



**Federal Aviation  
Administration**

**Aeronautical Information Services**

# **Aeronautical Chart Users' Guide**

**Effective as of 16 May 2024**



# TABLE OF CONTENTS

<b>TABLE OF CONTENTS .....</b>	<b>3</b>
<b>INTRODUCTION .....</b>	<b>7</b>
KEEP YOUR CHARTS CURRENT .....	7
EFFECTIVE DATE OF CHART USERS' GUIDE AND UPDATES.....	7
COLOR VARIATION .....	7
REPORTING CHART DISCREPANCIES.....	7
<b>WHAT'S NEW? .....</b>	<b>9</b>
VFR CHARTS.....	9
IFR ENROUTE CHARTS .....	9
TERMINAL PROCEDURE PUBLICATION (TPP) .....	9
<b>EXPLANATION OF VFR TERMS AND SYMBOLS.....</b>	<b>11</b>
WATER FEATURES (HYDROGRAPHY) .....	11
LAND FEATURES (TERRAIN) AND OBSTRUCTIONS .....	11
LAND FEATURES - MOUNTAIN PASSES.....	14
RADIO AIDS TO NAVIGATION .....	15
AIRPORTS .....	15
AIRSPACE.....	17
FOREIGN AREAS .....	20
TERMINAL AREA CHART (TAC) COVERAGE .....	21
INSET AND SPECIAL CHART COVERAGE .....	21
CHART TABULATIONS.....	21
<b>VFR SECTIONAL AND TERMINAL AREA CHARTS .....</b>	<b>23</b>
AIRPORTS .....	23
RADIO AIDS TO NAVIGATION .....	25
AIRSPACE INFORMATION.....	26
NAVIGATIONAL AND PROCEDURAL INFORMATION .....	32
CULTURE.....	34
HYDROGRAPHY .....	37
RELIEF .....	40
<b>VFR FLYWAY PLANNING CHARTS .....</b>	<b>43</b>
GENERAL INFORMATION.....	43
AIRPORTS .....	43
RADIO AIDS TO NAVIGATION .....	43
AIRSPACE INFORMATION.....	44
NAVIGATIONAL AND PROCEDURAL INFORMATION .....	47
CULTURE.....	48
BOUNDARIES.....	48
HYDROGRAPHY .....	48
RELIEF .....	48

# TABLE OF CONTENTS

<b>HELICOPTER ROUTE CHARTS.....</b>	<b>49</b>
GENERAL INFORMATION.....	49
AIRPORTS .....	49
RADIO AIDS TO NAVIGATION .....	50
AIRSPACE INFORMATION.....	51
NAVIGATIONAL AND PROCEDURAL INFORMATION .....	54
CULTURE.....	55
 <b>CARIBBEAN VFR AERONAUTICAL CHARTS (CAC) .....</b>	 <b>57</b>
 <b>AIRSPACE .....</b>	 <b>59</b>
 <b>EXPLANATION OF IFR ENROUTE TERMS .....</b>	 <b>61</b>
AIRPORTS .....	61
RADIO AIDS TO NAVIGATION .....	63
AIRSPACE INFORMATION.....	65
INSTRUMENT AIRWAYS .....	66
FOREIGN AREAS .....	70
TERRAIN CONTOURS ON AREA CHARTS.....	71
AIRPORTS .....	73
 <b>IFR ENROUTE LOW / HIGH ALTITUDE SYMBOLS (U.S., PACIFIC AND ALASKA CHARTS) .....</b>	 <b>73</b>
RADIO AIDS TO NAVIGATION .....	74
AIRSPACE INFORMATION.....	79
NAVIGATIONAL AND PROCEDURAL INFORMATION .....	92
CULTURE.....	93
HYDROGRAPHY .....	93
TOPOGRAPHY .....	93
 <b>U.S. TERMINAL PROCEDURES PUBLICATION .....</b>	 <b>95</b>
EXPLANATION OF TPP TERMS AND SYMBOLS .....	95
INSTRUMENT APPROACH PROCEDURE CHART.....	96
PLANVIEW .....	102
MISSED APPROACH INFORMATION.....	113
PROFILE VIEW .....	114
LANDING MINIMUMS .....	118
AIRPORT SKETCH .....	120
AIRPORT DIAGRAMS .....	121
DEPARTURE PROCEDURES (DPs).....	123
STANDARD TERMINAL ARRIVAL (STARs) CHARTS .....	124
CHARTED VISUAL FLIGHT PROCEDURE (CVFP) CHARTS .....	124
 <b>U.S. TERMINAL PROCEDURES PUBLICATION SYMBOLS .....</b>	 <b>125</b>
GENERAL INFORMATION.....	125
PLANVIEW SYMBOLS.....	125



# TABLE OF CONTENTS

PROFILE VIEW .....	127
STANDARD TERMINAL ARRIVAL (STAR) CHARTS.....	128
DEPARTURE PROCEDURE (DP) CHARTS.....	129
AIRPORT DIAGRAM/AIRPORT SKETCH .....	130
APPROACH LIGHTING SYSTEM.....	131
 <b>REFERENCES.....</b>	 <b>133</b>
 <b>ABBREVIATIONS .....</b>	 <b>135</b>



# INTRODUCTION

This Chart Users' Guide is an introduction to the Federal Aviation Administration's (FAA) aeronautical charts and publications. It is useful to new pilots as a learning aid, and to experienced pilots as a quick reference guide.

The FAA is the source for all data and information utilized in the publishing of aeronautical charts through authorized publishers for each stage of Visual Flight Rules (VFR) and Instrument Flight Rules (IFR) air navigation including training, planning, departures, enroute (for low and high altitudes), approaches, and taxiing charts. Digital charts are available online at:

- [VFR Charts](#)
- [IFR Charts](#)
- [Terminal Procedures Publication](#)
- [Chart Supplements](#)

Paper copies of the charts are available through an FAA Approved Print Provider. A complete list of current providers is available at [http://www.faa.gov/air\\_traffic/flight\\_info/aeronav/print\\_providers/](http://www.faa.gov/air_traffic/flight_info/aeronav/print_providers/).

The FAA Aeronautical Information Manual (AIM) Pilot/Controller Glossary defines all terms and abbreviations used throughout this publication. Unless otherwise indicated, miles are nautical miles (NM), altitudes indicate feet above Mean Sea Level (MSL), and times used are Coordinated Universal Time (UTC).

Notices to Air Missions (NOTAMs) alert pilots to time-critical aeronautical information that is either temporary or not sufficiently known in advance to permit publication on aeronautical charts or in other operational publications. Pilots can access NOTAM information via Flight Service Stations (FSS) or online via NOTAM Search at <https://notams.aim.faa.gov/notamSearch/>.

In addition to NOTAMs, the Safety Alerts/Charting Notices page of the Aeronautical Information Services website is also useful to pilots.

## KEEP YOUR CHARTS CURRENT

Aeronautical information changes rapidly, so it is important that pilots check the effective dates on each aeronautical chart and publication. To avoid danger, it is important to always use current editions and discard obsolete charts and publications.

To confirm that a chart or publication is current, refer to the next scheduled edition date printed on the cover. Pilots should also check NOTAMs for important updates between chart and publication cycles that are essential for safe flight.

## EFFECTIVE DATE OF CHART USERS' GUIDE AND UPDATES

All information in this guide is effective as of **16 May 2024**. All graphics used in this guide are for educational purposes. Chart symbology may not be to scale. Please do not use them for flight navigation.

The Chart Users' Guide is published in accordance with the 56-day aeronautical chart product schedule.

## COLOR VARIATION

Although the digital files are compiled in accordance with charting specifications, the final product may vary slightly in appearance due to differences in printing techniques/processes and/or digital display techniques.

## REPORTING CHART DISCREPANCIES

Your experience as a pilot is valuable and your feedback is important. We make every effort to display accurate information on all FAA charts and publications, so we appreciate your input. Please notify us concerning any requests for changes, or potential discrepancies you see while using our charts and related products.

*FAA, Aeronautical Information Services  
1305 East-West Highway  
SSMC4, Room 3424  
Silver Spring, MD 20910-3281*

*Telephone Toll-Free 1-800-638-8972  
Aeronautical Inquires: [https://www.faa.gov/air\\_traffic/flight\\_info/aeronav/aero\\_data/Aeronautical\\_Inquiries/](https://www.faa.gov/air_traffic/flight_info/aeronav/aero_data/Aeronautical_Inquiries/)*



## WHAT'S NEW?

*Update as of 16 May 2024*

The following charting items have been added to the Chart Users' Guide since the Guide was last published on 21 March 2024:

### VFR CHARTS

No Significant Changes Applied

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### IFR ENROUTE CHARTS

No Significant Changes Applied

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### TERMINAL PROCEDURE PUBLICATION (TPP)

No Significant Changes Applied



# EXPLANATION OF VFR TERMS AND SYMBOLS

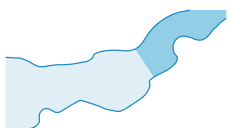
This chapter covers the Sectional Aeronautical Chart (Sectional). These charts include the most current data at a scale of (1:500,000), which is large enough to be read easily by pilots flying by sight under Visual Flight Rules. Sectionals are named after a major city within its area of coverage.

The chart legend includes aeronautical symbols and information about drainage, terrain, the contour of the land, and elevation. You can learn to identify aeronautical, topographical, and obstruction symbols (such as radio and television towers) by using the legend.

A brief description next to a small black square indicates the exact location for many of the landmarks easily recognized from the air, such as stadiums, pumping stations, refineries, etc. A small black open circle with descriptive type indicates oil, gas or mineral wells. A small black circle with descriptive type indicates water, oil or gas tanks. The scale for some items may be increased to make them easier to read on the chart.

Aeronautical Information Services' charts are prepared in accordance with specifications of the Interagency Air Committee (IAC) and are approved by representatives of the Federal Aviation Administration (FAA) and the Department of Defense (DoD).

## WATER FEATURES (HYDROGRAPHY)



Water features are depicted using two tones of blue, and are considered either "Open Water" or "Inland Water." "Open Water," a lighter blue tone, shows the shoreline limitations of all coastal water features at the average (mean) high water levels for oceans and seas. Light blue also represents the connecting waters like bays, gulfs, sounds and large estuaries.

Exceptionally large lakes like the Great Lakes, Great Salt Lake, and Lake Okeechobee, etc., are considered Open Water features. The Open Water tone extends inland as far as necessary to adjoin the darker blue "Inland Water" tones. All other bodies of water are marked as "Inland Water" in the darker blue tone.

## LAND FEATURES (TERRAIN) AND OBSTRUCTIONS

The elevation and configuration of the Earth's surface is important to pilots. Our Aeronautical Information Specialists are devoted to showing the contour of the earth and any obstructions clearly and accurately on our charts. We use five different techniques: contour lines, shaded relief, color tints, obstruction symbols, and Maximum Elevation Figures (MEF).

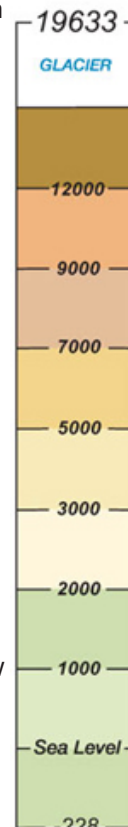
1. Contour lines join points of equal elevation. On Sectionals, basic contours are spaced at 500' intervals. Intermediate contours are typically at 250' intervals in moderately level or gently rolling areas. Auxiliary contours at 50', 100', 125', or 150' intervals occasionally show smaller relief features in areas of relatively low relief. The pattern of these lines and their spacing gives the pilot a visual concept of the terrain. Widely spaced contours represent gentle slopes, while closely spaced contours represent steep slopes.
2. Shaded relief shows how terrain may appear from the air. Shadows are shown as if light is coming from the northwest, because studies have shown that our visual perception has been conditioned to this view.



3. Different color tints show bands of elevation relative to sea level. These colors range from light green for the lower elevations, to dark brown for the higher elevations.
4. Obstruction symbols show man made vertical features that could affect safe navigation. The FAA maintains a database of obstacles. Aeronautical Specialists evaluate each obstacle based on charting specifications before adding it to a visual chart. When a Specialist is not able to verify the position or elevation of an obstacle, it is marked UC, meaning it is "under construction" or being reported, but has not been verified.

The FAA uses a Digital Obstacle File (DOF) to collect and disseminate data. Because land and obstructions frequently change, the source data on obstructions and terrain is occasionally incomplete or not accurate enough for use in aeronautical publications. For example, when the FAA receives notification about an obstruction, and there is insufficient detail to determine its position and elevation, the FAA Flight Edit Program conducts an investigation.

The Flight Edit crew visually verifies the cultural, topographic, and obstacle data. Charts are generally flight-checked every four years. This review includes checking for any obstruction that has been recently built, altered, or dismantled without proper notification.



*Obstacles less than 1000' AGL.*

*Obstacles 1000' AGL or greater.*

*Wind Turbines.*

Sectional Charts and Terminal Area (TACs) typically show man-made obstacles extending more than 200' Above Ground Level (AGL), or more than 299' AGL in yellow city tint. Obstacles may be lit or unlit. Features considered to be hazardous obstacles to low-level flight are; smokestacks, tanks, factories, lookout towers, antennas, and wind turbines, etc.

5540 (650)  
GARFIELD STACK

Man-made features used by FAA Air Traffic Control as checkpoints use a graphic symbol shown in black with the required elevation data in blue. The elevation of the top of the obstacle above Mean Sea Level (MSL) and the height of the structure (AGL) is also indicated (when known or can be reliably determined by a Specialist). The AGL height is in parentheses below the MSL elevation. In extremely congested areas, the FAA typically omits the AGL values to avoid confusion.

4977 (1432)  
Group Obstacle Symbol

Whenever possible, the FAA depicts specific obstacles on charts. However, in high-density areas like city complexes, only the highest obstacle is represented on the chart using the group obstacle symbol to maximize legibility.

5000 (1500) UC  
*If space is available the AGL height of the obstruction is shown in parentheses.*

Obstacles under construction are indicated by placing the letters UC adjacent to the obstacle type.

*Guy wires may extend outward from obstacles.*

*Wind turbines with high intensity lighting.*

Obstacles with high-intensity strobe lighting systems may operate part-time or by proximity activation and are shown as follows:

2894 UC

Concentrated obstructions of wind turbine farms shall be portrayed by an overlying hatched area and dotted outline to represent the approximate parameters of the farm. One or more single turbine symbols will populate the farm. A boxed elevation figure representing the MSL elevation of the highest wind turbine within the area shall be placed inside the farm or, if space is limited, just outside. Pilots are reminded that wind turbine blades and/or blade tips are not lighted. Wind turbine obstruction lights are located on top of the nacelle (generator) at the hub of wind turbines, which in some cases can be 200-300' below the rotating blade tips.



- The Maximum Elevation Figure (MEF) represents the highest elevation within a quadrant, including terrain and other vertical obstacles (towers, trees, etc.). A quadrant on Sectionals is the area bounded by ticked lines dividing each 30 minutes of latitude and each 30 minutes of longitude. MEF figures are rounded up to the nearest 100' value and the last two digits of the number are not shown.

125

*In this example the  
MEF represents  
12,500'.*

MEFs over land and open water areas are used in areas containing man-made obstacles such as oil rigs.

In the determination of MEFs, the FAA uses extreme care to calculate the values based on the existing elevation data shown on source material. Aeronautical Information Specialists use the following procedure to calculate MEFs:

### MEF - Man-made Obstacle

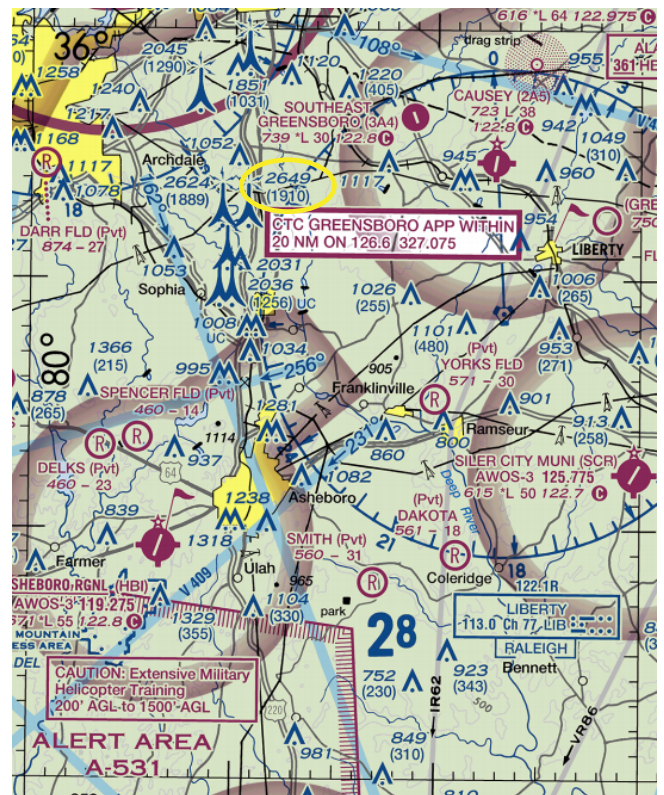
When a man-made obstacle is more than 200' above the highest terrain within the quadrant:

- Determine the elevation of the top of the obstacle above MSL.
- Add the possible vertical error of the source material to the above figure (100' or 1/2 contour interval when interval on source exceeds 200'. U.S. Geological Survey Quadrangle Maps with contour intervals as small as 10' are normally used).
- Round the resultant figure up to the next higher hundred-foot level.

### Example:

Elevation of obstacle top (MSL)	2649
Possible obstacle error	+100
equals	2749
Raise to the following 100' level	2800
Maximum Elevation Figure (MEF)	

28



## MEF - Natural Terrain Feature or Natural Vertical Obstacle

When a natural terrain feature or natural vertical obstacle (e.g. a tree) is the highest feature within the quadrangle:

1. Determine the elevation of the feature.
2. Add the possible vertical error of the source to the above figure (100' or 1/2 the contour interval when interval on source exceeds 200').
3. Add a 200' allowance for uncharted natural or manmade obstacles. Chart specifications don't require the portrayal of obstacles below minimum height.
4. Round the figure up to the next higher hundred-foot level.

**Example:**

**Elevation of obstacle top (MSL)** 13161

**Possible vertical error** +100

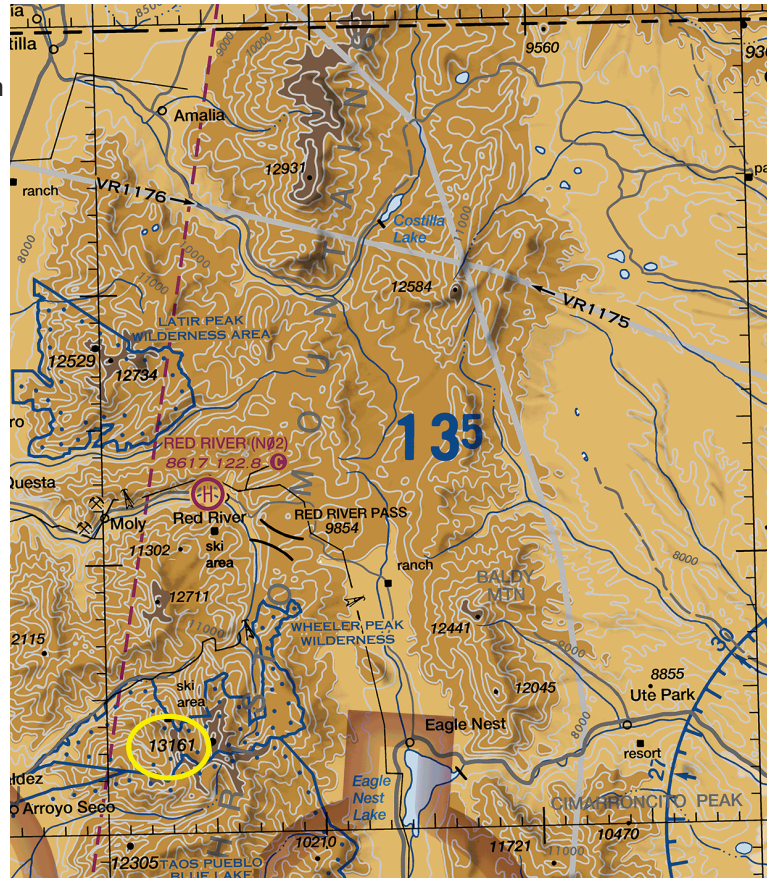
**Obstacle Allowance** +200

**equals** 13461

**Raise to the following 100' level** 13500


**Maximum Elevation Figure (MEF)**

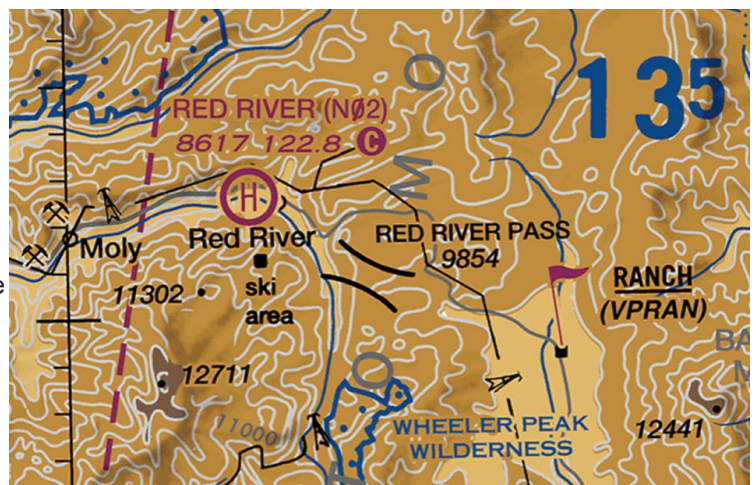
**135**



Pilots should be aware that while the MEF is based on the best information available to the Specialist, the figures are not verified by field surveys. Also, users should consult the Aeronautical Information Services website to ensure that your chart has the latest MEF data available.

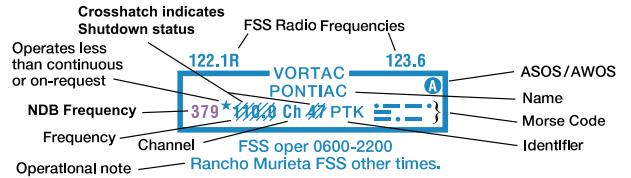
## LAND FEATURES - MOUNTAIN PASSES

The Mountain 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. For high-traffic mountain passes, VFR Checkpoints may be provided to increase situational awareness by indicating key landmarks inside confined terrain. A collocated VFR Waypoint and Checkpoint may be provided to assist with identifying natural entry points for commonly flown mountain passes.



## RADIO AIDS TO NAVIGATION

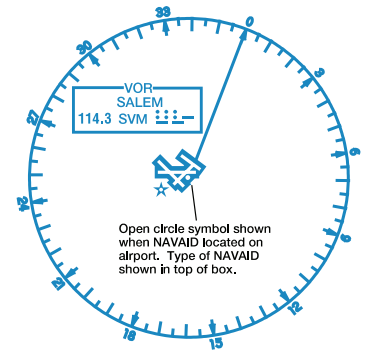
On VFR Charts, information about radio aids to navigation (NAVAID) are boxed, as illustrated. Duplication of data is avoided. When two or more radio aids in a general area have the same name with different frequencies, Tactical Air Navigation (TACAN) channel numbers, or identification letters, and no misinterpretation can result, the name of the radio aid may be indicated only once within the identification box. Very High Frequency/Ultra High Frequency (VHF/UHF) NAVAID names and identification boxes (shown in blue) take precedence. Only those items that differ (e.g., frequency, Morse Code) are repeated in the box in the appropriate color. The choice of separate or combined boxes is made in each case on the basis of economy of space and clear identification of the radio aids.



A NAVAID that is physically located on an airport may not always be represented as a typical NAVAID symbol. A small open circle indicates the NAVAID location when collocated with an airport icon.

The type of NAVAID will be identified by: "VOR," (VHF Omni-Directional Range) "VORTAC" (VOR Tactical Aircraft Control), "VOR-DME," (VOR-Distance Measuring Equipment) or "DME" (Distance Measuring Equipment) positioned on and breaking the top line of the NAVAID box.

DMEs are shown without the compass rose.



## AIRPORTS

Airports in the following categories are charted as indicated (additional symbols are shown later in this Section).

Public use airports:



Hard-surfaced runways greater than 8069' or some multiple runways less than 8069'



Hard-surfaced runways 1500' to 8069'



Other than hard-surfaced runways



Seaplane bases

Military airports:



Other than hard-surfaced runways

Foreign airports:



Hard-surfaced runways are depicted the same as public-use airports.

U.S. military airports are identified by abbreviations such as AAF (Army Air Field), AFB (Air Force Base), MCAS (Marine Corps Air Station), NAS (Naval Air Station), NAV (Naval Air Facility), and NAAS (Naval Auxiliary Air Station).

Fuel Available:



Fuel availability indicated by use of tick marks around the basic airport symbol. Consult Chart Supplement for details and availability.



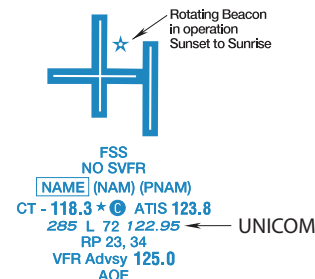
Other airports with or without fuel:



Airports are plotted in their true geographic position unless the symbol conflicts with a NAVAID at the same location. In such cases, the airport symbol will be displaced, but the relationship between the airport and the NAVAID will be retained. When depicting a seaplane base, the eye of the anchor symbol will be charted as close to the docking area as possible, with the remainder of the symbol in the water.

Airports are identified by their official FAA designated name.


The elevation of an airport is the highest point on the usable portion of the landing areas. Runway length is the length of the longest active runway, including displaced thresholds and excluding overruns. Runway length is shown to the nearest 100', using 70 as the rounding point; a runway 8070' in length is charted as 81, while a runway 8069' in length is charted as 80. If an airport has waterways, it will be indicated by a seaplane base symbol and additional elevation, lighting, and length information under primary airport information.



FAA Chart Users' Guide - VFR Terms and Symbols

Flight Service Station on field	FSS	Elevation in feet	285
Airports where fixed wing special VFR operations are prohibited (shown above airport name) FAR 91	NO SVFR	Lighting in operation Sunset to Sunrise	L
Indicates FAR 93 Special Air Traffic Rules and Airport Traffic Pattern		Lighting limitations exist; refer to Chart Supplement	*L
Location Identifier	(NAM)	Length of longest runway in hundreds of feet; usable length may be less	72
ICAO Location Identifier	(PNAM)	Aeronautical advisory station	122.95
Control Tower (CT) - primary frequency	CT - 118.3	Runways with Right Traffic Patterns (public use)	RP 23,34
Star indicates operation part-time. See tower frequencies tabulation for hours of operation	*	See Chart Supplement	*RP
Follows the Common Traffic Advisory Frequency (CTAF)	C	VFR Advisory Service Shown when ATIS is not available and frequency is other than the primary CT frequency	VFR Advsy 125.0
Automatic Terminal Information Services	ATIS 123.8	Weather Camera (Alaska)	WX CAM
Automatic Flight Information Service	AFIS 135.2	Airport of Entry	AOE
Automated Surface Weather Observing Systems; shown when full-time ATIS is not available	ASOS/AWOS 135.42	When information is lacking, the respective character is replaced by a dash. Lighting codes refer to runway edge lights and may not represent the longest runway or full length lighting.	

Airports with Control Towers (CT) and their related data are shown in blue. All other airports and their related data are shown in magenta. The **L** symbol indicates that runway lights are on from dusk to dawn. **\*L** indicates that the pilot must consult the Chart Supplement to determine runway lighting limitations, such as: available on request (by radio-call, letter, phone, etc), part-time lighting, or pilot/airport controlled lighting. Lighting codes refer to runway edge lights. The lighted runway may not be the longest runway available, and lights may not be illuminated along the full length of the runway. The Chart Supplement has a detailed description of airport and air navigation lighting aids for each airport. A dash represents no runway edge lights.

The symbol  indicates the existence of a rotating or flashing airport beacon operating from dusk to dawn. The Aeronautical Information Manual (AIM) thoroughly explains the types and uses of airport lighting aids.

Right traffic information is shown using the abbreviation 'RP' for right pattern, followed by the appropriate runway number(s) (RP 18). Special conditions or restrictions to the right pattern are indicated by the use of an asterisk (\*RP) to direct the pilot to the Chart Supplement for special instructions and/or restrictions.

The type "OBJECTIONABLE" associated with an airport symbol indicates that an objectionable airspace determination has been made for the airport per FAA JO 7400.2 Section 4, Airport Charting and Publication of Airport Data. Objectionable airspace determinations are based upon a number of factors including conflicting traffic patterns with another airport, hazardous runway conditions, or natural or man-made obstacles in close proximity to the landing area. FAA Regional Airports Offices are responsible for airspace determinations. Address any challenges to objectionable airspace determinations to your FAA Regional Airports Office.

AIRSPACE


CONTROLLED AIRSPACE

Controlled airspace consists of those areas where some or all aircraft may be subject to air traffic control, such as: Class A, Class B, Class C, Class D, Class E Surface (SFC) and Class E Airspace.

**Class A Airspace** within the United States extends from 18,000' up to FL600. While visual charts do not depict Class A, it is important to note its existence.

**Class B Airspace** is shown on the Sectional Aeronautical Chart (Sectional) and Terminal Area Chart (TAC). *Class B MSL* **90**  
*Altitudes* **20**  
The MSL ceiling and floor altitudes of each sector are shown in solid blue figures with the last two zeros omitted. Floors extending "upward from above" a certain altitude are preceded by a (+). Operations at and below these altitudes are outside of Class B Airspace. Radials and arcs used to define Class B are prominently shown on TACs. Detailed rules and requirements associated with the particular Class B are shown. The name by which the Class B is shown as **LAS VEGAS CLASS B** for example.

**Class C Airspace** is shown on Sectionals and TACs. The MSL ceiling and floor altitudes of each sector are *Class C MSL* **70**  
*Altitudes* **15**  
shown in solid magenta figures with the last two zeros eliminated.

 A ceiling value of "T" indicates the ceiling is to, but not including, the floor of the overlying Class B airspace.  
Surface.

Class C Airspace is identified by name: **BURBANK CLASS C**

Separate notes, enclosed in magenta boxes, give the approach control frequencies to be used by arriving VFR aircraft to establish two-way radio communication before entering the Class C (generally within 20 NM):

CTC BURBANK APP WITHIN  
20 NM ON 124.6 395.9

Class C operating less than continuous is indicated by the following note: *See NOTAMs/Supplement for Class C eff hrs*

**Class D Airspace** is identified with a blue dashed line. Class D operating less than continuous is indicated by the following note: *See NOTAMs/Supplement for Class D eff hrs*

Ceilings of Class D are shown as follows: **[30]**

A minus in front of the figure is used to indicate "from surface to, but not including..."

**Class E Surface (SFC) Airspace** is symbolized with a magenta dashed line. Class E (SFC) operating less than continuous is indicated by the following note: See NOTAMs/Supplement for Class E (sfc) eff hrs

**Class E Airspace** exists at 1200' AGL unless designated otherwise. The lateral and vertical limits of all Class E, (up to, but not including 18,000') are shown by narrow bands of vignette on Sectionals and TACs.

Controlled airspace floors of 700' above the ground are defined by a magenta vignette; floors other than 700' that laterally abut uncontrolled airspace (Class G) are defined by a blue vignette; differing floors greater than 700' above the ground are annotated by a symbol and a number indicating the floor.



2400 AGL  
4500 MSL

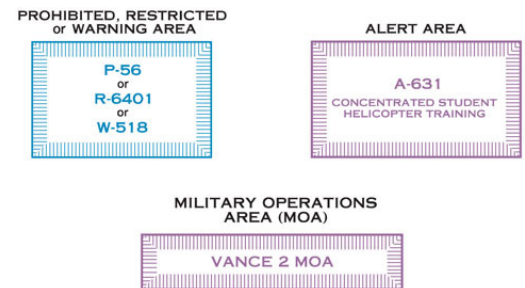
If the ceiling is less than 18,000' MSL, the value (preceded by the word "ceiling") is shown along the limits of the controlled airspace. These limits are shown with the same symbol indicated above.

## UNCONTROLLED AIRSPACE

**Class G Airspace** within the United States extends up to 14,500' Mean Sea Level. At and above this altitude is Class E, excluding the airspace less than 1500' above the terrain and certain special use airspace areas.

## SPECIAL USE AIRSPACE

**Special Use Airspace (SUA)** confines certain flight activities and restricts entry, or cautions other aircraft operating within specific boundaries. Except for Controlled Firing Areas, SUA areas are depicted on VFR Charts. Controlled Firing Areas are not charted because their activities are suspended immediately when spotter aircraft, radar, or ground lookout positions indicate an aircraft might be approaching the area. Nonparticipating aircraft are not required to change their flight paths. SUA areas are shown in their entirety (within the limits of the chart), even when they overlap, adjoin, or when an area is designated within another area. The areas are identified by type and identifying name/number, and are positioned either within or immediately adjacent to the area.



\* Alert Areas do not extend into Class A, B, C and D airspace, or Class E airport surface areas.

## OTHER AIRSPACE AREAS

**Mode C Required Airspace** (from the surface to 10,000' MSL) within a 30 NM radius of the primary airport(s) for which a Class B is designated, is depicted by a solid magenta line.



Mode C is required, but not depicted for operations within and above all Class C up to 10,000' MSL.

Enroute Mode C requirements (at and above 10,000' MSL except in airspace at and below 2500' AGL) are not depicted. See FAR 91.215 and the AIM.

**FAR 93** Airports and heliports under Federal Aviation Regulation 93 (FAR 93), (Special Air Traffic Rules and Airport Traffic Patterns), are shown by "boxing" the airport name.





**FAR 91** Airports where fixed wing special visual flight rules operations are prohibited (FAR 91) are shown with the type "NO SVFR" above the airport name.


TRUCKEE - TAHOE


**National Security Areas** indicated with a broken magenta line and Special Flight Rules Areas (SFRAs) indicated with the following symbol: consist of airspace with defined vertical and lateral dimensions established at locations where there is a requirement for increased security and safety of ground facilities. Pilots should avoid flying through these depicted areas. When necessary, flight may be temporarily prohibited.

**The Washington DC Flight Restricted Zone (FRZ)** is related to National Security. It is depicted using the Prohibited/Restricted/Warning Area symbology and is located within the SFRA. It is defined as the airspace within approximately a 13 to 15 NM radius of the DCA VOR-DME. Additional requirements are levied upon aviators requesting access to operate inside the National Capital Region.

**Temporary Flight Restriction (TFR) Areas Relating to National Security** are indicated with a broken blue line . A Temporary Flight Restriction (TFR) is a type of Notice to Air Missions (NOTAM). A TFR defines an area where air travel is restricted due to a hazardous condition, a special event, or a general warning for the entire airspace. The text of the actual TFR contains the fine points of the restriction. It is important to note that only TFRs relating to National Security are charted.

**Air Defense Identification Zones (ADIZs)** are symbolized using the ADIZ symbol: . As defined in Code of Federal Regulations 14 (CFR 14) Part 99, an ADIZ is an area in which the ready identification, location, and control of all aircraft is required in the interest of national security. ADIZ boundaries include Alaska, Hawaii, Guam and the Contiguous U.S.


**National Defense Airspace Temporary Flight Restriction (TFR) Areas** are bounded with cross hatching: . These areas include airspace that is subject to routine TFRs published as NOTAMs that have a 12+ month duration.

**Terminal Radar Service Areas (TRSAs)** are shown in their entirety, symbolized by a screened black outline of the entire area including the various sectors within the area .

The outer limit of the entire Terminal Radar Service Areas (TRSA) is a continuous screened black line. The various sectors within the TRSA are symbolized by narrower screened black lines.

Each sector altitude is identified in solid black color by the MSL ceiling and floor values of the respective sector, eliminating the last two zeros. A leader line is used when the altitude values must be positioned outside the respective sectors because of charting space limitations. The TRSA name is shown near the north position of the TRSA as follows:

**PALM SPRINGS TRSA.** Associated frequencies are listed in a table on the chart border.

**Military Training Routes (MTRs)** are shown on Sectionals and TACs. They are identified by the route designator: . Route designators are shown in solid black on the route centerline, positioned along the route for continuity. The designator IR or VR is not repeated when two or more routes are established over the same airspace, e.g., IR201-205-227. Routes numbered 001 to 099 are shown as IR1 or VR99, eliminating the initial zeros. Direction of flight along the route is indicated by small arrowheads adjacent to and in conjunction with each route designator.

The following note appears on Helicopters, Sectionals and TACs except for Hawaiian Islands, which is different.

**MILITARY TRAINING ROUTES (MTRs)**

All IR and VR MTRs are shown, and may extend from the surface upwards. Only the route centerline, direction of flight along the route, and the route designator are depicted - route widths and altitudes are not shown.

DoD users refer to Area Planning AP/1B Military Training Routes North and South America for current routes.

**There are IFR (IR) and VFR (VR) routes as follows:**

#### Route identification:

- a. MTRs with no segment above 1500' are identified by four-digit numbers; e.g., VR1007, etc. These routes are generally developed to be flown under Visual Flight Rules.
- b. MTRs that include one or more segments above 1500' AGL are identified by three or fewer digit numbers; e.g., IR21, etc. These routes are developed to be flown, to the maximum extent possible under Instrument Flight Rules.

Route width varies for each MTR and can extend several miles on either side of the charted MTR centerline. Detailed route width information is available in the Flight Information Publication (FLIP) AP/1B (a Department of Defense publication), or through the 56 Day NASR Subscription from the National Flight Data Center (NFDC).



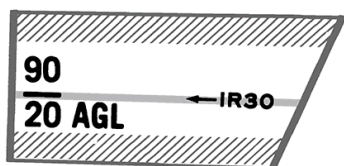
**Special Military Activity** areas are indicated on Sectionals by an underlying IFR Military Training Route with the lateral limits of the route shown by a gray Special Use Airspace symbol. A boxed note accompanies the area. The note contains radio frequency and route identifier information to use for obtaining area activity status.

SPECIAL MILITARY ACTIVITY  
FOR IR850, IR851, IR852 CTC BANGOR RADIO  
ON 122.4 255.4 FOR ACTIVITY STATUS

The following guidance appears in the margin of applicable Sectional Charts.

**SPECIAL MILITARY ACTIVITY**

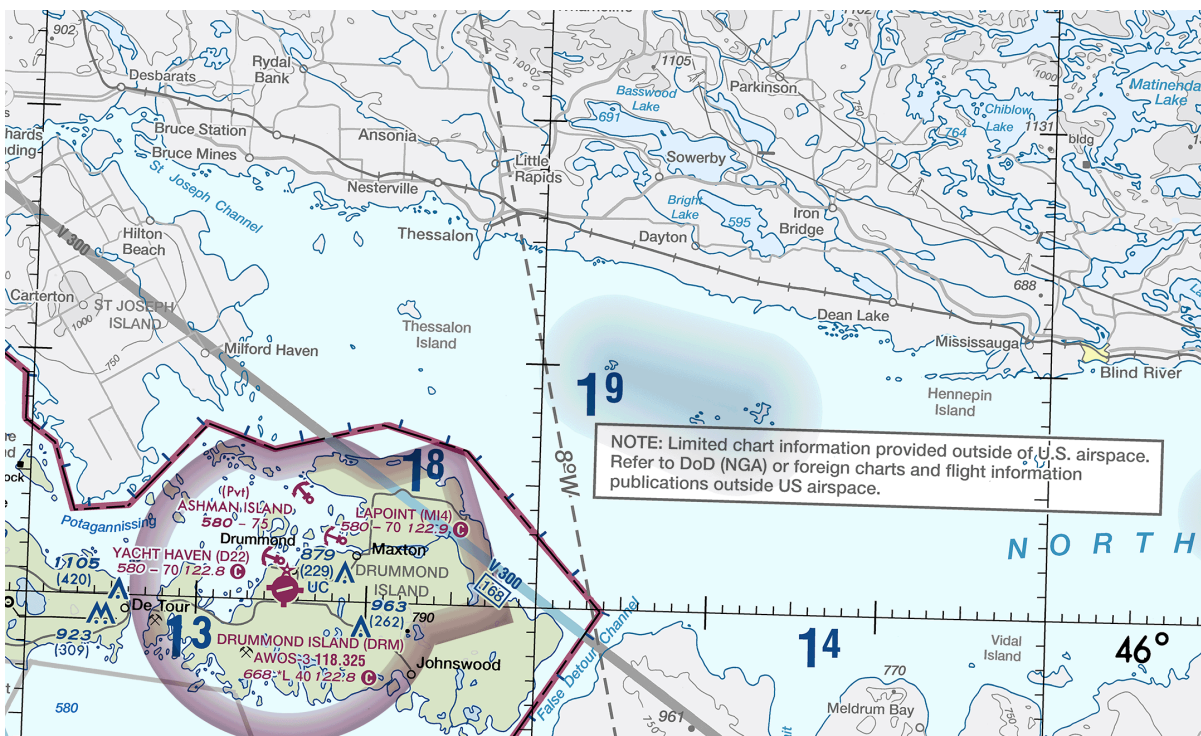
The chart identifies IFR Military Training Routes and Military Operations Area within which the Department of Defense conducts periodic operations involving Unmanned Aircraft Systems. These aircraft may be accompanied by military or other aircraft which provide the pilots of the Unmanned Aircraft Systems visual observation information about other aircraft operations near them. Status of these routes and areas may be obtained by contacting the FAA/DoD facility on designated frequencies along the IFR route, referencing the identifier, e.g., IR214 as depicted on this chart. The lateral limits of these specified routes are shown by the Special Use Airspace symbol. Altitudes for these route segments are also shown.



**90** --- Ceiling of MTR in hundreds of feet MSL  
**20 AGL** --- Floor of MTR in hundreds of feet AGL

## FOREIGN AREAS

The data depicted in areas outside the U.S. is skeletonized on all VFR aeronautical charts. Only major airports, NAVAIDs, and airways are charted in foreign areas in screened black. Cultural features, hydrographic information and geographic relief are depicted in subdued and different shades of gray. A note regarding the expectation of the use of foreign charts and flight information publications is depicted along the boundary.

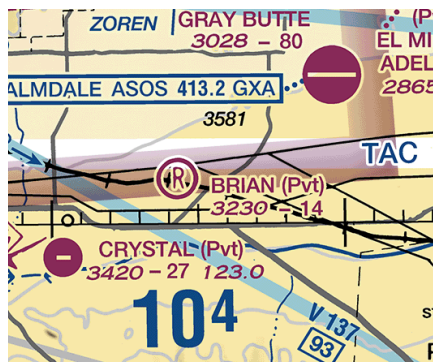




## TERMINAL AREA CHART (TAC) COVERAGE

TAC coverage is shown on appropriate Sectionals by a 1/4" masked line as indicated below. Within this area pilots should use TACs, which provide greater detail. A note indicating that the area is on the TAC appears near the masked boundary line.

**LOS ANGELES TERMINAL AREA**  
Pilots are encouraged to use the Los Angeles VFR Terminal Area Chart for flights at or below 10,000'



## INSET AND SPECIAL CHART COVERAGE

Inset and Special Chart Coverage (i.e., Grand Canyon Chart) is shown on appropriate Sectionals by a 1/8" masked line as indicated below. A note to this effect appears near the masked boundary line. (Additional examples shown in VFR Sectional and Terminal Charts > Navigational and Procedural Information > Chart Limits.)

If inset chart is on the same chart as outline:

**INDIANAPOLIS INSET**  
See inset chart for additional detail

If inset chart is on a different chart:

**INDIANAPOLIS INSET**  
See inset chart on the St. Louis Sectional for additional information

## CHART TABULATIONS

**Airport Tower Communications** are provided in a columnized tabulation for all tower-controlled airports that appear on the respective chart. Airport names are listed alphabetically. If the airport is military, the type of airfield, e.g., AAF, AFB, NAS, is shown after the airfield name. In addition to the airport name, tower operating hours, primary Very High Frequency/Ultra High Frequency (VHF/UHF) local Control Tower (CT), Ground Control (GND CON), and Automatic Terminal Information Service (ATIS) frequencies, when available, will be given. Airport Surveillance Radar (ASR) and/or Precision Approach Radar (PAR) procedures are listed when available.

**Approach Control Communications** are provided in a columnized tabulation listing Class B, Class C, Terminal Radar Service Areas (TRSA) and Selected Approach Control Facilities when available. Primary VHF/UHF frequencies are provided for each facility. Sectorization occurs when more than one frequency exists and/or is approach direction dependent. Availability of service hours is also provided.

**Special Use Airspace (SUA):** Prohibited, Restricted and Warning Areas are presented in blue and listed numerically for U.S. and other countries. A tabulation of Alert Areas (listed numerically) and Military Operations Areas (MOA) (listed alphabetically) appear on the chart in magenta. All are supplemented with altitude, time of use and the controlling agency/contact facility, and its frequency when available. Users need to be aware that a NOTAM addressing activation will NOT be issued to announce permanently listed times of use. The controlling agency will be shown when the contact facility and frequency data is unavailable.

Airports with control towers are indicated on the face of the chart by the letters CT followed by the primary VHF tower frequency(ies). Information for each tower is listed in the table below. Operational hours are local time. The primary VHF and UHF tower and ground control frequencies are listed.

Automatic Terminal Information Service (ATIS) frequencies shown on the face of the chart are arrival VHF/UHF frequencies. All ATIS frequencies are listed in the table below. ATIS operational hours may differ from tower operational hours.

ASR and/or PAR indicate Radar Instrument Approach available.

"MON-FRI" indicates Monday through Friday.

O/T indicates other times.

		Frequencies (VHF/UHF)				
Airport Name	CONTROL TOWER	OPERATES	TOWER	GND CON	ATIS	ASR/PAR
	AIRBORNE	0700 MON-1800 SAT 0600-1800 SUN	119.475	121.6	124.925	
	BLUE GRASS	CONTINUOUS	119.1 257.8	121.9	126.3	
	BOLTON	0730-1930	128.1	121.3 (E) 121.8 (W)		ASR/PAR
	CHARLOTTESVILLE-ALBEMARLE	0600-2300	124.5 338.275	121.9 338.275	118.425	PAR
	CINCINNATI/NORTHERN KENTUCKY INTL	CONTINUOUS Runway dependent	118.3 (RWYS 18R/36L & 09/27) 118.975 360.85 (RWY 18L/36R)	121.3 (E) 121.7 (W)	134.375 (ARR) 135.3 (DEP)	ASR
	COX DAYTON INTL	CONTINUOUS	119.9 257.8	121.9	125.8	
	EASTERN WV RGNL/ SHEPHERD	0700-2200 TUE-THU 0700-1600 FRI-SAT 1300-1800 SUN O/T BY NOTAM	124.3 236.6	121.8 275.8		
		Hours of Operation (local time)		Approach direction dependent		
					Radar Instru Approach av:	

		Frequencies (VHF/UHF)	
CLASS B, CLASS C, TRSA AND SELECTED RADAR APPROACH CONTROL FREQUENCIES			
	FACILITY	FREQUENCIES	SERVICE AVAILABILITY
Airspace Name	CINCINNATI CLASS B	VHF { 119.7 (RWY 09/27 090°-269°) (RWY 18R/36L 180°-359°) UHF { 123.875 (RWY 09/27 270°-089°) (RWY 18L/36R 360°-179°) 363.15	CONTINUOUS
	CHARLESTON CLASS C	124.1 269.125 (N) 119.2 269.125 (S)	CONTINUOUS
	COLUMBUS CLASS C	120.2 317.775 (280°-099°) 132.3 279.6 (100°-279°)	CONTINUOUS
	DAYTON CLASS C	127.65 294.5 (360°-090°) 118.85 327.1 (091°-180°) 134.45 316.7 (181°-359°)	CONTINUOUS
	BRISTOL TRSA	134.425 349.0 (047°-227°) 125.5 317.5 (228°-046°) O/T 127.85 371.85 ZTL CNTR	0600-2400 local time
Radar Approach Control	HUNTINGTON TRSA	119.75 257.8 (S) 132.95 257.8 (N)	CONTINUOUS
	PERKINSON/BAAF RADAR	118.75 353.9	CONTINUOUS
		O/T indicates Other times	

### SPECIAL USE AIRSPACE ON SECTIONAL CHART

Unless otherwise noted altitudes are MSL and in feet. Time is local.  
"TO" an altitude means "to and including."  
FL - Flight Level  
NO A/G - No alt to ground communications.  
Contact nearest FSS for information.

† Other times by NOTAM.  
NOTAM - Use of this term in Restricted Areas indicates FAA and DoD NOTAM systems. Use of this term in all other Special Use areas indicates the DoD NOTAM system.

### U.S. P-PROHIBITED, R-RESTRICTED, W-WARNING, A-ALERT, MOA-MILITARY OPERATIONS AREA

NUMBER	ALTITUDE	TIME OF USE	CONTROLLING AGENCY/ CONTACT FACILITY	FREQUENCIES — VHF/UHF
R-6602 A	TO BUT NOT INCL 4000	CONTINUOUS MAY 1-SEP 15 ‡24 HRS IN ADVANCE	WASHINGTON CNTR	118.75 377.1
R-6602 B	4000 TO BUT NOT INCL 11,000	BY NOTAM 24 HRS IN ADVANCE	WASHINGTON CNTR	118.75 377.1
R-6602 C	11,000 TO BUT NOT INCL 18,000	BY NOTAM 24 HRS IN ADVANCE	WASHINGTON CNTR	118.75 377.1

A-220	TO 4000 AGL	0800-2200	NO A/G
-------	-------------	-----------	--------

Alert Areas do not extend into Class A, B, C and D airspace, or Class E airport surface areas.

MOA NAME	ALTITUDE*	TIME OF USE†	CONTROLLING AGENCY/ CONTACT FACILITY	FREQUENCIES — VHF/UHF
BRUSH CREEK	100 AGL TO BUT NOT INCL 5000	0800-2200 MON-SAT	INDIANAPOLIS CNTR	134.0 135.57
BUCKEYE	5000	0800-2200 MON-FRI 0800-1600 SAT-SUN	INDIANAPOLIS CNTR	134.0 135.57
EVERS	1000 AGL	SR-SS BY NOTAM	WASHINGTON CNTR	

\*Altitudes indicate floor of MOA. All MOAs extend to but do not include FL 180 unless otherwise indicated in tabulation or on chart.

†Other times by DoD NOTAM.

Sunrise to Sunset

# VFR SECTIONAL AND TERMINAL AREA CHARTS

## GENERAL INFORMATION

The symbols shown in this section illustrate those that appear in the Sectional Aeronautical Charts (Sectionals) and Terminal Area Charts (TACs). The same symbology is utilized in VFR Flyway Planning Charts, Helicopter Route Charts and Caribbean Aeronautical Charts (CACs), however the scale of the symbols may be different due to the particular chart scales. Where symbology is distinctive to a given chart, examples and explanations are given in the additional examples. These charts are updated every 56 days.

## AIRPORTS

### Landplane: Civil

Airports having control towers (CT) are shown in blue, all others are shown in magenta.

All recognizable runways, including some that may be closed, are shown for visual identification purposes. Fuel available.

Runway patterns will be depicted at airports with at least one hard surfaced runway 1500' or greater in length.

### Landplane: Civil-Military

### Landplane: Military

Refueling and repair facilities not indicated.

### Heliport

(Selected)

### Foreign

### Foreign Airport Note

NOTE: Airports outside the U.S. Flight Information Region (FIR) are shown with the standard  symbol. Only the airport names and ICAO identifiers are shown.

Non-Towered      Towered



### Ultralight Flight Park

(Selected)



### Landplane: Landmark Value

Fuel not available  
or

Complete information  
is not available.



**PUBLIC USE** - (Soft surfaced runway, or hard surfaced runway less than 1500' in length.) Fuel not available.

**RESTRICTED OR PRIVATE** - (Soft surfaced runway, or hard surfaced runway less than 1500' in length.) Non-public use having landmark value.

**OBJECTIONABLE** is an airport that has an airspace determination based upon a number of factors including conflicting traffic patterns with another airport, hazardous runway conditions, or natural or man-made obstacles in close proximity to the landing area.

**UNVERIFIED** - A landing area available but warranting more than ordinary precaution due to:

(1) lack of current information on field conditions,

and/or

(2) available information indicates peculiar operating limitations.

**ABANDONED** - Depicted for landmark value or to prevent confusion with an adjacent usable landing area. (Normally at least 3000' paved).

Appropriate note as required for hard surfaced runways only: "(CLOSED)"

AIRPORTS (Continued)

Seaplane

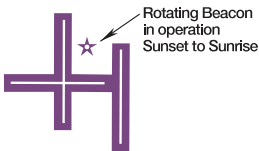


Airport Data Grouping

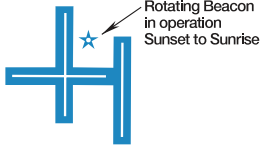
Boxed airport name indicates airport for which a Special Traffic Rule has been established.

(Pvt): Non-public use having landmark value.

“OBJECTIONABLE”: This airport may adversely affect airspace use.



(NAME) (NAM) (PNAM)  
ATIS 123.8  
285 L 72 122.95  
RP 23, 34  
UNICOM



FSS  
NO SVFR  
(NAME) (NAM) (PNAM)  
CT - 118.3 \* ATIS 123.8  
285 L 72 122.95  
RP 23, 34  
VFR Advsy 125.0  
AOE  
UNICOM

Flight Service Station on field	FSS	Elevation in feet	285
Airports where fixed wing special VFR operations are prohibited (shown above airport name) FAR 91	NO SVFR	Lighting in operation Sunset to Sunrise	L
Indicates FAR 93 Special Air Traffic Rules and Airport Traffic Pattern		Lighting limitations exist; refer to Chart Supplement	*L
Location Identifier	(NAM)	Length of longest runway in hundreds of feet; usable length may be less.	72
ICAO Location Identifier	(PNAM)	Aeronautical advisory station	122.95
Control Tower (CT) - primary frequency	CT - 118.3	Runways with Right Traffic Patterns (public use)	RP 23,34
Star indicates operation part-time. See tower frequencies tabulation for hours of operation	*	See Chart Supplement	*RP
Follows the Common Traffic Advisory Frequency (CTAF)	Ⓢ	VFR Advisory Service Shown when ATIS is not available and frequency is other than the primary CT frequency.	VFR Advsy 125.0
Automatic Terminal Information Services	ATIS 123.8	Weather Camera (Alaska)	WX CAM
Automatic Flight Information Service	AFIS 135.2	Airport of Entry	AOE
Automated Surface Weather Observing Systems; shown when full-time ATIS is not available.	ASOS/AWOS 135.42	When information is lacking, the respective character is replaced by a dash. Lighting codes refer to runway edge lights and may not represent the longest runway or full length lighting.	

# RADIO AIDS TO NAVIGATION

## VOR

Operates less than continuous or On-Request



OAKDALE  
\*116.8 OAK

Underline indicates no voice on this frequency

## VORTAC

When an NDB NAVAID shares the same name and Morse Code as the VOR NAVAID the frequency can be collocated inside the same box to conserve space.



NDB Frequency	Name	ASOS/AWOS	Morse Code
379	PONTIAC	Ch 47 PTK	
111.0			

Frequency Channel Identifier

## VOR-DME



SALEM  
\*114.3 Ch 90 SVM

Crosshatch indicates Shutdown status

## DME



PROVO  
Ch 21 PVU (108.4)

DME co-located at an airport  
Note: DMEs are shown without the compass rose.

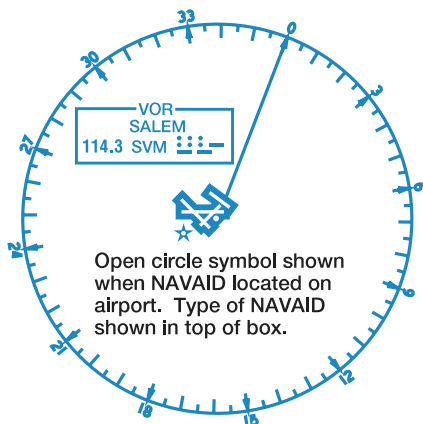
DME  
SARGO  
Ch 93 GVR (114.65)



## Compass Rose

Compass Rose is "reference" oriented to magnetic north

Example of VOR NAVAID co-located at airport



## Non-Directional Radio Beacon (NDB)



MONTAGUE  
404 MOG

Underline indicates no voice on this frequency

## NDB-DME



GAMBELL  
369 GAM  
DME Ch 92 (114.5)

## NAVAID Used To Define Class B Airspace

### ILS Components

#### ILS-DME



CLEVELAND-HOPKINS  
DME ANTENNA  
(I-HPI) Ch 36 (109.9)

TAC - Shown when used in description of Class B airspace.

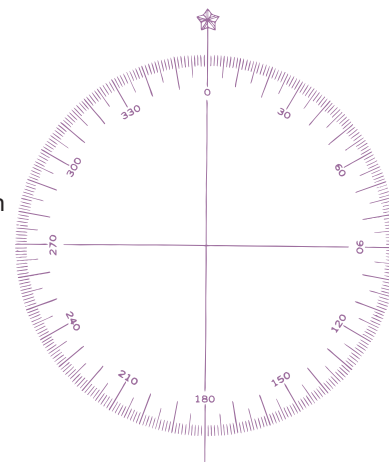


SALT LAKE CITY DME ANTENNA  
(I-BNT/I-UTJ) Ch 52 (111.5)

## Compass Rosette

Shown only in areas void of VOR roses.

Compass rosette will be based on the five year epoch magnetic variation model.



## RADIO AIDS TO NAVIGATION (Continued)

### Automated Weather Broadcast Services

Automated Weather Observing System (AWOS) / Automated Surface Observing System (ASOS).

VHF/UHF



LF/MF



### Flight Service Station (FSS)

Heavy line box indicates Flight Service Station (FSS). Frequencies 121.5, 122.2 and 243.0 are available at many Alaskan FSSs and are not shown above boxes. All other frequencies are shown. Frequencies transmit and receive except those followed by an R.

R - receive only

**PONTIAC PTK**  
No NAVAID of the same name as FSS  
OR  

122.1R
123.6

**NORTHWAY**  
**116.3 Ch 110 ORT**

FSS oper 0600-2200  
Rancho Murieta FSS other times.  
NAVAID same name as FSS but not an RCO

### Off Airport AWOS/ASOS

**SANDBERG ASOS 120.625 SDB**

### Broadcast Stations (BS)

On request by the proper authority or when a VFR Checkpoint

**KFTM** **BS KFTM 1400**

### Remote Communications Outlet (RCO)

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

Thin line box without frequencies and controlling FSS name indicates no FSS frequency available.

**HANCOCK RCO**  
122.525 123.65  
**GREEN BAY**

**ST PAUL**  
122.35 108.6 STP  
**MINNEAPOLIS**

**HUMPHREY**  
122.35 275 HPY  
**MILES CITY**

FSS Radio providing voice communications

## AIRSPACE INFORMATION

### Class B Airspace

#### Sectional

**LAS VEGAS CLASS B**



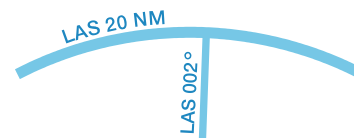
Appropriate notes as required may be shown.

Only the airspace effective below 18,000 feet MSL are shown.

(Mode C see FAR 91.215 / AIM)

### Terminal Area Chart (TAC)

**LAS VEGAS CLASS B**



**CTC LAS VEGAS APP**  
**ON 121.1 OR 257.8**

All mileages are nautical (NM).

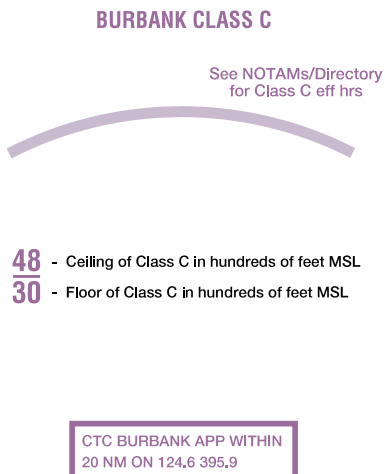
All radials are magnetic.

## AIRSPACE INFORMATION (Continued)

### Class C Airspace

Appropriate notes as required may be shown.

(Mode C see FAR 91.215/ AIM)



### Class E Airspace

The limits of Class E airspace shall be shown by narrow vignettes or by the dashed magenta symbol. Individual units of designated airspace are not necessarily shown; instead, the aggregate lateral and vertical limits shall be defined by the following:



Airspace beginning at the surface (sfc) designated around airports.

Airspace beginning at 700 feet AGL that laterally abuts 1200 feet or higher Class E Airspace.



Airspace beginning at 700 feet AGL that laterally abuts uncontrolled (Class G) airspace.

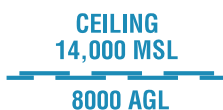


Airspace beginning at 1200 feet AGL that laterally abuts uncontrolled (Class G) airspace.



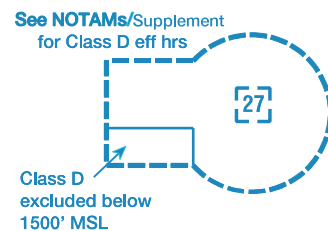
Differentiates floors of airspace greater than 700 feet above the surface.

When the ceiling is less than 18,000 feet MSL, the value prefixed by the word "CEILING", shall be shown along the limits.

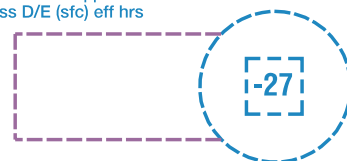


### Class D Airspace

Altitude in hundreds of feet MSL



See NOTAMs/Supplement for Class D/E (sfc) eff hrs

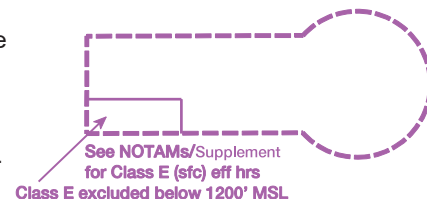


(A minus in front of the figure is used to indicate "from surface to but not including...")

Airspace beginning at the surface (sfc) designated around airports.



Airspace beginning at the surface with an airspace exclusion area where Class E airspace is excluded below 1200' MSL.





## AIRSPACE INFORMATION (Continued)

### Class E Airspace (Continued)

#### Low Altitude Airways VOR and LF/MF (Class E Airspace)

Low altitude Federal Airways are indicated by centerline.

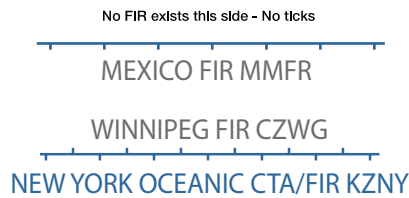
Only the controlled airspace effective below 18,000 feet MSL is shown

### Miscellaneous Air Routes

Combined Federal Airway/RNAV 2 "T" Routes are identified in solid blue type adjacent to the solid magenta federal airway identification.

The joint route symbol is screened magenta.

### Flight Information Regions (FIR)

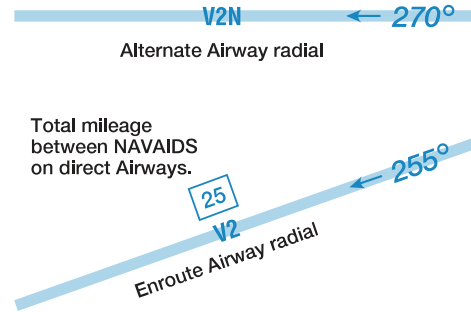


### Oceanic Control Areas (OCA)

OAKLAND OCEANIC  
CONTROL AREA

### Control Areas (CTA)

MONTERREY CTA SECTOR 3



### Offshore Control Areas



### Foreign Airspace Note

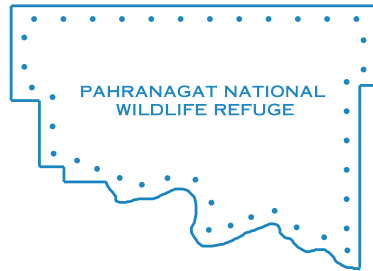
NOTE: Limited chart information provided outside of U.S. airspace. Refer to DoD (NGA) or foreign charts and flight information publications outside U.S. airspace.



## AIRSPACE INFORMATION (Continued)

### Special Conservation Areas

National Park, Wildlife Refuge, Primitive and Wilderness Areas, etc.

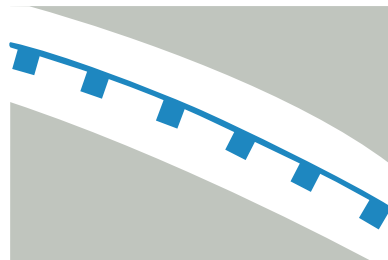


### Special Flight Rules Area (SFRA) Relating to National Security

Example: Washington DC

Appropriate notes as required may be shown.

Note: Delimiting line not shown when it coincides with International Boundary, projection lines or other linear features.



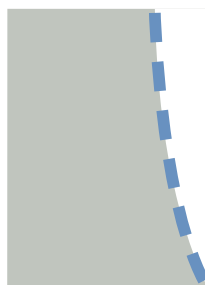
**WASHINGTON DC METROPOLITAN AREA SFRA**

Washington DC Metropolitan Area Special Flight Rules Area/Flight Restricted Zone (DC SFRA & DC FRZ) (See description in Atlantic Ocean).

### Temporary Flight Restriction (TFR) Relating to National Security

Example: Washington DC

Appropriate notes as required may be shown.

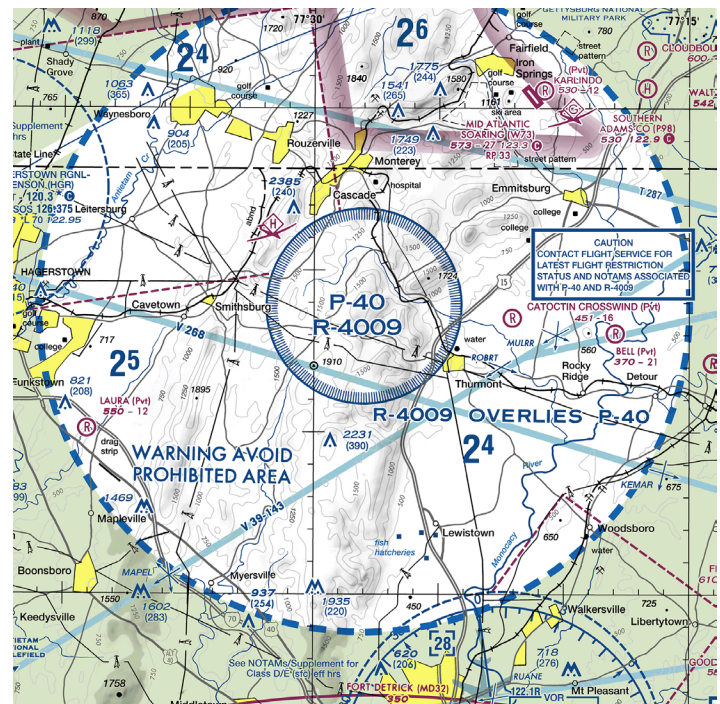
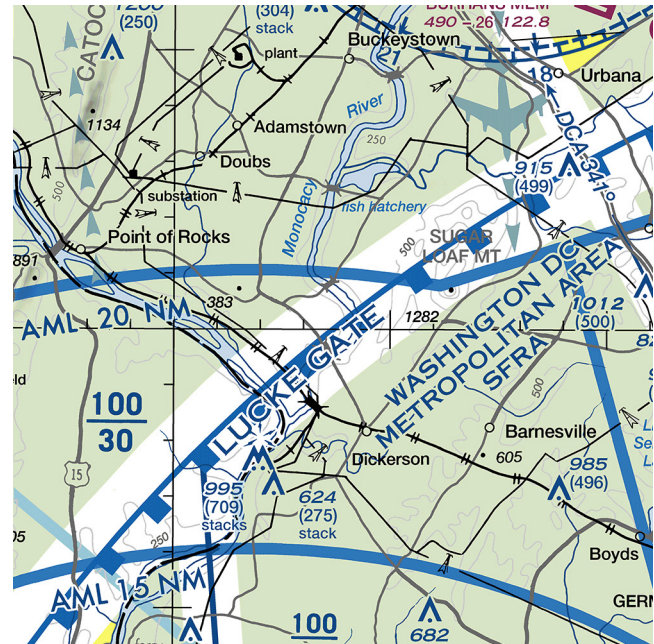


**CAUTION**  
CONTACT FLIGHT SERVICE FOR  
LATEST FLIGHT RESTRICTION  
STATUS AND NOTAMS ASSOCIATED  
WITH P-40 AND R-4009

NOAA Regulated National  
Marine Sanctuary  
Designated Areas

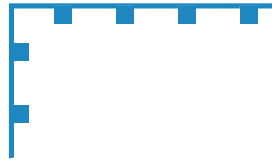


Flight operations below 1000' AGL  
over the designated areas within the  
Gulf of Farallones National Marine  
Sanctuary violate NOAA regulations  
(see 15 CFR 922).



## AIRSPACE INFORMATION (Continued)

### Special Flight Rules Area (SFRA)

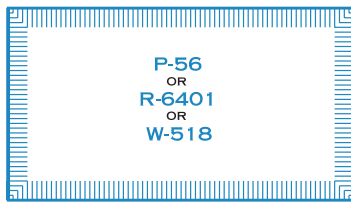


**SPECIAL FEDERAL AVIATION REGULATIONS (SFAR)**  
14 CFR Part 93, Subpart U and SFAR 50.2 -  
GRAND CANYON NATIONAL PARK SPECIAL  
FLIGHT RULES AREA. Special regulations apply  
to all aircraft operations below 18,000 feet MSL.

### Special Use Airspace

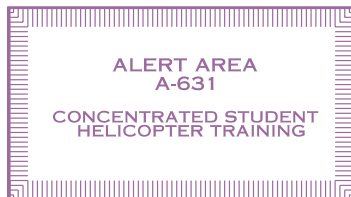
Only the airspace effective below 18,000 feet MSL is shown.

The type of area shall be spelled out in large areas if space permits.



**PROHIBITED, RESTRICTED  
or WARNING AREA**

\* Alert Areas do not extend into Class A, B, C and D airspace, or Class E airport surface areas.



**ALERT AREA**



**MILITARY OPERATIONS  
AREA (MOA)**

### Special Air Traffic Rules / Airport Patterns (FAR Part 93)

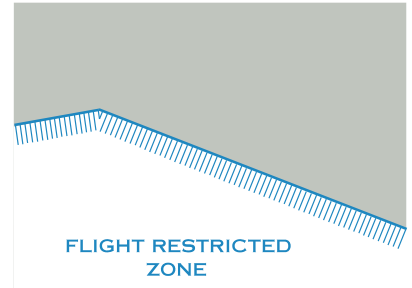
Appropriate boxed note as required shown adjacent to area.

Inside the FAR Part 93 boundary area, the cross hatching is at a 45 degree angle. The hypsometric tint shall be masked within the area around the yellow city tint when applicable (should not be confused with white glacier tint).



**SPECIAL NOTICE**  
Pilots are required to  
obtain an ATC clearance  
prior to entering this area.

### Flight Restricted Zone (FRZ) Relating to National Security



### National Security Area

Appropriate notes as required may be shown



Small Area

**NOTICE**  
FOR REASONS OF NATIONAL SECURITY  
PILOTS ARE REQUESTED TO AVOID FLIGHT  
BELOW 1200' MSL IN THIS AREA

### Special Awareness Training Areas



**NOTICE**  
Special awareness training required within 60 NM  
of DCA VOR-DME. See description on Flyway.

### Mode C (FAR 91.215)

Appropriate notes as required may be shown.



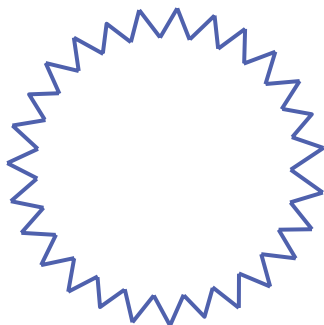
### Air Defense Identification Zone (ADIZ)

Note: Delimiting line not shown when it coincides with International Boundary, projection lines or other linear features.



## AIRSPACE INFORMATION (Continued)

### High Energy Radiation Areas



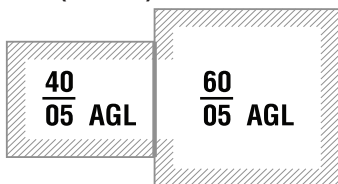
Appropriate notes as required may be shown

Solar Farm-  
Ocular Glare

### Military Training Routes (MTR)

← VR269

### Special Military Activity Routes (SMAR)



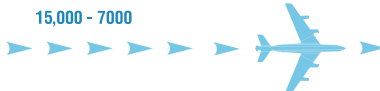
Boxed notes shown adjacent to route.

SPECIAL MILITARY ACTIVITY  
FOR IR850, IR851, IR852 CTC BANGOR RADIO  
ON 122.4 255.4 FOR ACTIVITY STATUS

40  
05 AGL

### IFR Routes

Arrival



Departure

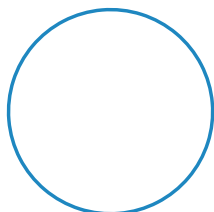


Arrival/Departure



TAC only

### Special Security Notice Permanent Continuous Flight Restriction Areas



DISNEYLAND THEME PARK  
See Note for requirements

### Sporting Event Temporary Flight Restriction (TFR) Sites



### National Defense Airspace Temporary Flight Restriction (TFR) Areas



Dallas National  
Defense Airspace TFR  
Check NOTAMs

### Space Operations Area (FAR Part 91.143)



### Miscellaneous Activity Areas

Aerobic Practice Area



Glider Operations



Hang Glider Activity



Ultralight Activity



Unmanned Aircraft Activity



Parachute Jumping Area with Frequency



Space Launch Activity Area





## AIRSPACE INFORMATION (Continued)

### VFR Transition Routes

Appropriate notes as required may be shown.

VFR TRANSITION ROUTE  
ATC CLEARANCE REQUIRED  
SEE SHOWBOAT GRAPHIC  
ON SIDE PANEL

Uni-directional



Bi-directional



Bi-directional with NAVAID Ident and Radial



TAC only

### Terminal Radar Service Area (TRSA)

TRSA Name

HARRISBURG TRSA

TRSA Boundaries



TRSA Sectors



Appropriate notes as required may be shown.

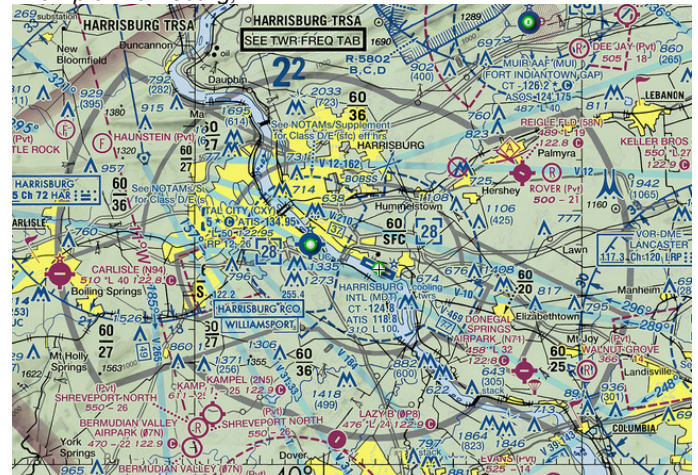
80 - Ceiling of TRSA in hundreds of feet MSL  
40 - Floor of TRSA in hundreds of feet MSL

SEE TWR FREQ TAB

Example: Los Angeles



Example: Harrisburg, PA



## NAVIGATIONAL AND PROCEDURAL INFORMATION

### Isogonic Line and Value

Isogonic lines and values shall be based on the five year epoch magnetic variation model.



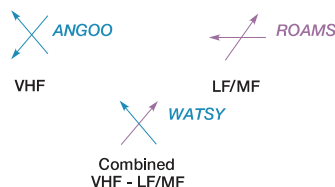
### Local Magnetic Notes

Unreliability Notes

Magnetic disturbance of as much as 78° exists at ground level and 10° or more at 3000 feet above ground level in this vicinity.

### Intersections

Named intersections used as reporting points. Arrows are directed toward facilities that establish intersection.



### Aeronautical Lights

By Request

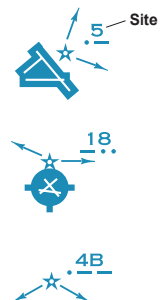
Rotating or Oscillating



Isolated Location



Rotating Light with Flashing Code Identification Light



Rotating Light with Course Lights and Site Number



NAVIGATIONAL AND PROCEDURAL INFORMATION (Continued)

Airport Beacons

Rotating or Flashing

Isolated Locations

2520

VFR Checkpoints

Underline indicates proper name of VFR Checkpoint.

STATE CAPITOL

SIGNAL HILL

LEWIS (Pvt)  
989 - 27

NORTHBROOK  
113.0 Ch 77 OBK

Waypoints

RNAV

GRANT

VFR Stand-Alone

VPXYZ

VFR Collocated with Checkpoint

NAME  
(VPXYZ)

Obstruction

Above 200' & below 1000' AGL  
(above 299' AGL in urban area)

1473  
(394)  
bldg

Under Construction (UC) or reported and position/elevation unverified

628  
UC

1000' and higher (AGL)

3368  
(1529)

Wind Turbine

2179  
(315)

High-Intensity Obstruction Lights

Less than 1000' (AGL)

1000' and higher (AGL)

Wind Turbine

Group obstruction

Wind Turbines

High-intensity lights may operate part-time or by proximity activation.

Marine Lights

With Characteristics of Light

Oc  
R SEC  
Land Light

Red

R

White

\*W

Green

G

Blue

BU

Orange

OR

Black

B

Yellow

Y

Sector

SEC

Fixed

F

Single Occulting

Oc

Group Occulting

Oc (2)

Composite Group Occulting

Oc (2+1)

Isophase

Iso

Flashing

FI

Group Flashing

FI (2)

Composite Group Flashing

FI (2+1)

Quick

Q

Interrupted Quick/Interrupted Quick Flashing

IQ

Morse Code

Mo (A)

Fixed and Flashing

FFI

Alternating

AI

Group

Gp

Long Flash

LFI

Group Quick Flashing

Q (3)

Very Quick Flashing

VQ

Group Very Quick Flashing

VQ (3)

Interrupted Very Quick Flashing

IVQ

Ultra Quick Flashing

UQ

Interrupted Ultra Quick Flashing

IUQ

\* Marine Lights are white unless otherwise noted. Alternating lights are red and white unless otherwise noted.

Group Obstruction

Above 200' & below 1000' AGL  
(above 299' AGL in urban area)

1062  
(227)

1000' and higher (AGL)

4977  
(1432)

At least two in group  
1000' and higher (AGL)

2889  
(1217)

Wind Turbines

2735  
(415)

Wind Turbine Farms

When highest wind turbine is unverified, UC will be shown after MSL value.

2894 UC

Maximum Elevation Figure (MEF)

(see VFR Terms tab for explanation)

135

# NAVIGATIONAL AND PROCEDURAL INFORMATION (Continued)

## Chart Limits

### Outline on Sectional of Terminal Area Chart



**LOS ANGELES TERMINAL AREA**  
Pilots are encouraged to use the Los Angeles VFR Terminal Area Chart for flights at or below 10,000'

### Outline of Special Chart on Sectional and Terminal Area Chart



### Outline on Sectional of Inset Chart



If inset chart is on the same chart as outline:

**INDIANAPOLIS INSET**  
See inset chart for additional detail

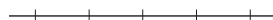
If inset chart is on a different chart:

**INDIANAPOLIS INSET**  
See inset chart on the St. Louis Sectional for additional information

## CULTURE

### Railroads

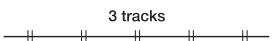
Single Track



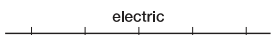
Double Track



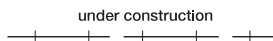
More Than Two Tracks



Electric



Non-operating, Abandoned or Under Construction



### Roads

Dual-Lane Divided Highway Category 1



Primary Category 2



Secondary Category 2



### Trails

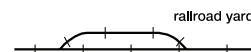
Category 3



Provides symbolization for dismantled railroad when combined with label "dismantled railroad."

### Railroad Yards

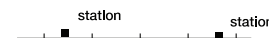
Limiting Track To Scale



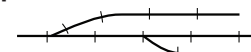
Location Only



### Railroad Stations



### Railroad Sidings and Short Spurs



### Road Markers

Interstate Route No.



U.S. Route No.



Air Marked Identification Label



### Road Names

LINCOLN HIGHWAY

### Roads Under Construction

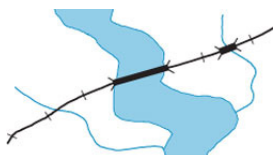


## CULTURE (Continued)

### Related Features to Railroads and Roads

#### Bridges and Viaducts

Railroad



#### Causeways



#### Overpasses and Underpasses

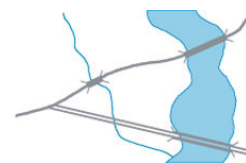


#### Tunnels-Road and Railroad

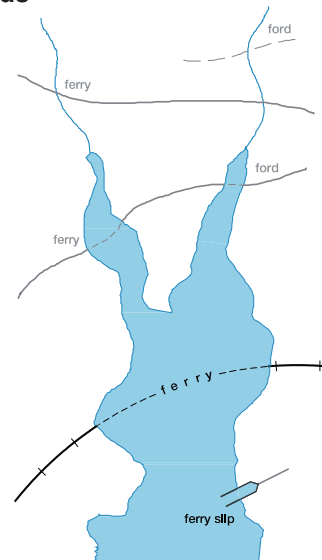


#### Bridges and Viaducts

Road



#### Ferries, Ferry Slips and Fords



### Populated Places

Yellow tinted areas indicate populated places.

Small circle indicates an area too small to depict using yellow tint.



Font Style and Size indicate the category of the populated area:

#### Large Cities Category 1

- population more than 250,000

#### Cities and Large Towns Category 2

- population 25,000 to 250,000

#### Towns and Villages Category 3

- population less than 25,000

ST LOUIS

NASHVILLE

Frankfort

## CULTURE (Continued)

### Boundaries

#### International

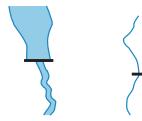
#### State or Province

#### Convention or Mandate Line



### Miscellaneous Cultural Features

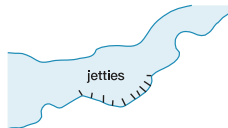
#### Dams



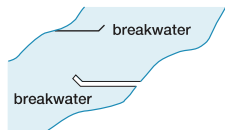
#### Passable Locks



#### Weirs and Jetties



#### Breakwaters



#### Pipelines

pipeline

#### Underground

underground pipeline

#### Landmark Features

- substation
- fort
- cemetery

#### Mines or Quarries

#### Shaft Mines or Quarries



#### Wells

#### Other than water

oil

#### Lookout Towers

(Elevation Base of Tower)



618

#### Aerial Cableways,Conveyors, Etc.

aerial cableway



### Time Zones

PST  
+8 (+7DT) = UTC  
MST  
+7 (+6DT) = UTC

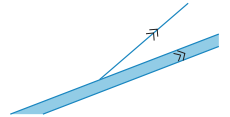
#### Date Line

INTERNATIONAL (Monday)  
DATE LINE (Sunday)

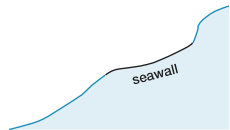
#### Dam Carrying Road



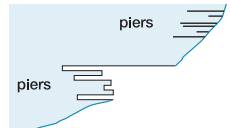
#### Small Locks



#### Seawalls



#### Piers, Wharfs, Quays, etc.



#### Power Transmission and Telecommunication Lines



#### Tanks

- water
- oil
- gas

#### Outdoor Theater



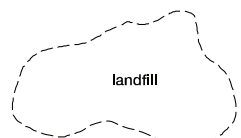
#### Race Tracks



#### Coast Guard Station

CG

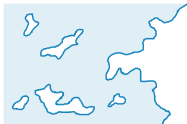
#### Landmark Areas





HYDROGRAPHY

Open Water



Open/Inland Water



Lakes

Label as required.



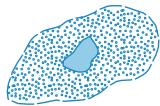
Perennial

When too numerous to show individual lakes, show representative pattern and descriptive note. Number indicates elevation.



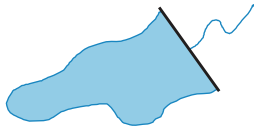
Non-Perennial

(dry, intermittent, etc.) Illustration includes small perennial lake.



Reservoirs

Natural Shorelines



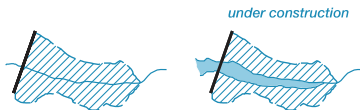
Man-made Shorelines  
Label when necessary for clarity



Too small to show to scale



Under Construction



Inland Water



Shorelines

Definite



Fluctuating



Unsurveyed  
Indefinite



Man-made



## HYDROGRAPHY (Continued)

### Streams

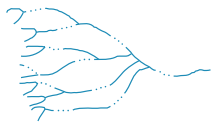
Perennial



Non-Perennial



Fanned Out



Alluvial fan

Braided

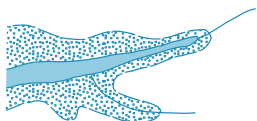


Disappearing

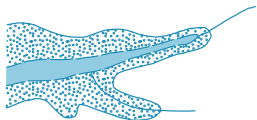


Seasonally Fluctuating

with undefined limits



with maximum bank limits,  
prominent and constant



Sand Deposits in and along  
riverbeds



### Wet Sand Areas

Within and adjacent to desert areas



### Canals

To Scale



Abandoned or Under Construction

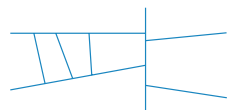


Abandoned to Scale



### Small Canals and Drainage / Irrigation Ditches

Perennial



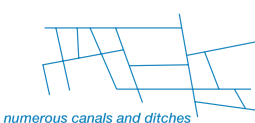
Non-Perennial



Abandoned or Ancient  
Numerous



Representative pattern and/or  
descriptive note.



### Aqueducts

To Scale



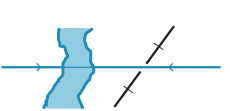
Abandoned or Under Construction



Underground



Suspended or Elevated

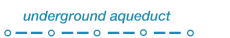


Tunnels



Kanats

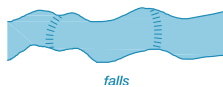
Underground with Air Vents



## HYDROGRAPHY (Continued)

### Falls

Double-Line

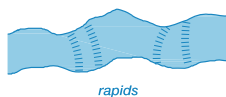


Single-Line



### Rapids

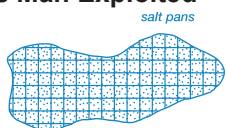
Double-Line



Single-Line



### Salt Evaporators and Salt Pans Man Exploited



### Hummocks and Ridges



### Peat Bogs



### Rice Paddies

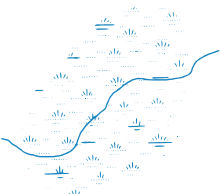
Extensive areas indicated by label only.



### Springs, Wells and Waterholes



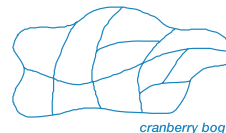
### Swamps, Marshes and Bogs



### Mangrove And Nipa



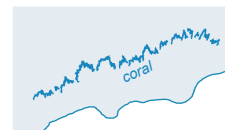
### Cranberry Bogs



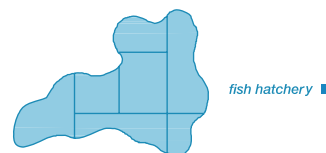
### Land Subject To Inundation



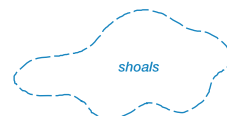
### Reefs-Rocky or Coral



### Fish Ponds and Hatcheries



### Miscellaneous Underwater Features Not Otherwise Symbolized



### Wrecks

Exposed



### Rocks-Isolated

Bare or Awash



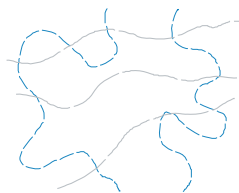
### Tundra

tundra

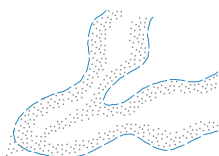
## HYDROGRAPHY (Continued)

### Permanent Snow and Ice Areas

#### Glaciers



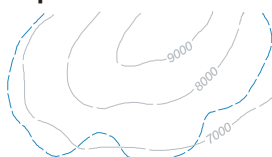
#### Glacial Moraines



#### Ice Cliffs

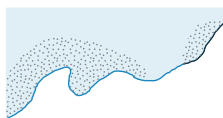


#### Snowfields, Ice Fields And Ice Caps



#### Foreshore Flats

Tidal flats exposed at low tide.



#### Ice

Permanent Polar Ice

Pack Ice

Ice Peaks



## RELIEF

### Contours

Basic



Approximate



Intermediate

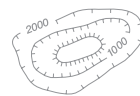


Auxiliary



Depression  
(Illustration includes mound within depression)

Values



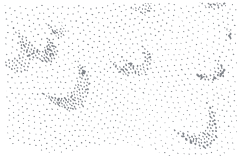
## RELIEF (Continued)

### Sand or Gravel Areas



### Sand Dunes

To Scale



### Hachuring



### Spot Elevations

Position Accurate



Position Accurate, Elevation Approximate



Highest in General Area



Highest on Chart



### Mountain Pass



### Distorted Surface Areas

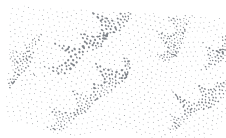


### Lava Flows



### Sand Ridges

To Scale



### Shaded Relief



### Quarries To Scale

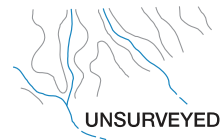


### Craters



### Unsurveyed Areas

Label appropriately as required



### Levees And Eskers



### Rock Strata Outcrop



### Strip Mines, Mine Dumps And Tailings

To Scale

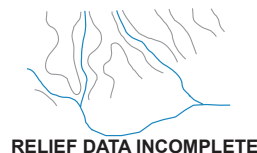


### Escarments, Bluffs, Cliffs, Depressions, Etc.



### Uncontoured Areas

Label appropriately as required





# VFR FLYWAY PLANNING CHARTS

## GENERAL INFORMATION

**VFR Flyway Planning Charts** are printed on the reverse sides of the Baltimore-Washington, Charlotte, Chicago, Cincinnati, Dallas-Ft. Worth, Denver, Detroit, Houston, Las Vegas, Los Angeles, Miami, Orlando, New Orleans, Phoenix, St. Louis, Salt Lake City, San Diego, San Francisco, Seattle, and Tampa Terminal Area Charts (TACs). The scale is 1:250,000, with area of coverage the same as the associated TACs. Flyway Planning Charts depict flight paths and altitudes recommended for use to by-pass areas heavily traversed by large turbine-powered aircraft. Ground references on these charts provide a guide for visual orientation. VFR Flyway Planning charts are designed for use in conjunction with TACs and are not to be used for navigation. These charts are updated every 56 days.

## AIRPORTS

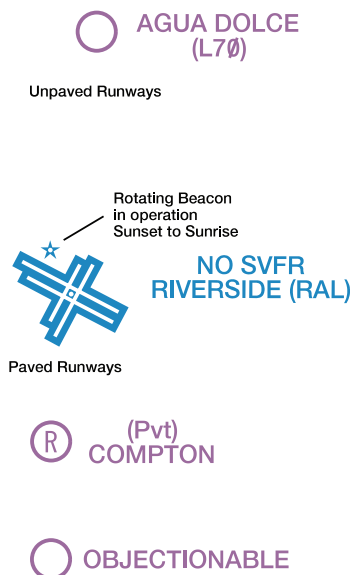
### Landplane

No distinction is made between airports with fuel and those without fuel. Runways may be exaggerated to clearly portray the pattern. Hard-surfaced runways that are closed but still exist are included in the charted pattern.

FAR 91 - Fixed wing special VFR operations prohibited.

(Pvt): Non-public use having landmark value.

"OBJECTIONABLE": This airport may adversely affect airspace use.



### Landplane (continued)

ABANDONED - Depicted for landmark value or to prevent confusion with an adjacent usable landing area. Only portrayed beneath or close to the VFR flyway routes or requested by the FAA. (Normally at least 3000' paved).

FOREIGN

### Foreign Airport Note

NOTE: Airports outside the U.S. Flight Information Region (FIR) are shown with the standard symbol. Only the airport names and ICAO identifiers are shown.

## RADIO AIDS TO NAVIGATION

### VHF Omni-Directional Radio Range (VOR)



### VORTAC



### VOR-DME



### DME



Example: DME co-located at an airport.



### Non-Directional Radio Beacon (NDB)



### NDB-DME



### NAVAIDS Used to Define Class Airspace

ILS - DME



Shared ILS - DME



## AIRSPACE INFORMATION

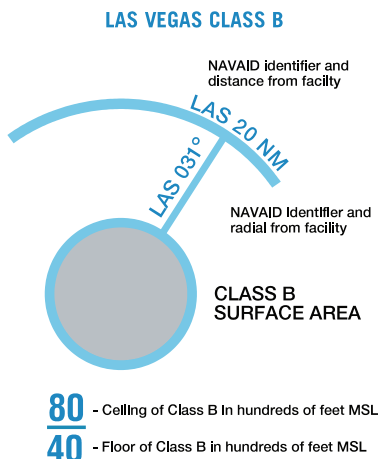
### Class B Airspace

Appropriate notes as required may be shown.

(Mode C see FAR 91.215/AIM)

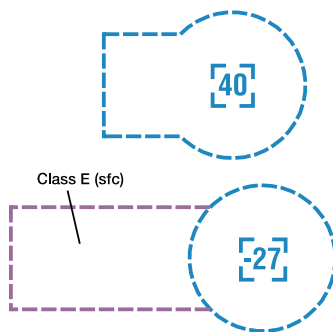
All mileages are nautical (NM).

All radials are magnetic.



Floors extending "upward and above" a certain altitude are preceded by a +. Operations at or below these altitudes are outside of the Class B Airspace.)

### Class D Airspace



ALTITUDE IN HUNDREDS OF FEET MSL.

### Special Airspace Areas

#### Special Flight Rules Area (SFRA) Relating to National Security

Example: Washington DC

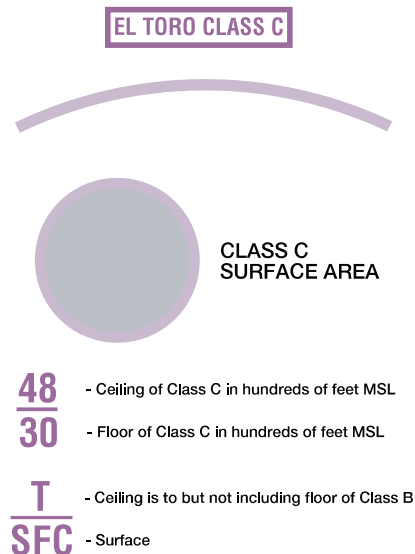
Appropriate notes as required may be shown.

Note: Delimiting line not shown when it coincides with International Boundary, projection lines or other linear features.

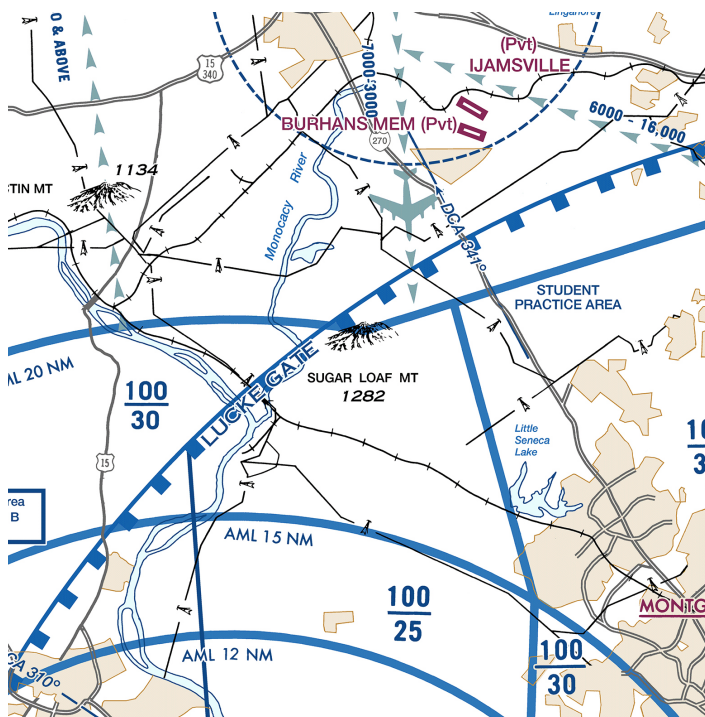
### Class C Airspace

Appropriate notes as required may be shown.

(Mode C see FAR 91.215/AIM)



### Class E Surface (SFC) Airspace

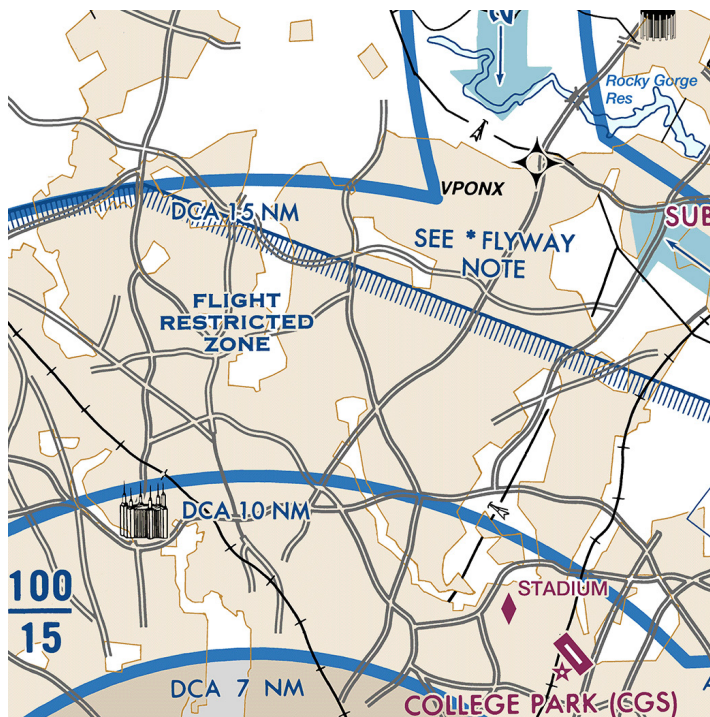




## AIRSPACE INFORMATION (Continued)

### Flight Restricted Zone (FRZ) Relating To National Security

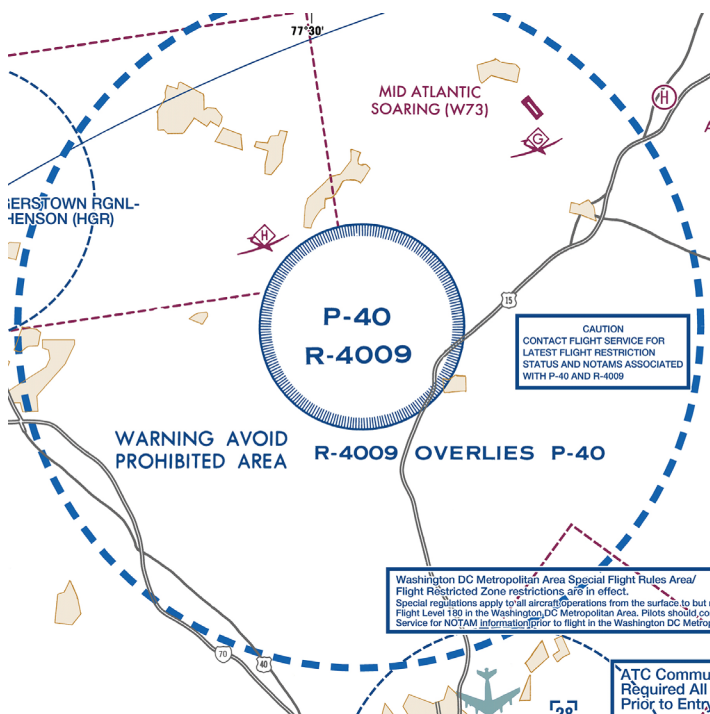
Example: Washington DC



### Temporary Flight Restriction (TFR) Relating To National Security

Example: Washington DC

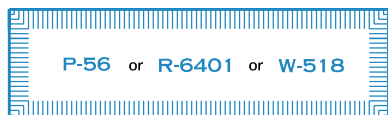
Appropriate notes as required may be shown.



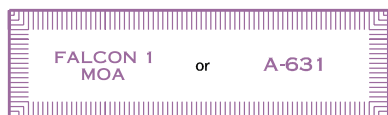
### Special Use Airspace

Only the airspace effective below 18,000 feet MSL is shown.

The type of area shall be spelled out in large areas if space permits.



PROHIBITED, RESTRICTED or WARNING AREA



MILITARY OPERATIONS AREA (MOA) or ALERT AREA

### Air Defense Identification Zone (ADIZ)

Note: Delimiting line not shown when it coincides with International Boundary, projection lines or other linear features.

CONTIGUOUS U.S. ADIZ

### Foreign Airspace Note

NOTE: Limited chart information provided outside of U.S. airspace. Refer to DoD (NGA) or foreign charts and flight information publications outside U.S. airspace.

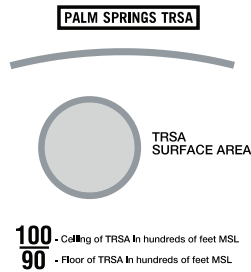
## AIRSPACE INFORMATION (Continued)

### Special Air Traffic Rules/Airport Traffic Areas (FAR Part 93)

Appropriate boxed note as required shown adjacent to area. Inside the FAR Part 93 boundary area, the cross hatching is at a 45 degree angle.



### Terminal Radar Service Area (TRSA)



### IFR Routes

Arrival



Departure



Arrival/Departure



### VFR Transition Routes

Appropriate notes as required may be shown.

VFR TRANSITION ROUTE  
ATC CLEARANCE REQUIRED  
SEE SHOWBOAT GRAPHIC  
ON SIDE PANEL

Uni-directional



Bi-directional



Bi-directional with NAVAID Ident and Radial



### Special Conservation Areas

NOAA Regulated National Marine Sanctuary Designated Areas



Flight operations below 1000' AGL over the designated areas within the Gulf of Farallones National Marine Sanctuary violate NOAA regulations (see 15 CFR 922).

### Mode C (FAR 91.215)

Appropriate notes as required may be shown.



### Sporting Event Temporary Flight Restriction (TFR) Sites



### National Defense Airspace Temporary Flight Restriction (TFR) Areas



Dallas National  
Defense Airspace TFR  
Check NOTAMS

### Miscellaneous Activity Areas

Aerobatic Practice Area



Glider Operations



Hang Glider Activity



Ultralight Activity



Unmanned Aircraft Activity



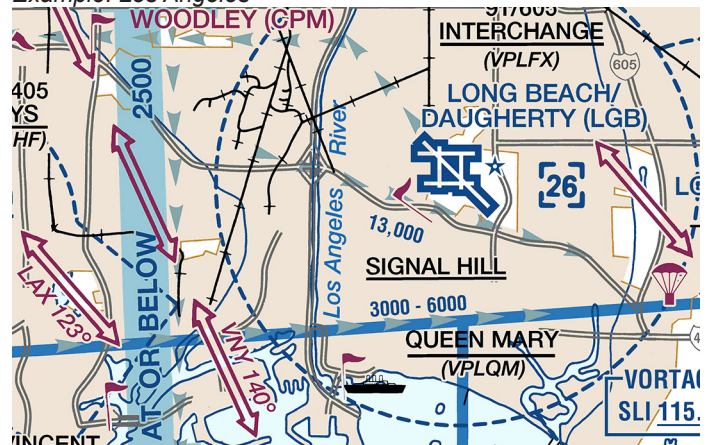
Parachute Jumping Area with Frequency



Space Launch Activity Area

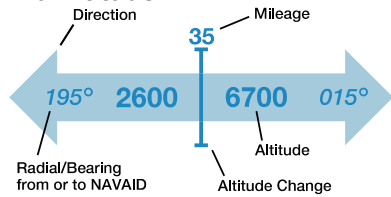


Example: Los Angeles



AIRSPACE INFORMATION (Continued)

Suggested VFR Flyway And Altitude



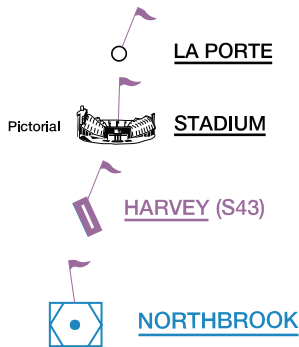
Military Training Routes (MTR)



NAVIGATIONAL AND PROCEDURAL INFORMATION

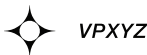
VFR Checkpoints

Underline indicates proper name of VFR Checkpoint



VFR Waypoints

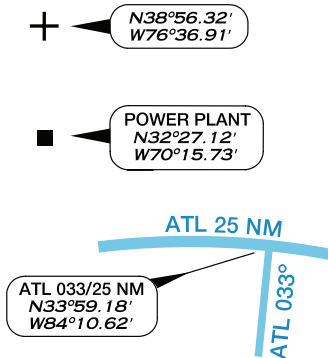
Stand-Alone



Collocated with VFR Checkpoint



Navigational Data

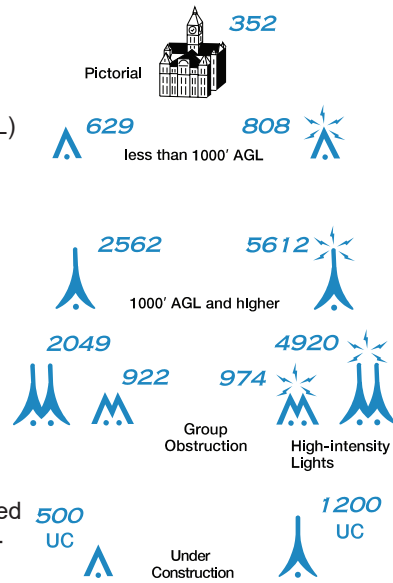


Obstructions

Obstacles may be lit or unlit.

Only obstacles greater than 999' above ground level (AGL) or specified by the local ATC Facility shall be shown.

AGL heights are not shown. High-intensity lights may operate part-time or by proximity activation.



Under Construction or reported and position/elevation unverified.

## CULTURE

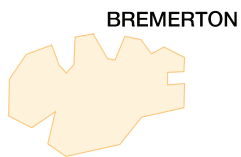
### Railroads

Single and Multiple Tracks



### Populated Places

Built-up Areas



Towns



## BOUNDARIES

International



## HYDROGRAPHY

Shorelines



## RELIEF

Spot Elevations

Position Accurate  
Mountain Peaks



### Roads

Dual-Lane



Divided Highway Primary



### Prominent Pictorials



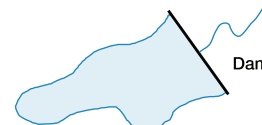
### Power Transmission Lines



### Landmarks



### Reservoirs



### Major Lakes and Rivers



# HELICOPTER ROUTE CHARTS

## GENERAL INFORMATION

**Helicopter Route Charts** are three-color charts that depict current aeronautical information useful to helicopter pilots navigating in areas with high concentrations of helicopter activity. Information depicted includes helicopter routes, four classes of heliports with associated frequency and lighting capabilities, NAVAIDS, and obstructions. In addition, pictorial symbols, roads, and easily-identified geographical features are portrayed. The scale is 1:125,000. These charts are updated every 56 days.

## AIRPORTS

### Landplane

All recognizable runways, including some that may be closed, are shown for visual identification.



Public



Private



Unverified



Abandoned



Foreign



### Airport Data Grouping

Boxed airport name indicates airport for which a Special Traffic Rule has been established.

(Pvt): Non-public use having landmark value.

"OBJECTIONABLE": This airport may adversely affect airspace use.

Flight Service Station on field

FSS

Airspace where fixed wing special visual flight rules operations are prohibited (shown above airport name) FAR 91

NO SVFR

Indicates FAR 93 Special Air Traffic Rules and Airport Traffic

NAME

Location Identifier

(NAM)

ICAO Location Identifier

(PNAM)

Control Tower (CT) - primary frequency

CT - 119.1

Star indicates operation part-time. See tower frequencies tabulation for hours of operation

\*

When lighting is lacking, the respective character is replaced by a dash.

Lighting codes refer to runway edge lights and may not represent the longest runway or full length lighting. Dashes are not shown on heliports or helipads unless additional information follows the elevation (e.g. UNICOM, CTAF).

### Seaplane



### Heliport

Heliports public and private



Medical Center



Helipads located at major airports (when requested)



### Ultralight Flight Park



### Foreign Airport Note

NOTE: Airports outside the U.S. Flight Information Region (FIR) are shown with the standard  symbol. Only the airport names and ICAO identifiers are shown.



FSS  
NO SVFR  
NAME (NAM) (PNAM)  
CT - 119.1 \* (119.8 HELI)  
ATIS 115.4  
ASOS/AWOS 135.42  
285 L 122.95  
(Unverified)  
AOE

Automated Terminal Information Service

ATIS 115.4

Automated Surface Weather Observing Systems (shown when full-time ATIS is not available). Some ASOS/AWOS facilities may not be located at airports.

ASOS/AWOS 135.42

Elevation in feet

285

Lighting in operation Sunset to Sunshine

L

Lighting limitations exists, refer to Chart Supplement

\*L

UNICOM - Aeronautical advisory station

122.95

Follows the Common Traffic Advisory Frequency (CTAF)



Unverified Heliport

(Unverified)

Airport of Entry

AOE

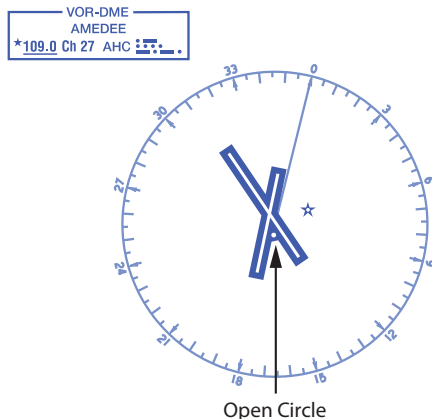
# RADIO AIDS TO NAVIGATION

## NAVAIDs

### VHF Omni-Directional Radio (VOR) Range

Open circle symbol shown when NAVAID located on airport. Type of NAVAID shown in top of box.

Compass Rose is "reference" oriented to magnetic north.



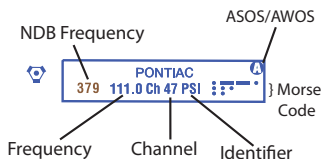
### VOR

Operates less than continuous or On-Request



### VORTAC

When an NDB NAVAID shares the same name and Morse Code as the VOR NAVAID the frequency can be collocated inside the same box to conserve space.



### VOR-DME



### DME



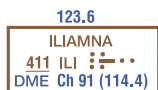
### Flight Service Station (FSS)

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

Certain FSSs provide Airport Advisory Service, refer to Chart Supplement.

R - Receive Only

DENVER DEN



## Non-Directional Radio Beacon (NDB)



MONTAGUE  
404 MOG

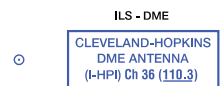
Underline indicates no voice on this frequency

### NDB-DME



GAMBELL  
369 GAM  
DME Ch 92 (114.5)

### NAVAID Used to Define Class B Airspace



### Broadcast Stations (BS)

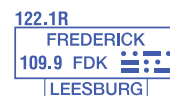
On request by the proper authority or when a VFR Checkpoint.



### Remote Communications Outlet (RCO)

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

Thin line box without frequencies and controlling FSS name indicates no FSS frequency available.





# AIRSPACE INFORMATION

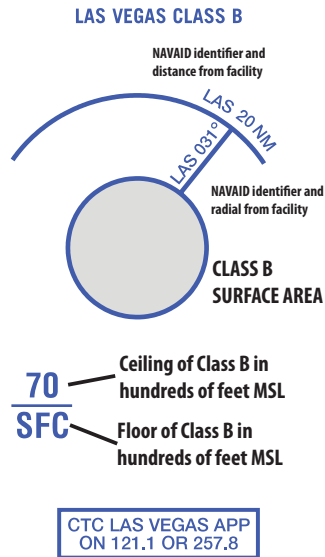
## Class B Airspace

Appropriate notes as required may be shown. (Mode C see FAR 91.215/AIM)

All mileages are nautical (NM)

(Floors extending "upward from above" a certain altitude are preceded by a +. Operations at and below these altitudes are outside of Class B Airspace.)

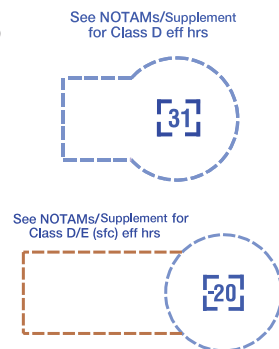
All radials are magnetic.



## Class D Airspace

(A minus in front of the figure is used to indicate "from surface to but not including...")

Altitudes in hundreds of feet MSL.



## Special Airspace Areas

### Special Flight Rules Area (SFRA) Relating to National Security

Example: Washington DC

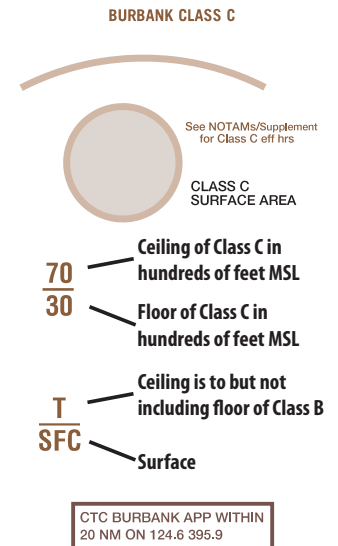
Appropriate notes as required may be shown.

Note: Delimiting line not shown when it coincides with International Boundary, projection lines or other linear features.



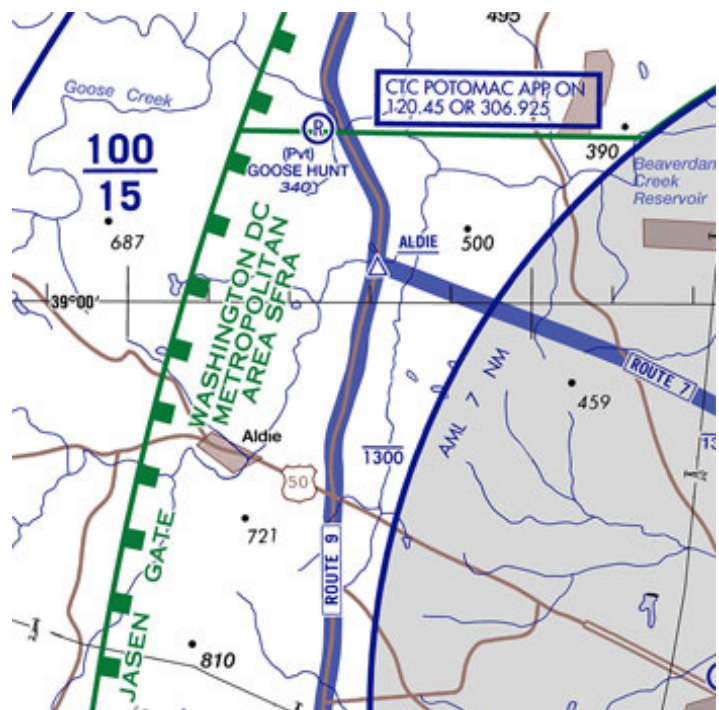
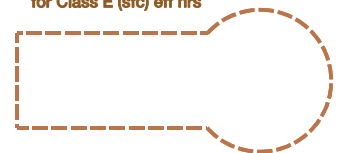
## Class C Airspace

Appropriate notes as required may be shown. (Mode C see FAR 91.215/AIM)



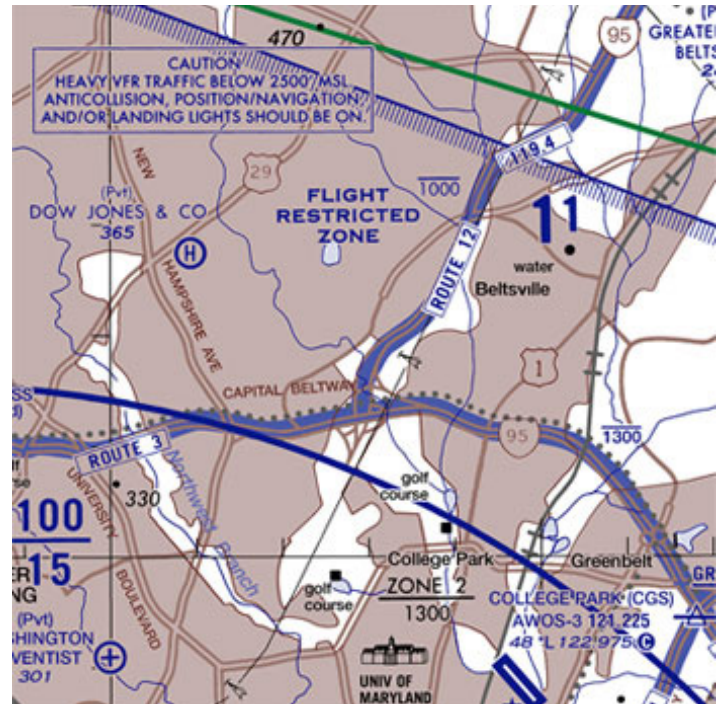
## Class E Surface (SFC) Airspace

See NOTAMs/Supplement for Class E (sfc) eff hrs



*Example: Washington DC*

\_\_\_\_\_



CONTIGUOUS  
U.S. ADIZ

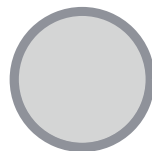


MODE C & ADS-B OUT  
30 NM

**PALM SPRINGS TRSA**



Appropriate notes as required may be shown.

TRSA  
SURFACE AREA

SEE TWR FREQ TAB

**80** - Ceiling of TRSA in hundreds of feet MSL  
**40** - Floor of TRSA in hundreds of feet MSL








**SPECIAL NOTICE**  
Pilots are required to obtain an ATC clearance prior to entering this area.

 STADIUM

## Dallas National Defense Airspace TFR Check NOTAMs

AIRSPACE INFORMATION (Continued)




Miscellaneous Activity Areas

Aerobatic Practice Area	
Glider Operations	
Hang Glider Activity	
Ultralight Activity	
Unmanned Aircraft Activity	
Parachute Jumping Area with Frequency	 122.9
Space Launch Activity Area	

Military Training Routes (MTR)



Helicopter Routes

Primary Route with Route Name and Tower Frequency	
Secondary Route	
Transition Symbol	

Reporting Points

	
Non-compulsory	
Compulsory	
Reporting Point Name	BAHA1

Foreign Airspace Note

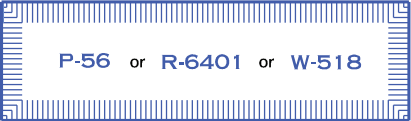
NOTE: Limited chart information provided outside of U.S. airspace. Refer to DoD (NGA) or foreign charts and flight information publications outside U.S. airspace.

Police Zones

.....  
ZONE 8  
1000

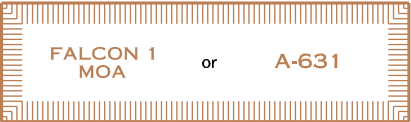
Special Use Airspace

Only the airspace effective below 18,000 feet MSL is shown.



The type of area shall be spelled out in large areas if space permits.

PROHIBITED, RESTRICTED or WARNING AREA



MILITARY OPERATIONS AREA (MOA) or ALERT AREA

One-way Route



Altitude Changeover Point



Recommended Altitudes

Maximum Altitude	500
Minimum Altitude	500
Recommended Altitude	500

AIRSPACE INFORMATION (Continued)

Special Conservation Areas

National Park, Wildlife Refuge, Primitive and Wilderness Areas, etc.



NOAA Regulated National Marine Sanctuary Designated Areas

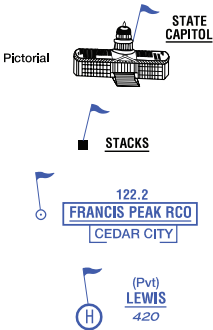


Flight operations below 1000' AGL over the designated areas within the Gulf of Farallones National Marine Sanctuary violate NOAA regulations (see 15 CFR 922).

NAVIGATIONAL AND PROCEDURAL INFORMATION

VFR Checkpoints

Underline indicates proper name of VFR Checkpoint.



VFR Waypoints

Stand-Alone



Collocated with VFR Checkpoint



Collocated with VFR Checkpoint & Reporting Point



Obstruction

Above 299' and below 1000' AGL



1000' and higher AGL



Group Obstruction

Above 299' and below 1000' AGL



1000' and higher AGL



High-Intensity Obstruction Lights

High-intensity lights may operate part-time or by proximity activation.

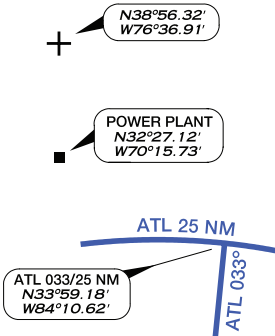


Wind Turbine Farms

When highest wind turbine is unverified, UC will be shown after MSL value.



Navigation Data



Maximum Elevation Figure (MEF)

(see VFR Terms tab for explanation)

124

CULTURE

Railroads

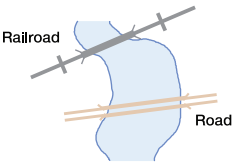
Single Track



Double Track

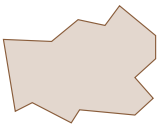


Bridges



Populated Places

Built-up Areas



Roads

Dual-Lane:  
Divided Highways



Major Boulevards & Major Streets  
Primary



Boundaries

International



State or Province



Power Transmission Lines



Prominent Pictorials



Landmarks

- |   |                          |
|---|--------------------------|
| ■ Landmark-stadium, factory, school, etc. | ⬆ Lookout Tower          |
| ⚒ Mines or Quarries                       | 🏎 Race Track             |
| 🎪 Outdoor Theater                         | ● Tank-water, oil or gas |