VFR AERONAUTICAL CHART SYMBOLS

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GENERAL INFORMATION
Symbols shown are for World Aeronautical Charts (WACs), Sectional Aeronautical Charts (Sectionals), Terminal Area Charts (TACs), VFR Flyway Planning Charts and Helicopter Route Charts. When a symbol is different on any VFR chart series, it will be annotated as such (e.g. WAC or Not shown on WAC).
### AIRPORTS

**LANDPLANE: CIVIL**

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

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

Refueling and repair facilities for normal traffic.

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

**LANDPLANE: CIVIL-MILITARY**

Refueling and repair facilities not indicated.

**SEAPLANE: CIVIL**

**LANDPLANE: EMERGENCY**

No facilities

or

Complete information is not available.

Add appropriate note as required: "(CLOSED)"

**LANDPLANE: MILITARY**

Refueling and repair facilities not indicated.

**SEAPLANE: EMERGENCY**

No facilities or complete information is not available.

**Heliport**

(Selected)

**ULTRALIGHT FLIGHT PARK**

(Selected)

### AIRPORT DATA GROUPING

(Pvt) - Non-public use having emergency or landmark value.

<table>
<thead>
<tr>
<th>FSS NO SVFR NAME</th>
<th>(NAM)</th>
<th>CT - 118.3</th>
<th>ASOS/ AWOS</th>
<th>897 Elevation in foot</th>
<th>L - Lighting in operation Sunset to Sunrise</th>
<th>110 - Length of runway in hundreds of feet; usable length may be less.</th>
<th>UNICOM</th>
<th>RP 23,34</th>
<th>VFR Advisory 125.0 AOE</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Flight Service Station on field
- Airports where fixed wing special visual flight rules operations are prohibited (shown above airport name) F.A.R. 91
- Indicates F.A.R. 91 Special Air Traffic Rules and Airport Traffic Patterns
- Airport Surveillance Radar (not shown on WAC)
- Location Identifier
- Control Tower (CT) - primary frequency
- ShowsCT indicates operation part-time. See tower frequencies tabulation for hours of operation
- Indicates Common Traffic Advisory Frequencies (CTAF) (not shown on WAC)
- Automated Surface Weather Observing Systems (shown where full-time ATIS is not available).
- Some ASOS/AWOS facilities may not be located at airports. (not shown on WAC)
- Elevation in foot
- Lighting in operation Sunset to Sunrise
- Lighting limitations exist; refer to Airport/Facility Directory.
- Length of runway in hundreds of feet; usable length may be less.
- Aeronautical advisory station ("*" only on WAC)
- Runways with Right Traffic Patterns (public use) (not shown on WAC)
- Special conditions exist - sec A/FID
- VFR Advisory 125.0 (VFR Advisory Service shown where full-time ATIS not available and frequency is other than primary CT frequency.
- AOE - Airport of Entry

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

### VHF OMNI-DIRECTIONAL RADIO (VOR) RANGE

<table>
<thead>
<tr>
<th>Location</th>
<th>Frequency</th>
<th>Morse Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salem</td>
<td>114.3 SVM</td>
<td></td>
</tr>
</tbody>
</table>

- Compass Rose oriented to slave variation.

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

- Operates less than continuous or On-Request Broadcast (TWEB)

- Transcribed Weather Broadcast (TWB)

### VOR

- 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 colocated inside the same box to conserve space.

### VOR-DME

- Hazardous Inflight Weather Advisory Service (HIWAS)

### NON-DIRECTIONAL RADIOBEACON (NDB)

- WAC

### NDB-DME

- WAC

---

## ILS COMPONENTS

**Shown when component of airway system or used in the description of Class B airspace.**

- **LOCALIZER**
  - LCZR
  - LOCALIZER 109.5 I-BED

- **ILS - DME**
  - SALT LAKE CITY
  - DME ANT 8 (BINT) Ch 92 (111.3)

## BROADCAST STATIONS (BS)

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

- **KFTM**
  - BS (KFTM 1469)

- **IDAHOFALLS**
  - 109.8 Ch 27 IDA 1469
  - FSS Oper 0600-2300 Boise FSS other times.
  - NAVAID same name as FSS but not an RCO

## FLIGHT SERVICE STATION (FSS)

- Heavy line box indicates Flight Service Station (FSS). Frequencies 121.5, 122.2, 243.9 and 255.4 (Canada - 121.5, 126.7 and 243.9) are normally available at all FSS’s and are not shown above boxes.
- All other frequencies are shown.
- For Local Airport Advisory use FSS frequency 123.8.
- **R** - Receive only

### REMOTE COMMUNICATIONS OUTLET (RCO)

- **OLYMPIA RCO**
  - McCHORD

- **ST PAUL**
  - 108.6 STP 1469
  - FSS Providing voice communication

- **HUMPHREY**
  - 275 HPY 1469

- **GAMBELL**
  - 359 GAM Ch 92 (111.3)
### RADIO AIDS TO NAVIGATION

<table>
<thead>
<tr>
<th>AIR FORCE STATION (AFS)</th>
<th>LONG RANGE RADAR STATION (LRRS)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AFS at airport with NDB</strong></td>
<td></td>
</tr>
<tr>
<td><strong>LRRS at airport with NDB</strong></td>
<td></td>
</tr>
</tbody>
</table>

### AIRSPACE INFORMATION

#### CLASS C AIRSPACE

- **BURBANK CLASS C**
  - Ceiling of Class C in hundreds of feet MSL
  - Floor of Class C in hundreds of feet MSL
  - Ceiling is to but not including floor of Class B
  - Surface

- **BOISE CLASS C**
  - Ceiling of Class C in hundreds of feet MSL
  - Floor of Class C in hundreds of feet MSL

- **FOR FLIGHTS AT OR BELOW 6000 MSL SEE PHOENIX VFR SECTIONAL CHART**

- **WAC only**

#### CLASS B AIRSPACE

- **LAS VEGAS CLASS B**
  - Ceiling of Class B in hundreds of feet MSL
  - Floor of Class B in hundreds of feet MSL

- **FOR FLIGHTS AT AND BELOW 8000 MSL SEE KANSAS CITY VFR TERMINAL AREA CHART**

- **WAC only**

#### CLASS D AIRSPACE

- **See NOTAMs/Directory for Class D eff hrs**

- **ALTITUDE IN HUNDREDS OF FEET MSL**

- **Not shown on WAC**

#### AIRSPACE INFORMATION

- **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)**
- **All mileages are nautical (NM).**
- **All radials are magnetic.**
### 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...
- Airspace beginning at 1200 feet AGL or greater that abuts uncontrolled airspace (Class G)...

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.

### CANADIAN AIRSPACE

Individual units of designated Canadian airspace are not necessarily shown; instead, the aggregate lateral and vertical limits shall be portrayed as closely as possible to the comparable U.S. airspace.

Appropriate notes as required may be shown.

### OFFSHORE CONTROL AREAS

#### ATLANTIC LOW CONTROL AREA

- Class G Airspace
- 9500 MSL
- Atlantic Low Control Area

#### ATLANTIC LOW CONTROL AREA

- 8000 MSL
- Control Area 114BL

### AIRSPACE OUTSIDE OF U.S.

Other than Canada

Appropriate notes as required may be shown.

### FLIGHT INFORMATION REGIONS (FIR) and /or (CTA)

#### MONCTON FIR CZQM

#### WINNIPEG FIR CZWG

#### EDMONTON FIR CZEG

#### OAKLAND OCEANIC CONTROL AREA

**NOTE:** Refer to current Canadian charts and flight information publications for information outside of U.S. airspace.

### AIRSPACE CLASSIFICATION (SEE CANADA FLIGHT SUPPLEMENT) AND OPERATIONAL REQUIREMENTS (SEE DOD AREA PLANNING AP(1)) MAY DIFFER BETWEEN CANADA AND UNITED STATES

**NOTE:** Refer to current DOD (ING) flight information publications for information outside of U.S. airspace.

**NO FIR EXISTS THIS SIDE - NO TICKS**
### 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.

- **V2N** Alternate Airway radial
- **R40** LF / MF Airway
- **V2N** Alternate Airway radial
- **R40** LF / MF Airway

### MISCELLANEOUS AIR ROUTES

- **BR 63V** Bahamas Route
- **A 301** Oceanic & ATS Route
- **AR5** Atlantic Route
- **GULF RTE 28** Gulf Route
- **ROUTE 2** Class G Route
- **BR 63V** Bahamas Route
- **A 301** Oceanic & ATS Route
- **AR5** Atlantic Route
- **GULF RTE 28** Gulf Route
- **ROUTE 2** Class G Route

### SPECIAL USE AIRSPACE

Only the airspace effective below 18,000 feet MSL are shown. The type of area shall be spelled out in large areas if space permits.

- **P-56** or **R-6401** or **W-518**

### PROHIBITED, RESTRICTED or WARNING AREA

**ALERT AREA**

**A-631** CONCENTRATED STUDENT HELICOPTER TRAINING

**ALERT AREA**

**VANCE 2 MOA**

**MILITARY OPERATIONS AREA (MOA)**

**MILITARY TRAINING ROUTES (MTR)**

Not shown on WAC

### SPECIAL MILITARY ACTIVITY ROUTES (SMAR)

Boxed notes (as in text) shown adjacent to route.

- **40 05 AGL**
- **45 05 AGL**

**SPECIAL MILITARY ACTIVITY CONTACT MOBILE FSS ON 123.8 FOR ACTIVITY STATUS**

- **40 05 AGL** - Ceiling of SMAR in hundreds of feet MSL
- **40 05 AGL** - Floor of SMAR in hundreds of feet AGL

Not shown on WAC
### SPECIAL AIRSPACE RULES / AIRPORT PATTERNS (FAR 93)

Appropriate boxed note as required shown adjacent to area.

### SPACE OPERATIONS AREA (FAR 91.143)

**DARKER TINT IS FAR 91.143 AREA**

Not shown on WAC

### MODE C (FAR 91.215)

**MODE C**

30 NM

### MISCELLANEOUS AIRSPACE AREAS

- **Parachute Jumping Area with Frequency**
  - 122.9
- **Glider Operating Area**
- **Ultralight Activity**
- **Hang Glider Activity**

Not shown on WAC

### SPECIAL CONSERVATION AREAS

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

Not shown on WAC

### SPECIAL AIRSPACE AREAS

### SPECIAL FEDERAL AVIATION REGULATIONS (SFAR) AREAS

Appropriate notes as required may be shown.

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

### FLIGHT RESTRICTED ZONE RELATING TO NATIONAL SECURITY

Example: Washington DC

Appropriate notes as required may be shown.

**Washington DC Metropolitan Area Air Defense Identification Zone (ADIZ)**

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

### TEMPORARY FLIGHT RESTRICTION (TFR) RELATING TO NATIONAL SECURITY

Example: P-40/R-4009

Appropriate notes as required may be shown.

**CAUTION**
P-40 AND R-4009 EXPANDED BY TEMPORARY FLIGHT RESTRICTION. CONTACT AFSS FOR LATEST STATUS AND NOTAMS.
AIRSPACE INFORMATION

NATIONAL SECURITY AREA

Appropriate notes as required may be shown.

Not shown on WAC

HIGH ENERGY RADIATION AREAS

Appropriate notes as required may be shown.

TERMINAL RADAR SERVICE AREA (TRSA)

Appropriate notes as required may be shown.

HAZARDOUS LASER TRANSMISSIONS SFC to infinity See Airport Facility/Directory

WAC

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

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.

COMPASS ROSETTE

Shown only in areas void of VOR roses. Compass rosette will be based on the five year epoch magnetic variation model.
### NAVIGATIONAL AND PROCEDURAL INFORMATION

#### INTERSECTIONS

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

**ANGOO**

**ROAMS**

**WATSY**

Combined VHF - LF / MF

Not shown on WAC

#### AERONAUTICAL LIGHTS

Rotating or Oscillating Located at Aerodrome

*In isolated location on top of high structure

#### MARINE LIGHTS

With Characteristics of Light

- **R** Red
- **W** White
- **G** Green
- **B** Blue
- **SEC** Sector
- **F** Fixed
- **Oc** Single Occulting
- **Oc (2)** Group Occulting
- **Oc (2+1)** Composite Group Occulting
- **Iso** Isophase
- **Fl** Flashing
- **Fl (2)** Group Flashing
- **Fl (2+1)** Composite Group Flashing
- **Q** Quick
- **Iq** Interrupted Quick
- **Mo (A)** Morse Code
- **Fr** Fixed and Flashing
- **Al** Alternating
- **Gp** Group
- **LFI** Long Flash
- **G (3)** Group Quick Flashing
- **IQ** Interrupted Quick Flashing
- **VQ** Very Quick Flashing
- **VQ (3)** Group Very Quick Flashing
- **IQV** Interrupted Very Quick Flashing
- **UQ** Ultra Quick Flashing
- **IUQ** Interrupted Ultra Quick Flashing

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

#### VISUAL GROUND SIGNS

*Arrow points to location of marker*

**A33**

**M**

**STATE CAPITAL**

**SIGNAL HILL**

**NORTHBROOK**

**LEWIS (P>4)**

Not shown on WAC

#### VFR CHECKPOINTS

Pictorial

**VPXYZ**

**NAME (VPXYZ)**

Not shown on WAC

#### VFR WAYPOINTS

Stand-Alone

Collocated with VFR Checkpoint
## NAVIGATIONAL AND PROCEDURAL INFORMATION

### OBSTRUCTION

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1473 (394) bkg</td>
<td>Less than 1000' AGL</td>
</tr>
<tr>
<td>628 UC</td>
<td>Under Construction or reported position / elevation unverified</td>
</tr>
<tr>
<td>3368 (1529)</td>
<td>1000' AGL and Higher</td>
</tr>
<tr>
<td>507 UC</td>
<td></td>
</tr>
<tr>
<td>2967 (1697)</td>
<td></td>
</tr>
</tbody>
</table>

### GROUP OBSTRUCTION

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1062 (227)</td>
<td>Less than 1000' AGL</td>
</tr>
<tr>
<td>4977 (1432)</td>
<td>1000' AGL and Higher</td>
</tr>
<tr>
<td>2889 (1217)</td>
<td>At least two in group over 1000' AGL</td>
</tr>
</tbody>
</table>

### HIGH-INTENSITY OBSTRUCTION LIGHTS

- High-intensity lights may operate part-time.
- Less than 1000' AGL
- 1000' AGL and higher
- Group Obstruction

### WINDMILL FARMS

- When highest windmill is unverified, UC will be shown after MSL value.
- CAUTION NUMEROUS WINDMILLS HIGHEST 3624' MSL UC
- WAC

### MAXIMUM ELEVATION FIGURE (MEF)

(see page 2 for explanation)

### WARNING AND CAUTION NOTES

- WARNING: Extensive fleet and all operations being conducted in offshore areas to approximately 100 miles seaward.
- CAUTION: Be prepared for loss of horizontal reference at low altitude over lake during hazy conditions and at night.

## CHART LIMITS

### OUTLINE ON SECTIONAL OF TERMINAL AREA CHART

LOS ANGELES TERMINAL AREA

NOTS are encouraged to use the Los Angeles VFR Terminal Area Chart for flights at or below 10,000'.

### OUTLINE ON SECTIONAL OF INSET CHART

- INDIANAPELIS INSET

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

- INDIANAPELIS INSET

See inset chart for additional detail.

Note: Not shown on WAC.
<table>
<thead>
<tr>
<th>RAILROADS</th>
<th>CULTURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>All gauges</td>
<td><img src="image" alt="Single Track" /> WAC</td>
</tr>
<tr>
<td>Single Track</td>
<td><img src="image" alt="Double Track" /> WAC</td>
</tr>
<tr>
<td>Double Track</td>
<td><img src="image" alt="More Than Two Tracks" /> 3 tracks</td>
</tr>
<tr>
<td>Electric</td>
<td><img src="image" alt="Railroad Yards" /> railroad yard</td>
</tr>
<tr>
<td>RAILROADS IN JUXTAPOSITION</td>
<td><img src="image" alt="RAILROAD-SIDINGS AND SHORT SPURS" /></td>
</tr>
<tr>
<td>RAILROAD-NONOPERATING, ABANDONED, DESTROYED OR UNDER CONSTRUCTION</td>
<td><img src="image" alt="ROADS" /> Dual-Lane Divided Highway Category 1 WAC</td>
</tr>
<tr>
<td>RAILROAD STATIONS</td>
<td><img src="image" alt="TRAILS" /> Category 3 Provides symbolization for dismantled railroad when combined with label &quot;dismantled railroad.&quot;</td>
</tr>
<tr>
<td>Limiting Track To Scale</td>
<td><img src="image" alt="ROAD MARKERS" /> Interstate Route No. U.S. Route No. Air Marked Identification Label</td>
</tr>
<tr>
<td>Location Only</td>
<td><img src="image" alt="ROAD NAMES" /> LINCOLN HIGHWAY WAC</td>
</tr>
<tr>
<td>RAILROAD STATIONS</td>
<td><img src="image" alt="ROADS UNDER CONSTRUCTION" /> under construction</td>
</tr>
<tr>
<td>TIME ZONES</td>
<td>SMALL LOCKS</td>
</tr>
<tr>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Not shown on WAC</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MINES OR QUARRIES</th>
<th>WEIRS AND JETTIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shaft Mines or Quarries</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>POWER TRANSMISSION &amp; TELECOMMUNICATION LINES</th>
<th>SEAWALLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>--------------------------------------------</td>
<td>---------</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PIPELINES</th>
<th>BREAKWATERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipeline</td>
<td>Breakwater</td>
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</table>

<table>
<thead>
<tr>
<th>UNDERGROUND PIPELINE</th>
<th>MISCELLANEOUS CULTURAL FEATURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underground Pipeline</td>
<td>stadium</td>
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<table>
<thead>
<tr>
<th>DAMS</th>
<th>OUTDOOR THEATER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>Outdoor Theater</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>DAM CARRYING ROAD</th>
<th>WELLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam Carrying Road</td>
<td>Other Than Water</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>PASSABLE LOCKS</th>
<th>CULTURAL FEATURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passable Locks</td>
<td>ft</td>
</tr>
<tr>
<td>CULTURE</td>
<td>HYDROGRAPHY</td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>RACE TRACKS</td>
<td></td>
</tr>
<tr>
<td>LOOKOUT TOWERS</td>
<td></td>
</tr>
<tr>
<td>Air marked identification</td>
<td><img src="618" alt="Elevation Base of Tower" /></td>
</tr>
<tr>
<td>LANDMARK AREAS</td>
<td></td>
</tr>
<tr>
<td><img src="" alt="dark area" /></td>
<td></td>
</tr>
<tr>
<td>TANKS</td>
<td></td>
</tr>
<tr>
<td><img src="" alt="water" /></td>
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<tr>
<td><img src="" alt="oil" /></td>
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<tr>
<td><img src="" alt="gas" /></td>
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</tr>
<tr>
<td>COAST GUARD STATION</td>
<td></td>
</tr>
<tr>
<td><img src="" alt="CG" /></td>
<td></td>
</tr>
<tr>
<td>AERIAL CABLEWAYS, CONVEYORS, ETC.</td>
<td><img src="" alt="aerial cableway" /> <img src="" alt="aerial cableway" /></td>
</tr>
<tr>
<td><img src="" alt="WAC" /></td>
<td></td>
</tr>
<tr>
<td>HYDROGRAPHY</td>
<td></td>
</tr>
<tr>
<td>OPEN WATER</td>
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<tr>
<td><img src="" alt="open water" /></td>
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<tr>
<td>INLAND WATER</td>
<td></td>
</tr>
<tr>
<td><img src="" alt="inland water" /></td>
<td></td>
</tr>
</tbody>
</table>

**SHORELINES**
- **Definite**
- **Fluctuating**
- **Unsurveyed**
- **Indefinite**
- **Man-made**

**LAKES**
- **Perennial**
  - Label as required
  - When too numerous to show individual lakes, show representative pattern and descriptive note.
- **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**
<table>
<thead>
<tr>
<th>HYDROGRAPHY</th>
<th>HYDROGRAPHY</th>
<th>HYDROGRAPHY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STREAMS</strong></td>
<td><strong>WET SAND AREAS</strong></td>
<td><strong>AQUEDUCTS</strong></td>
</tr>
<tr>
<td>Perennial</td>
<td><em>Within and adjacent to desert areas</em></td>
<td><strong>Abandoned or Under Construction</strong></td>
</tr>
<tr>
<td>Non-Perennial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fanned Out</td>
<td></td>
<td><strong>Underground</strong></td>
</tr>
<tr>
<td>Alluvial fan</td>
<td></td>
<td><strong>Suspended or Elevated</strong></td>
</tr>
<tr>
<td>Braided</td>
<td></td>
<td><strong>Tunnels</strong></td>
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<tr>
<td>Disappearing</td>
<td></td>
<td><strong>Kanats</strong></td>
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<tr>
<td>Seasonally Fluctuating</td>
<td></td>
<td></td>
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<tr>
<td><em>with undefined limits</em></td>
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<tr>
<td><em>with maximum bank limits, prominent and constant</em></td>
<td></td>
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<tr>
<td>Sand Deposits In and Along Riverbeds</td>
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### VFR AERONAUTICAL CHARTS - Topographic Information

<table>
<thead>
<tr>
<th>HYDROGRAPHY</th>
<th>HYDROGRAPHY</th>
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<tbody>
<tr>
<td><strong>FLUMES, PENSTOCKS AND SIMILAR FEATURES</strong></td>
<td><strong>To Scale</strong></td>
</tr>
<tr>
<td>Elevated</td>
<td>Abandoned or Under Construction</td>
</tr>
<tr>
<td>Underground</td>
<td>Abandoned to Scale</td>
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<tr>
<td>FALLS</td>
<td><strong>SMALL CANALS AND DRAINAGE / IRRIGATION DITCHES</strong></td>
</tr>
<tr>
<td>Double-Line</td>
<td>Perennial</td>
</tr>
<tr>
<td>Single-Line</td>
<td>Non-Perennial</td>
</tr>
<tr>
<td>RAPIDS</td>
<td>Abandoned or Ancient</td>
</tr>
<tr>
<td>Double-Line</td>
<td>Numerous</td>
</tr>
<tr>
<td>Single-Line</td>
<td><em>Representative pattern and/or descriptive note.</em></td>
</tr>
<tr>
<td>CANALS</td>
<td>Numerous</td>
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- **FLUMES, PENSTOCKS AND SIMILAR FEATURES**
  - Elevated
  - Underground

- **FALLS**
  - Double-Line
  - Single-Line

- **RAPIDS**
  - Double-Line
  - Single-Line

- **CANALS**
  - ERIE

- **HYDROGRAPHY**
  - To Scale
  - Abandoned or Under Construction
  - Abandoned to Scale
  - Abandoned
  - Perennial
  - Non-Perennial
  - Abandoned or Ancient
  - Numerous

- **SMALL CANALS AND DRAINAGE / IRRIGATION DITCHES**
  - Perennial
  - Non-Perennial
  - Abandoned or Ancient
  - Numerous

- **Representative pattern and/or descriptive note.**

- **Numerous canals and ditches**
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<thead>
<tr>
<th>HYDROGRAPHY</th>
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<tr>
<td>SALT EVAPORATORS AND SALT PANS</td>
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<td>SWAMPS, MARSHES AND BOGS</td>
<td>SPRINGS, WELLS AND WATERHOLES</td>
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<tr>
<td>HUMMOCKS AND RIDGES</td>
<td>GLACIERS</td>
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<tr>
<td>MANGROVE AND NIPA</td>
<td>GLACIAL MORAINES</td>
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<tr>
<td>PEAT BOGS</td>
<td>ICE CLIFFS</td>
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<tr>
<td>TUNDRA</td>
<td>SNOWFIELDS, ICE FIELDS AND ICE CAPS</td>
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<tr>
<td>CRANBERRY BOGS</td>
<td>ICE PEAKS</td>
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<tr>
<td>RICE PADDIES</td>
<td>FORESHORE FLATS</td>
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Extensive areas indicated by label only.

Tidal flats exposed at low tide.
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<td>Bare or Awash</td>
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<td>Approximate</td>
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<td>WRECKS</td>
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<td>REEFS-ROCKY OR CORAL</td>
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<td>MISCELLANEOUS UNDERWATER FEATURES NOT OTHERWISE SYMBOLIZED</td>
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<tr>
<td>FISH PONDS AND HATCHERIES</td>
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</tr>
<tr>
<td>ICE</td>
<td></td>
<td></td>
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<tr>
<td>Permanent Polar Ice</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Pack Ice</td>
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Illustration includes mound within depression.
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<td><strong>SAND OR GRAVEL AREAS</strong></td>
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<td>Position Accurate, Elevation</td>
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<td></td>
<td>Approximate</td>
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<tr>
<td>Approximate location</td>
<td><strong>SAND RIDGES</strong></td>
</tr>
<tr>
<td>Highest in General Area</td>
<td>To Scale</td>
</tr>
<tr>
<td>Highest on Chart</td>
<td><strong>SAND DUNES</strong></td>
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<tr>
<td></td>
<td>To Scale</td>
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<tr>
<td><strong>MOUNTAIN PASS</strong></td>
<td><strong>SHADED RELIEF</strong></td>
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<td></td>
<td>ROCK STRATA OUTCROP</td>
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<td></td>
<td><strong>QUARRIES TO SCALE</strong></td>
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<tr>
<td></td>
<td><strong>STRIP MINES, MINE DUMPS AND</strong></td>
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<td><strong>TAILINGS</strong></td>
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<td><strong>CRATERS</strong></td>
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<tr>
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<td><strong>ESCAPMENTS, BLUFFS, CLIFFS,</strong></td>
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<tr>
<td></td>
<td><strong>DEPRESSIONS, ETC.</strong></td>
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<tr>
<td></td>
<td><strong>LEVEES AND ESKERS</strong></td>
</tr>
<tr>
<td><strong>UNSURVEYED AREAS</strong></td>
<td><strong>RELIEF DATA INCOMPLETE</strong></td>
</tr>
<tr>
<td>Label appropriately as</td>
<td><strong>UNSURVEYED</strong></td>
</tr>
<tr>
<td>required</td>
<td><strong>UNCONTOURED AREAS</strong></td>
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<tr>
<td></td>
<td><strong>RELIEF DATA INCOMPLETE</strong></td>
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<tr>
<td><strong>DISTORTED SURFACE AREAS</strong></td>
<td><strong>LEVEES AND ESKERS</strong></td>
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<tr>
<td><strong>LAVA FLOWS</strong></td>
<td></td>
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</tbody>
</table>
LANDPLANE

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

HELIPORT

Helipoints public and private
Hospital helipads
Trauma Center
Helipads located at major airports

SEAPLANE

ULTRALIGHT FLIGHT PARK

AIRPORT DATA GROUPING

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

(Pvt) - Non-public use having emergency or landmark value.

* Rotating Beacon in operation Sunset to Sunrise

VHF OMNI-DIRECTIONAL RADIO (VOR) RANGE

VOR

NDB Frequency Name ASOS/AWOS

VORTAC

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

NON-DIRECTIONAL RADIOBEACON (NDB)

NDB-DME

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. Dashes are not shown on heliports or helipads unless additional information follows the elevation (ft), UNICOM, CTAF.
NAVAIDS USED TO DEFINE CLASS B AIRSPACE

- ILS - DME
- Salt Lake City DME Ant (4-I/1) 92 52 (111.5)

BROADCAST STATIONS (BS)

On request by the proper authority or when a VFR Check-point.

FLIGHT SERVICE STATION (FSS)

Heavy line box indicates Flight Service Station (FSS). Frequencies 121.5, 122.3, 243.0 and 256.4 (Canada - 121.5, 126.7 and 243.0) are normally available at all FSS’s and are not shown above boxes. All other frequencies are shown. For Local Airport Advisory use FSS frequency 123.8.

- R - Receive only
- DENVER DEN
  No NAVAID of the same name as FSS

- or

122 1R 123.6
NORTHWAY
116.3 Ca 119 ORT
FSS oper 0600-2200 Rancho Murlieta FSS other times.

- NAVAID same name as FSS but not an RCO

- OLYMPIA RCO McCHORD

REMOTE COMMUNICATIONS OUTLET (RCO)

Frequencies above thin line box are remoted to NAVAID site. Other frequencies at FSS providing voice communication may be available determined by altitude and terrain. Consult Airport/Facility Directory for complete information.

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

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.

- LAS VEGAS CLASS B
  NAVAID identifier and distance from facility.
  - Ceiling of Class B in hundreds of feet MSL
  - Floor of Class B in hundreds of feet MSL
  CTC LAS VEGAS APP ON 121.1 OR 257.8

CLASS C AIRSPACE

- Appropriate notes as required may be shown. (Mode C see FAR 91.215/AIM)
- Ceiling is to but not including floor of Class B

- BURBANK CLASS C
  See NOTAMs/Directory for Class C eff hrs
  - Ceiling of Class C in hundreds of feet MSL
  - Floor of Class C in hundreds of feet MSL
  - Surface
  CTC BURBANK APP WITHIN 20 NM ON 124.6 395.9

CLASS D AIRSPACE

- See NOTAMs/Directory for Class D eff hrs
- (A minus in front of the figure is used to indicate "from surface to but not including...")
- ALTITUDES IN HUNDREDS OF FEET MSL

- ST Paul
  108.8 STP MINNEAPOLIS
- Gambell
  369 GAM MILES CITY
AIRSPACE INFORMATION

CLASS E SURFACE (SFC) AIRSPACE
See NOTAMs/Directory for Class E (sfc) off hrs

SPECIAL AIRSPACE AREAS

FLIGHT RESTRICTED ZONE RELATING TO NATIONAL SECURITY

Example: Washington DC
Appropriate notes as required may be shown.

WASHINGTON DC METROPOLITAN ADIZ
Note. Delimiting line not shown when it coincides with International Boundary, projection lines or other linear features.

HELICOPTER ROUTES

CANADIAN AIRSPACE
Appropriate notes as required may be shown.

TCA Class C/D
- Ceiling of TCA Class C/D in hundreds of feet MSL
- Floor of TCA Class C/D in hundreds of feet MSL

Class C or D Control Zone

ALTITUDE IN HUNDREDS OF FEET MSL

Class E Control Zone

Class E CZ

AIRSPACE CLASSIFICATION (SEE CANADA FLIGHT SUPPLEMENT) AND OPERATIONAL REQUIREMENTS (SEE DCO AREA PLANNING AP21) MAY DIFFER BETWEEN CANADA AND UNITED STATES

NOTE: REFER TO CURRENT CANADIAN CHARTS AND FLIGHT INFORMATION PUBLICATIONS FOR INFORMATION WITHIN CANADIAN AIRSPACE

HELICOPTER ROUTES

Primary Route
Route Name: MARRIOT
Tower Frequency: 108.3
One-way Route: Compulsory
Attitude Changeover Point: Non-Compulsory

Recommended Route Altitude
- Maximum: 500
- Minimum: 500
- Recommended: 500
### AIRSPACE INFORMATION

#### 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.

#### MILITARY TRAINING ROUTES (MTR)

- **Type**: Military Training Routes (MTR)
- **Symbol**: VR269

#### SPECIAL AIR TRAFFIC RULES / AIRPORT TRAFFIC AREAS (FAR PART 93)

- **Type**: Special Air Traffic Rules
- **Symbol**: Appropriate boxed notes as required shown adjacent to area.

#### MODE C (FAR 91.215)

- **Type**: Mode C
- **Symbol**: Mode C
- **Value**: 30 NM

#### MISCELLANEOUS AIRSPACE AREAS

- **Parachute Jumping Area with Frequency**: 122.9
- **Glider Operating Area**
- **Ultralight Activity**
- **Hang Glider Activity**

#### SPECIAL CONSERVATION AREAS

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

#### TERMINAL RADAR SERVICE AREA (TRSA)

- **Symbol**: Palm Springs TRSA
- **Note**: See TWR FREQ TAB

### NAVIGATIONAL AND PROCEDURAL INFORMATION

#### VFR CHECKPOINTS

- **Type**: VFR Checkpoints
- **Symbol**: Pictorial
- **Values**: State Capitol, Stacks, Francis Peak RCD, Cedar Cty, Lewis

#### VFR WAYPOINTS

- **Type**: VFR Waypoints
- **Symbol**: VPXYZ
- **Values**: Stand-Alone, Collocated with VFR Checkpoint

#### OBSTRUCTIONS

- **Values**: 1000' AGL and higher, 300' AGL and higher, Group Obstruction, Obstruction with high-intensity lights, Elevation of the top above mean sea level, Height above ground, Under Construction or reported and position / elevation unverified

#### MAXIMUM ELEVATION FIGURE (MEF)

- **Symbol**: 124

#### NAVIGATION DATA

- **Values**: N38°56.32′W76°36.91′, N33°27.12′W70°15.73′, ATL 033/25 NM, ATL 033°
### NAVIGATIONAL AND PROCEDURAL INFORMATION

#### WARNING AND CAUTION NOTES

**WARNING**
Extensive fleet and air operations being conducted in offshore areas to approximately 100 miles seaward.

**CAUTION:** Be prepared for loss of horizontal reference at low altitude over lake during hazy conditions and at night.

#### LOCAL MAGNETIC NOTES

**Unreliability Notes**
Magnetic disturbance of as much as 76° exists at ground level and 10° or more at 3000 feet above ground level in this vicinity.

### CULTURE

#### RAILROADS
- Single Track
- Double Track

#### ROADS
- Dual-Lane: Divided Highways
- Major Boulevards & Major Streets
- Primary

#### BRIDGES

#### POPULATED PLACES
- Built-up Areas

#### BOUNDARIES
- International
- State and Provincial

### POWER TRANSMISSION LINES

### NAVIGATIONAL AND PROCEDURAL INFORMATION

### CULTURE

#### POWER TRANSMISSION LINES

#### PROMINENT PICTORIALS

#### LANDMARKS
- Landmark Feature: stadium, factory, school, etc.
- Mines or Quarries
- Race Track
- Outdoor Theater
- Tank-water, oil or gas

### HYDROGRAPHY

#### SHORELINES

#### MAJOR LAKES AND RIVERS

#### RESERVOIRS

#### RELIEF

#### SPOT ELEVATIONS
Position Accurate

- **405**
AIRPORTS

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

FAR 91 - Fixed wing special VFR operations prohibited.

(Pvt) - Non-public use having emergency or landmark value.

RADIO AIDS TO NAVIGATION

VHF OMNI-DIRECTIONAL RADIO RANGE (VOR)

VOR

VORTAC

VOR-DME

NON-DIRECTIONAL RADIOBEACON (NDB)

NDB-DME

NAVAIDS USED TO DEFINE CLASS B AIRSPACE

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.

CLASS C AIRSPACE

Appropriate notes as required may be shown.

(Mode C see FAR 91.215/AIM)

All mileages are nautical (NM).

CLASS D AIRSPACE

Class E (jet)

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

ALTITUDE IN HUNDREDS OF FEET MSL
VFR FLYWAY PLANNING CHARTS - Aeronautical Information

CLASS E SURFACE (SFC) AIRSPACE

SPECIAL AIRSPACE AREAS

FLIGHT RESTRICTED ZONE RELATING TO NATIONAL SECURITY

Example: Washington DC

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.

TEMPORARY FLIGHT RESTRICTION (TFR) RELATING TO NATIONAL SECURITY

Example:

Appropriate notes as required may be shown.

SUGGESTED VFR FLYWAY AND ALTITUDE

IFR ROUTES

Appropriate notes as required may be shown.

TRANSITION ROUTES

Appropriate notes as required may be shown.

SPECIAL USE AIRSPACE

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

MILITARY TRAINING ROUTES (MTR)

CAUTION
P-40 AND R-4009 EXPANDED BY TEMPORARY FLIGHT RESTRICTION. CONTACT AFSS FOR LATEST STATUS AND NOTAMS.
### AIRSPACE INFORMATION

**SPECIAL AIR TRAFFIC RULES / AIRPORT TRAFFIC AREAS (FAR Part 93)**

Appropriate boxed note as required shown adjacent to area.

**MODE C (FAR 91.215)**

Appropriate notes as required may be shown.

**TERMINAL RADAR SERVICE AREA (TRSA)**

Pictorial

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

**MISCELLANEOUS AIRSPACE AREAS**

- Parachute Jumping Area
- Glider Operating Area
- Ultralight Activity
- Hang Glider Activity

### NAVIGATIONAL AND PROCEDURAL INFORMATION

**VFR CHECKPOINTS**

- LA PORTE
- STADIUM
- HARVEY (S43)
- NORTHBROOK

**VFR WAYPOINTS**

- VPXYZ
- NAME (VPXYZ)

**OBSTRUCTIONS**

Only those obstacles specified by the local ATC Facility shall be shown.

Above Ground Level (AGL) heights are not shown.

**NAVIGATIONAL DATA**

- POWER PLANT N32°27.12' W70°15.73'
- ATL 25 NM

ATL 033°3/25 NM N33°59.18' W84°10.62'
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<thead>
<tr>
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<td>Single and Multiple Tracks</td>
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<td><strong>ROADS</strong></td>
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<td>Dual-Lane Divided Highway</td>
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<tr>
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