

Joint Base Andrews Naval Air Facility Washington



Mid-Air Collision Avoidance

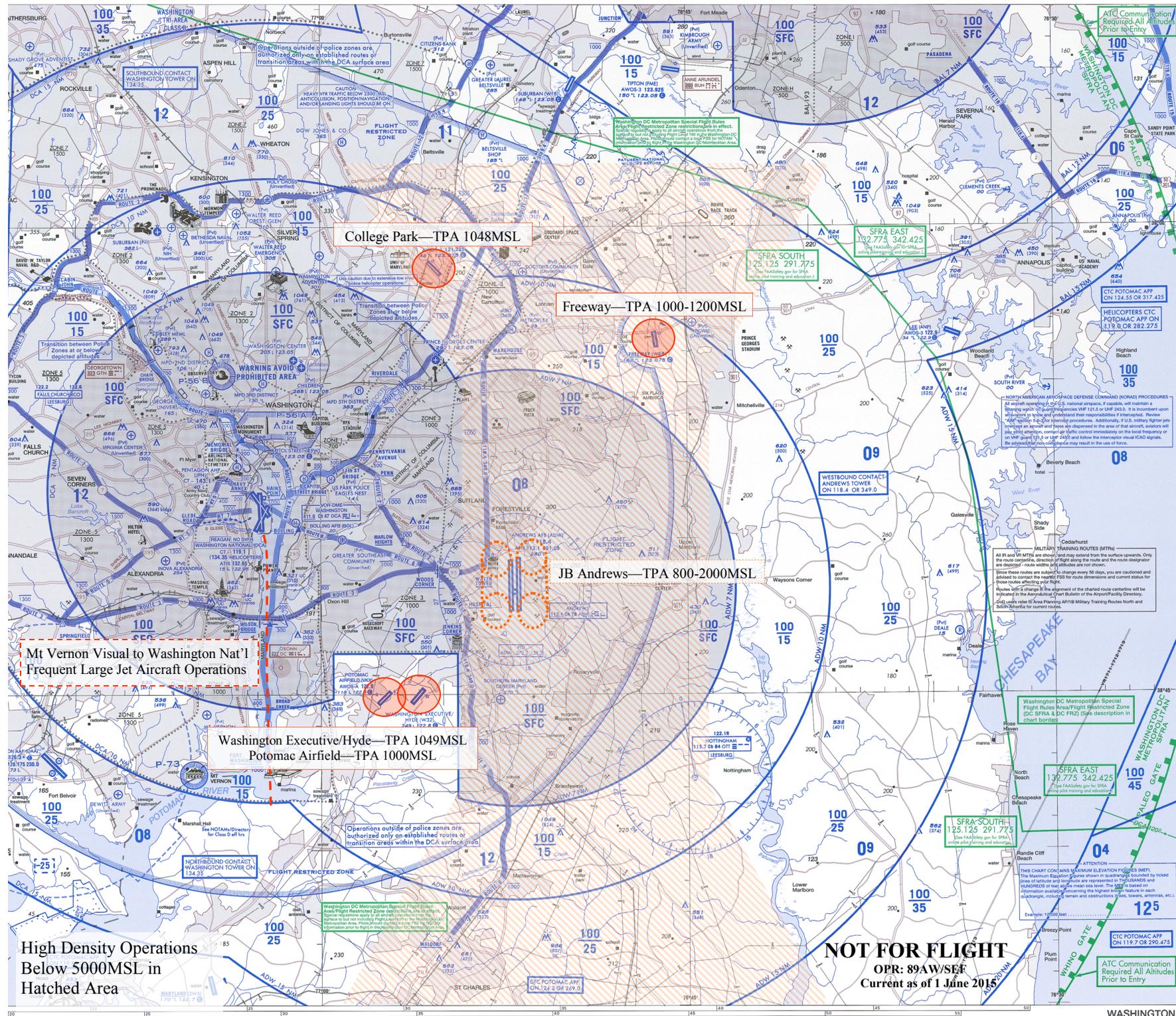
Joint Base Andrews supports the most diverse collection of operational aircraft in the United States. We have aircraft from all branches of the Department of Defense as well as the Department of Energy, Maryland State Police and Civil Air Patrol.

Andrews, the home of “Air Force One,” has an unusual mix of executive support aircraft, low flying helicopters, refueling aircraft and supersonic fighters that contribute to the mid-air collision potential in the Washington D.C.-Baltimore area. We have developed this guide to aid aviators in avoiding areas of congestion, determining the best routes of flight and minimizing potential conflicts.

The adjacent Helicopter Route Chart depicts common routing (in blue) for base assigned helicopters and common IFR/VFR pattern, arrival and departure zones for all aircraft at Andrews (hatched area). Operators should use increased vigilance in the hatched area as high performance military aircraft frequently operate in this area below 5000MSL and at speeds often exceeding 200kts. This chart is for reference only and should not be used for actual flight.

The 89th Airlift Wing Flight Safety Office requests your assistance in making the skies over the National Capital Region a safer place to fly. If you have any questions, comments or ideas on how to improve flight safety in the area, please do not hesitate to contact us. We can be reached via phone at (301) 981-4125 or via E-mail at 89aw.sef1@us.af.mil

Useful Links:
 89th Airlift Wing MACA Guide: <http://www.andrews.af.mil>
 FAA Safety Team: <http://www.faa.gov>
 AOPA Air Safety Institute: <http://www.aopa.org/asf>
 See and Avoid: <http://www.seeandavoid.org/>



High Density Operations
Below 5000MSL in
Hatched Area

NOT FOR FLIGHT
 OPR: 89AW/SEF
 Current as of 1 June 2015

VC-25A
Boeing 747



Wingspan: 195 ft
Length: 231 ft
Height: 63 ft
Color: Blue/White
Normal Rate of Climb:
2,000 – 4000 FPM
Normal Approach Speed:
150kts

C-32A
Boeing 757



Wingspan: 125 ft
Length: 159 ft
Height: 44 ft
Color: Blue/White
Normal Rate of Climb:
2,000 – 4000 FPM
Normal Approach Speed:
140 Knots

C-40B
Boeing 737



Wingspan: 113 ft
Length: 110 ft
Height: 41 ft
Color: Blue/White
or White
Normal Rate of Climb:
2,000 – 4000 FPM
Normal Approach Speed:
125kts

C-17
Globemaster



Wingspan: 170 ft
Length: 174 ft
Height: 55 ft
Color: Grey
Normal Rate of Climb:
2,000 – 4000 FPM
Normal Approach Speed:
135kts

C-20
Gulfstream III



Wingspan: 78 ft
Length: 83 ft
Height: 25 ft
Color: Blue/White
or White
Normal Rate of Climb:
2,000 – 4000 FPM
Normal Approach Speed:
130kts

C-37A/B
Gulfstream V



Wingspan: 94 ft
Length: 96 ft
Height: 26 ft
Color: Blue/White
or White
Normal Rate of Climb:
2,000 – 4000 FPM
Normal Approach Speed:
125kts

C-38A
Astrajet



Wingspan: 55 ft
Length: 56 ft
Height: 18 ft
Color: White
Normal Rate of Climb:
2,000 – 4000 FPM
Normal Approach Speed:
125kts

C-21
Leafjet 35



Wingspan: 40 ft
Length: 49 ft
Height: 17 ft
Color: White
Normal Rate of Climb:
2,000 – 4000 FPM
Normal Approach Speed:
140kts

C-12
Beech King Air



Wingspan: 35 ft
Length: 35 ft
Height: 14 ft
Color: White
Normal Rate of Climb:
1,500 FPM
Normal Approach Speed:
110kts

UH-1N
Bell Huey



Rotor: 48 ft
Length: 57 ft
Height: 12 ft
Color: White/Blue
Normal Rate of Climb:
800 FPM
Normal Approach Speed:
90kts

C-130
Lockheed



Wingspan: 132 ft
Length: 97 ft
Height: 38 ft
Color: White
Normal Rate of Climb:
1,500 FPM
Normal Approach Speed:
110kts

KC-135
Boeing 707



Wingspan: 130 ft
Length: 136 ft
Height: 41 ft
Color: Grey
Normal Rate of Climb:
1,000 – 2000 FPM
Normal Approach Speed:
145kts

F-16
General Dynamics



Wingspan: 31 ft
Length: 49 ft
Height: 18 ft
Color: Grey
Normal Rate of Climb:
6,000 – 9000 FPM
Normal Approach Speed:
150kts

BELL 412



Rotor: 40 ft
Length: 57 ft
Height: 12 ft
Color: Blue/Silver
Normal Rate of Climb:
800 FPM
Normal Approach Speed:
90kts

S365
MD State Police



Rotor: 39 ft
Length: 38 ft
Height: 13 ft
Color: Black
Normal Rate of Climb:
1000 FPM
Normal Approach Speed:
80kts

UC-35
Citation II



Wingspan: 52 ft
Length: 47 ft
Height: 15 ft
Color: White
Normal Rate of Climb:
3000 FPM
Normal Approach Speed:
120kts

NEAR MID-AIR COLLISION REPORTING

Purpose: The primary purpose of the Near Mid-Air Collision (NMAC) Reporting Program is to enhance the safety and efficiency of the National Aerospace System. The data from these reports is investigated, compiled and analyzed by the FAA or military safety office which then makes safety program recommendations.

Definition: A NMAC is an incident associated with the operation of an aircraft in which a possibility of a collision occurs as a result of proximity of less than 500 feet to another aircraft, or a report is received from a pilot or flight crew member stating that a collision hazard existed between two or more aircraft. A report does not necessarily involve the violation of regulations or error by the air traffic control system, nor does it necessarily represent an unsafe condition.

Reporting Responsibility: It is the responsibility of the pilot and/or flight crew to determine whether a NMAC actually occurred and to initiate a NMAC report. The pilot should state to the controlling facility, "I wish to report a near mid-air collision." State your call sign, time and place, altitude or flight level, and a description of the other aircraft. Report incidents as soon as possible to the nearest FAA ATC facility or Flight Service Station. Air Force personnel report details on AF Form 651 (HATR) within 24 hours to the nearest Air Force Base safety office.

Helicopter Operations

Joint Base Andrews hosts and is frequented by a number of helicopter operators. Most helicopter flying is conducted under visual flight rules (VFR) between 70—120kts and 500—2,000AGL. Most helicopter operations follow the helicopter route structure (shown on reverse side) and aircrews will maintain contact with either Reagan National Airport tower (DCA), Potomac Approach or the nearest UNICOM/CTAF frequency. Additionally, Andrews helicopters use low level training routes and frequently operate at 100AGL in a surveyed area south of US 50 between the Potomac River and Chesapeake Bay.

Approaches and Departures

The high volume of military and civilian air carrier traffic in the Baltimore-Washington area, requires air traffic controllers to use standardized arrival and departure routes. These routes aid the controllers in sequencing traffic and reducing the number of radio transmissions. Regardless of weather conditions, most aircraft arriving at, or departing from Andrews will be flying under IFR. Over one-third of near mid-air collisions result when an aircraft flying an instrument approach under IFR in good weather comes within close proximity of an aircraft flying under VFR. In most cases, both the IFR and VFR aircraft were following proper procedures, but proper procedures alone will not prevent mid-air collisions. Mid-air collision avoidance also takes proper visual scanning and situational awareness. Do not rely solely on cockpit displays for collision avoidance, you **must** also scan visually. Additionally, your situational awareness is increased by turning to the proper radio frequency and listening to all radio transmissions, not just the ones with your call sign.

Flight Restrictions in the Washington, DC Area

As a result of the September 11 terrorist attacks, pilots in the greater Washington, DC area have faced a host of new operating restrictions. Due to the number of important assets in the National Capital Region, flight restrictions in the DC area have changed over time in response to potential threats. There are currently three restrictions in place, the Washington, DC Metropolitan Area Flight Restricted Zone (FRZ), Special Federal Aviation Regulation 94 (SFAR 94) and the Washington, DC Metropolitan Air Defense Identification Zone (DC.ADIZ). Joint Base Andrews Naval Air Facility Washington is located within all three of the above restrictions.

The following links provide a valuable resource to understanding and operating within the National Capital Region and should be viewed prior to flying in the Washington, DC Metropolitan Area.

Navigating the DC ADIZ, TFRs, and Special Use Airspace—
https://www.faasafety.gov/gslac/ALC/course_content.aspx?clD=24

Airspace Obstacles and TFR Trivia—
http://www.faa.gov/pilots/safety/notams_tfr/media/tfrweb.pdf

Security on the Ground and in the Air—
<http://www.aopa.org/adiz>

Washington DC ADIZ Visual Warning System—
<http://www.aopa.org/safetycenter/courses/vws/>