Subject: Planned Implementation of 3° Lateral Offset Approaches Serving Runway 16R at Denver International Airport (KDEN) to Reduce Traffic Alert and Collision Avoidance System (TCAS) Resolution Advisories (RA) with Runway 16L Approaches.

Purpose: This InFO serves to notify pilots and operators of revised procedures that utilize a 3° lateral offset approach course on runway 16R concurrently with runway 16L at KDEN, where at least one approach is a visual approach. In addition, stress the importance of maintaining course alignment to mitigate TCAS RAs, and the use of TCAS Traffic Advisory (TA)/RA mode.

Background: Despite both aircraft being established on the straight-in approaches to 16R and 16L and being radar monitored data analysis indicates a high number of TCAS RAs. These TCAS RAs have led to unstabilized approaches, aircraft being forced down below minimum crossing altitudes, go-arounds and subsequent resequencing. Recent studies have shown that utilizing a 3° lateral offset approach course to runway 16R at KDEN will prevent TCAS RAs while allowing for the use of TA/RA mode.

Discussion: The FAA will publish two Area Navigation (RNAV), 3° lateral offset approaches to runway 16R, with an effective operational date of November 30, 2023. RNAV Global Positioning System (GPS) Y Runway (RWY) 16R, and RNAV Required Navigation Performance (RNP) Z RWY 16R approaches will be published. Both of these approaches will be laterally offset by 3°. The following are operational considerations:

- Automatic Terminal Information Services (ATIS) will typically advertise, “Expect offset RNAV or offset visual approach runway 16R, ILS, RNAV or visual approach runway 16L, runway 17R, multiple RNAV Zulu approaches in use.”

- When conducting a visual approach, pilots are not required to follow a specific track or vertical profile. However, to assist in mitigating the present KDEN runway 16R/16L TCAS RA issue, it is recommended that flightcrews navigate via the lateral and vertical path of the appropriate instrument approach procedure. Remaining on the lateral path is compatible with operating the TCAS in TA/RA mode. Navigating the vertical path (or complying with the minimum at-or-above altitudes) permits the aircraft to conduct a stabilized approach and remain within Class B airspace.
• Do not utilize the straight-in ILS instrument approach procedure for runway 16R (173° final approach course) or the runway 16R extended runway centerline unless specifically cleared to do so. Note: The cancellation of the present, straight-in, runway 16R RNAV (GPS) and RNAV (RNP) approaches will occur on the same date as the publication of the runway 16R 3° offset RNAV (GPS) and RNAV (RNP) approaches.

• During a visual or instrument approach utilizing the offset final approach course to runway 16R, after passing the final approach fix, and with the runway in sight, pilots may opt to begin alignment with the runway 16R extended centerline. Final alignment prior to this fix will increase the likelihood of an RA.

• Runway 16R procedures used concurrently with runway 16L (with at least one approach being a visual) is not a simultaneous IFR operation, hence the following RNAV (GPS) chart notes do not apply:
  o “LNAV procedure NA during simultaneous operations.”
  o “FD or AP providing RNAV track guidance required during simultaneous operations,” but is recommended.

**Recommended Action:** Directors of Operations, Directors of Training, Directors of Safety, Chief Pilots, and pilots should familiarize themselves with the information contained in this InFO. Aircraft operators are encouraged to review their risk assessment of TCAS policy and procedures including the use of TCAS TA/RA mode when KDEN Air Traffic Control (ATC) is conducting concurrent approach operations to runways 16L and 16R utilizing the runway 16R offset procedures.

**Contact:** Questions or comments regarding this InFO should be directed to the Flight Technologies and Procedures Division at 9-AWA-AVS-AFS-400-Flight-Technologies-Procedures@faa.gov or (202) 267-8790.