

d. Area Navigation (RNAV)/Global Navigation Satellite System (GNSS)

1. When not being radar monitored, GNSS-equipped RNAV aircraft on random RNAV routes must be cleared via or reported to be established on a point-to-point route.

(a) The points must be published NAVAIDs, waypoints, fixes or airports recallable from the aircraft's navigation database. The points must be displayed on controller video maps or depicted on the controller chart displayed at the control position. When applying non-radar separation the maximum distance between points must not exceed 500 miles.

(b) ATC will protect 4 miles either side of the route centerline.

(c) Assigned altitudes must be at or above the highest MIA along the projected route segment being flown, including the protected airspace of that route segment.

2. Pilots of aircraft equipped with approved area navigational equipment may file for RNAV routes throughout the National Airspace System in accordance with the following procedures:

(a) File airport-to-airport flight plans.

(b) File the appropriate indication of RNAV and/or RNP capability in the flight plan.

(c) Plan the random route portion of the flight plan to begin and end over appropriate arrival and departure transition fixes or appropriate navigation aids for the altitude stratum within which the flight will be conducted. The use of normal preferred departure and arrival routes (DP/STAR), where established, is recommended.

(d) File route structure transitions to and from the random route portion of the flight.

(e) Define the random route by waypoints. File route description waypoints by using degree distance fixes based on navigational aids which are appropriate for the altitude stratum.

(f) File a minimum of one route description waypoint for each ARTCC through whose area the random route will be flown. These waypoints must be located within 200 NM of the preceding center's boundary.

(g) File an additional route description waypoint for each turn point in the route.

(h) Plan additional route description waypoints as required to ensure accurate navigation via the filed route of flight. Navigation is the pilot's responsibility unless ATC assistance is requested.

(i) Plan the route of flight so as to avoid prohibited and restricted airspace by 3 NM unless permission has been obtained to operate in that airspace and the appropriate ATC facilities are advised.

NOTE-

To be approved for use in the National Airspace System, RNAV equipment must meet system availability, accuracy, and airworthiness standards. For additional information and guidance on RNAV equipment requirements see Advisory Circular (AC) 20-138 Airworthiness Approval of Positioning and Navigation Systems and AC 90-100 U.S. Terminal and En Route Area Navigation (RNAV) Operations.

3. Pilots of aircraft equipped with latitude/longitude coordinate navigation capability, independent of VOR/TACAN references, may file for random RNAV using the following procedures:

(a) File airport-to-airport flight plans prior to departure.

(b) File the appropriate RNAV capability certification suffix in the flight plan.

(c) Plan the random route portion of the flight to begin and end over published departure/arrival transition fixes or appropriate navigation aids for airports without published transition procedures. The use of preferred departure and arrival routes, such as DP and STAR, where established, is recommended.

(d) Plan the route of flight so as to avoid prohibited and restricted airspace by 3 NM unless permission has been obtained to operate in that airspace and the appropriate ATC facility is advised.

(e) Define the route of flight after the departure fix, including each intermediate fix (turnpoint) and the arrival fix for the destination airport in terms of latitude/longitude coordinates plotted to the nearest minute or