

outbound turns. An aircraft's flight guidance system may use reduced bank angles for all turns including turns in holding, especially at higher altitudes, that may result in exceeding holding protected airspace. Use of a shallower bank angle will expand both the width and length of the aircraft track, especially as wind speed increases. If the flight guidance system's bank angle limit feature is pilot-selectable, a minimum 25 degree bank angle should be selected regardless of altitude unless aircraft operating limitations specify otherwise and the pilot advises ATC.

(4) Where a holding distance is published, the turn from the outbound leg begins at the published distance from the holding fix, thus establishing the

design turn point required to remain within protected airspace. RNAV systems apply a database coded or pilot-entered leg distance as a maximum length of the inbound leg to the holding fix. The RNAV system then calculates a turn point from the outbound leg required to achieve this inbound leg length. This often results in an RNAV-calculated turn point on the outbound leg beyond the design turn point. (See FIG 5-3-8). With a strong headwind against the outbound leg, RNAV systems may fly up to and possibly beyond the limits of protected airspace before turning inbound. (See FIG 5-3-9.) This is especially true at higher altitudes where wind speeds are greater and ground speed results in a wider holding pattern.

FIG 5-3-8

**RNAV Lateral Guidance and Holding – No Wind**

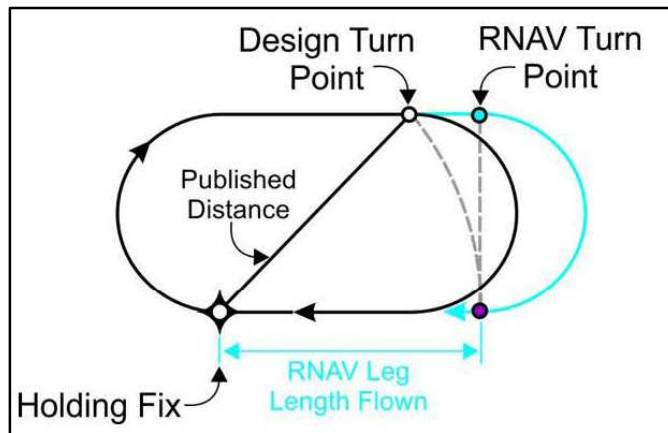


FIG 5-3-9

**RNAV Lateral Guidance and Holding – Effect of Wind**

