



## MEMORANDUM

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**Air Safety Investigator**  
**National Transportation Safety Board**  
**Office of Aviation Safety - Eastern Region**

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### **Subject: Calculated groundspeed**

The ground speed was derived from the Vx and Vy columns in the ADS-B data, which are provided as east/west speed and north/south speed in knots. Groundspeed was derived as the square root of  $(Vx^2 + Vy^2)$ .

$45^2 + 9^2 = 2197^2 = 46$  knots groundspeed + a headwind around 16 knots = 62 knots calculated airspeed.

Approximately 6 seconds before the last recorded data point and at approximately the same altitude, the airplane was about 54 knots + a headwind of 16 knots = 70 knots calculated airspeed.

The airplane was decelerating along the final approach and on short final.