

- 13. Qualitative flight test of the CV-580 revealed no adverse flight characteristics during the duplicated climb maneuver including the stall buffet regime. Positive aileron, rudder, and elevator control were available throughout the maneuver.
- 14. Comments made by the flightcrew during the latter stage of the approach, as found on the CVR, indicate that "lights," either on the ground or from the aircraft, were a factor which resulted in spatial disorientation of the pilot and the subsequent loss of control of the aircraft.

(b) Probable Cause

The Safety Board determines that the probable cause of this accident was spatial disorientation of the captain precipitated by atmospheric refraction of either the approach lights or landing lights at a critical point in the approach wherein the crew was transitioning between flying by reference to flight instruments and by visual reference to the ground.

3. RECOMMENDATIONS

In connection with this accident, the Safety Board recommends to the Administrator of the Federal Aviation Administration that:

Section 121.652 of the Federal Aviation Regulations be amended to prohibit a captain from being removed from "high" minimums until he has accrued 100 hours as pilot-in-command in type and that 50 percent of this time may be reduced by 1 hour for one landing that is made by conducting a published approach procedure. Actual or simulated IFR approaches accrued under Part 121 Training Program would be accepted for such substitution cited.

BY THE NATIONAL TRANSPORTATION SAFETY BOARD:

/s/	<u>JOHN H. REED</u>	Chairman
/s/	<u>OSCAR M. LAUREL</u>	Member
/s/	<u>FRANCIS H. McADAMS</u>	Member
/s/	<u>LOUIS M. THAYER</u>	Member
/s/	<u>ISABEL A. BURGESS</u>	Member

November 12, 1970