

REPORT OF THE CIVIL AERONAUTICS BOARD  
on the  
Investigation of a Mid-Air Collision Which Occurred  
Between Two Local Instruction Flights

A mid-air collision which occurred approximately  $2\frac{1}{2}$  miles southwest of the Municipal Airport, Burlington, Vermont, about 10:00 a.m. on December 28, 1943, resulted in fatal injuries to Instructor Rene Phillip DeLaricheliere and his student, Harry M. Hollander, and in the complete destruction of the aircraft in which they were flying, a Piper J3L-65, NC 38844. Instructor Robert Jonas Birnbaum and his student, Morris I. Silber, occupants of the other aircraft involved, a Piper J3C-65, NC 35073, effected a safe landing with minor injury to the student and major damage to the aircraft. Instructor DeLaricheliere held a commercial pilot certificate with single-engine land, 0-330 h.p., and flight instructor ratings. He had flown about 1280 hours, 1000 of which were in the type of aircraft involved. Instructor Birnbaum held a commercial pilot certificate with single-engine land, 0-80 h.p., and flight instructor ratings. He had flown approximately 870 hours, 700 of which were in the type of aircraft involved. Students Hollander and Silber were War Training Service trainees in the Army indoctrination course. Both aircraft were owned by the Defense Plant Corporation and were being operated in the War Training Service program by the Fli-Rite School of Aviation, Burlington, Vermont.

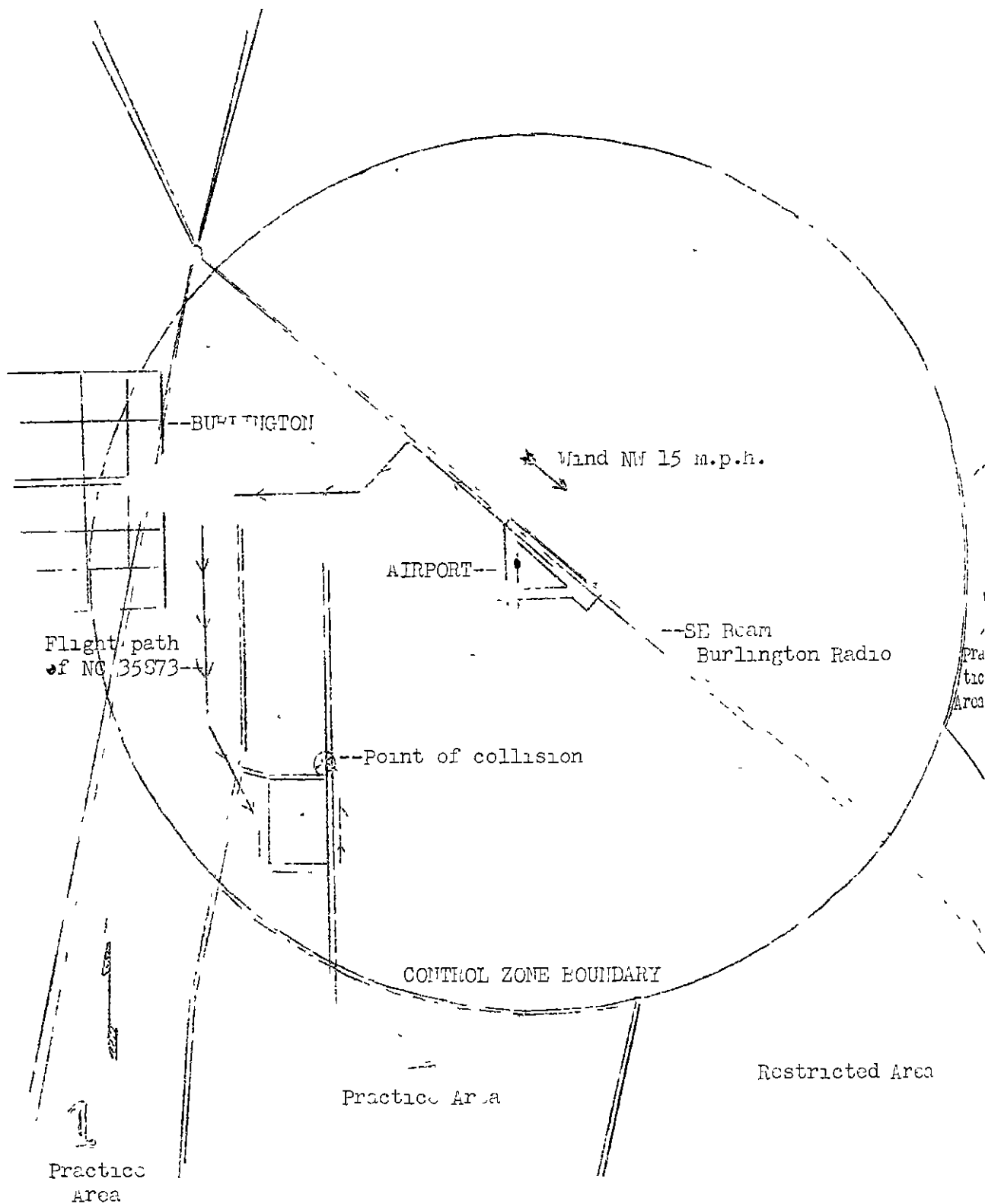
CONDUCT OF INVESTIGATION

The New York Office of the Civil Aeronautics Board (hereinafter referred to as the Board) was notified of the accident about 12:20 p. m. on December 28 and an investigation was immediately initiated in accordance with the provisions of Section 702(a) (2) of the Civil Aeronautics Act of 1938, as amended. Air Safety Investigator C. S. Collar was dispatched to the scene and arrived there at approximately 5:45 p.m. the same day. In connection with this investigation a public hearing was held at Burlington, Vermont, on January 4, 1944. Allen P. Boarder, Senior Air Safety Investigator, New York Office of the Safety Bureau of the Board, was designated and served as Presiding Officer, with the following personnel of the Safety Bureau participating: Jesse K. Fenno, Chief, Investigation Division, and C. S. Collar, Air Safety Investigator. The transcript and exhibits of the hearing have been docketed as SA-38 and are filed in the Docket Section of the Board.

Upon the basis of all the evidence accumulated during the investigation and hearing, the Board now makes its report in accordance with the provisions of the Civil Aeronautics Act of 1938, as amended.

History of the Flights

Instructor Birnbaum, occupying the rear seat and Student Silber the front, took off from the Burlington Municipal Airport at approximately 9:40 a.m. on a routine instruction flight, and proceeded to their assigned practice area (No. 1), about  $2\frac{1}{2}$  miles southwest of the airport. While they were engaged in flying a rectangular pattern at an altitude of 500 feet, and during or immediately following a left turn from the upwind to the crosswind leg at the northeast corner of the rectangle, the student pointed ahead and shouted "Plane!". A head-on collision followed almost instantaneously. (See sketch on Page 2.) The right wing of the other plane struck and severed



one of their propeller blades and the right landing gear, then passed under them and disappeared. Barnbaum landed his plane in an open field, skidded approximately 40 feet on the bottom of the fuselage, and stopped in an upright position, heading northwest.

About 45 minutes later a farmer telephoned the airport, informing the operator that an airplane had crashed and burned in a field across the road from his farm. Investigation revealed the plane to be NC 38844, flown by Instructor DeLaricheliere and Student Hollander, and the other aircraft involved in the collision. As nearly as could be determined DeLaricheliere and Hollander had left the airport about 9:50 a.m. and followed the same general course as other planes headed for Nos. 1, 2 and 3 practice areas. It was quite evident that the aircraft had sustained considerable damage in the collision, following which it crashed to the ground, out of control, about three-fifths of a mile east of the position where Barnbaum and Silber landed. Both safety belts were broken, apparently on impact, and although the instructor's parachute had sprung open, the rip-cord had not been pulled and apparently neither of the occupants had attempted to leave the plane.

Little could be learned from the surviving instructor and student as neither had seen the other aircraft until an instant before the collision. There were no other known witnesses.

#### Examination of the Wreckage

Marks on both aircraft indicated clearly that the collision was nearly head-on, with the plane being flown by DeLaricheliere on the right side of the other plane's fuselage and slightly lower. The right wing of DeLaricheliere's plane had struck and severed one propeller blade of Barnbaum's, approximately five inches below the hub, snared off the right landing gear and collapsed the left gear back into the left wing brace strut. The right wing of DeLaricheliere's plane was snared off about 4 feet in-board from the tip and had fallen free, while a section approximately  $4\frac{1}{2}$  feet long disintegrated at a point centered near the strut fittings. A portion of the right aileron of DeLaricheliere's plane was found looped over the left landing gear strut of the other plane. The severed propeller tip and the right landing gear of Barnbaum's plane were found in the vicinity of the collision a considerable distance from the wreckage. There was no indication of failure of any part of either aircraft prior to the collision.

#### Traffic Control

Light aircraft without radio equipment were assigned to practice areas and operated at an altitude of 500 feet above the elevation of the airport. Aircraft entered the traffic pattern on the downwind leg at an angle of  $45^{\circ}$  and left on the leg opposite the base leg at an angle of  $45^{\circ}$ . On the northwest take-off pattern, in use at the time of this accident, planes were to take off, climb to 500 feet, make a  $90^{\circ}$  turn to the left, then a  $45^{\circ}$  turn to the right, bringing the aircraft on a westerly heading which was to be continued to the Burlington city limits. This point is arrived at before the planes reach the three mile control zone boundary; therefore, the customary procedure is to turn to the left (south), skirting the edge of the city until intersecting the three mile boundary line, then proceed to the respective practice areas. Practice areas Nos. 1 and 3 are located southwest and east of the airport, respectively, and with the traffic pattern in use at the

time of the accident, all planes assigned to these areas would follow the same general course in reaching them. It is obvious that all aircraft, under the then existing local traffic rules following take-off, climbed to 500 feet and proceeded to their respective practice areas at this altitude. Upon reaching the rectangular pattern areas assigned, these maneuvers were also flown and the return trip to the airport made at 500 feet. This procedure did not provide any altitude separation whatever for flights from this airport engaged in this particular sequence of flight training.

Since this accident, certain precautionary measures have been taken. The operator has required that all pilots, after making the 45° turn leaving the control zone, shall climb to and maintain an altitude of 800 feet while going to and returning from practice areas, descending to 500 feet for practice after the assigned areas have been reached. The need for greater vigilance on the part of all instructors and students has been stressed.

## CONCLUSIONS

### Findings

1. The mid-air collision which occurred near Burlington, Vermont, at approximately 10:00 a.m. on December 28, 1943, resulted in fatal injuries to Instructor Renc Phillip DeLaricheliere and his student, Harry M. Hollander. Instructor Robert Jonas Barnbaum escaped injury, while his student, Morris I. Silber, received a minor cut on his forehead.

2. DeLaricheliere's aircraft was completely demolished and Barnbaum's sustained major damage.

3. There were no known witnesses other than the two survivors who stated that they did not see the other aircraft until just an instant before the collision.

4. While the surviving instructor and student were not agreed as to whether the final turn had been completed or was still in process at the time of impact, the condition of the wreckage indicated that both aircraft were very nearly in level flight.

5. It is evident that DeLaricheliere, who reportedly knew the location of Barnbaum's rectangular pattern area, failed to go far enough south of it, as was stated to be the established procedure, before turning east to his own practice area, No. 3.

### Discussion

DeLaricheliere and Hollander had been assigned to practice area No. 3, which is east of the locality assigned to Instructor Barnbaum, the point where the collision occurred. Had DeLaricheliere followed the customary procedure and gone farther south before turning left to his assigned practice area, instead of cutting toward the area being used by Barnbaum, this accident would not have occurred. However, there is no assurance that a similar accident might not have occurred under the same conditions between other aircraft flying rectangular patterns south and southeast of Instructor Barnbaum. Barnbaum and his student were in straight and level flight very little of the time, as the legs of their rectangle averaged only 4/10 of a mile in length, and they were probably spending considerable time checking ground objects. Also, it is possible that DeLaricheliere and his student

were somewhat blinded by the brilliance of the morning sun when looking in the direction of Parnbaum's area. However, it is apparent that none of the four occupants exercised sufficient vigilance in looking around for other air traffic.

PROBABLE CAUSE

Lack of vigilance on the part of the occupants of both aircraft, resulting in their failure to observe each other in time to avoid a collision.

APPROVED:

/s/ L. Welch Pogue  
L. Welch Pogue

/s/ Edward Warner  
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/s/ Harliee Branch  
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/s/ Oswald Ryan  
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/s/ Josh Lee  
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