



FEDERAL BUREAU OF INVESTIGATION
WASHINGTON, D. C.

To: **FBI, Dallas (89-43)**

Date: **December 11, 1963**

Re: **ASSASSINATION OF PRESIDENT
JOHN F. KENNEDY, 11/22/63,
DALLAS, TEXAS**

J.

John Edgar Hoover
John Edgar Hoover, Director

FBI File No.

62-109060

Lab. No.

D-437341 ET

Examination requested by: **Dallas**

Reference: **Letter 12/5/63**

Examination requested: **Photographic**

Remarks:

Enclosures (2) (2 Lab report)

1 - Mr. Henry A. Schutz, Jr. Room 5722 (sent direct)

1 - Mr. Elbert T. Turner Room 649 EB (sent direct)

FVW:GFM (9)

ADMINISTRATIVE PAGE

REPORT
of theFEDERAL BUREAU OF INVESTIGATION
WASHINGTON, D. C.To: **FBI, Dallas**Date: **December 20, 1963**
FBI File No. **62-109060**
Lab. No. **D-437341 ET**Re: **ASSASSINATION OF PRESIDENT
JOHN F. KENNEDY, 11/22/63,
DALLAS, TEXAS**Specimens received **12/6/63****K51 One Bell and Howell Koscatic 8mm motion picture
camera SN A813486, obtained from Mr. Abraham Kapruder****Result of examination:**

The K51 8mm motion picture camera has been tested to determine the running speed of this camera, and it has been determined that this camera when operated at normal "RUN" speed operates at 18 1/3 frames per second.

While it is not possible to establish accurately from the film the moment of impact of the first two shots, applying the above camera speed to the film previously submitted which was exposed by Abraham Kapruder and which recorded the assassination, it has been determined that the best estimate of the elapsed time between the first and third shots lies between approximately five and six seconds. It is noted that the President's car moves behind a signboard at about the time of the first shot, and the President's movements during this period are not observable. However, he begins to fall forward immediately upon emerging from behind the sign.

Specimen K51 will be returned to you separately.
Appropriate photographs have been made.

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REPORT
of the



FEDERAL BUREAU OF INVESTIGATION
WASHINGTON, D. C.

To: **FBI, Dallas**

Re: **ASSASSINATION OF PRESIDENT
JOHN F. KENNEDY, 11/22/63,
DALLAS, TEXAS**

Date: **December 11, 1963**
FBI File No. **62-109060**
Lab. No. **D-437841 ET**

Specimens received **12/6/63'**

**K51 One Bell and Howell Zoomatic 8mm motion picture camera
SN A513486 obtained from Mr. Abraham Zapruder**

Result of examination:

The K51 8mm motion picture camera has been tested to determine the running speed of this camera, and it has been determined that this camera when operated at normal "RUN" speed operates at 18 1/3 frames per second.

Applying the above camera speed to the film previously submitted which was exposed by Abraham Zapruder and which recorded the assassination, it has been determined that 4.74 seconds elapsed between the third frame (A) after President Kennedy emerged from back of a sign in this film which is the frame in which he makes a sudden motion forward and the frame (B) in which he is struck in the head. It has been determined that 5.57 seconds elapsed from a frame (C) where the President's head disappears in back of the sign and the frame (B) in which he is struck in the head. In frames prior to this the President's head is turned to the side and he appears to be waving to the crowd.

The time from the third frame (A) after the President emerged from in back of the sign to a frame (D) where Governor John Connally makes a sudden turn back toward the front of the automobile was determined to be 3.49 seconds. It was noted that

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following the third frame (A) after the President emerged from in back of the sign in which he starts to fall forward, Governor John Connally turned and looked directly back, remaining in this position until frame (D) when Governor John Conally makes the turn toward the front.

Specimen K51 will be returned to you separately. Appropriate photographs have been made.