

(Mount Clipping in Space Below)

Dealey Plaza shots

re-enacted

By JOHN MAKEIG
Star-Telegram Writer

DALLAS — The sharp cracks of 6.5mm rifle shots sounded anew over Dealey Plaza here about 7 a.m. Sunday, then continued for 1½ hours in what had been widely billed as a re-enactment of the assassination of President Kennedy.

It was a "re-enactment" in the sense that two Dallas policemen, using the same kind of Italian-made rifles and firing from the sixth floor of the old Texas School Book Depository, fired about 40 shots into three stacks of sandbags exactly where shots struck Kennedy's motorcade Nov. 23, 1963.

But there the similarities ended.

The purpose of the shooting was to provide acoustical data for the Cambridge, Mass., firm of Bolt, Beranek & Newman to analyze. The

firm has challenged Warren Commission conclusions that only three shots were fired onto the motorcade from the depository building, saying there may have been four or five fired.

Dallas police spokesman Bob Shaw said he was uncertain how long it will be before results of the test firings are made known.

A crowd of hundreds assembled to watch the tests, most of them news media representatives from Fort Worth, Dallas, Houston, Austin and national television networks. Some were from as far away as Germany and Japan.

Most of them were expecting a barrage of rounds to be fired as officers tried to squeeze off shots in a span of a few seconds, as the Warren Commission said Lee Harvey Oswald did in killing the president. And they expected to be kept back from the scene.

Instead, they ended up jamming barricades erected around the base of the depository, and

(Indicate page, name of newspaper, city and state.)

Fort Worth
3A Star-Telegram
Ft. Worth, Texas

Date: 8/21/78
Edition: Morning

Title:

Character:

or

Classification:

Submitting Office: Dallas

They had to wait for as long as five minutes between shots.

"I thought they'd try to do it in three seconds," one youth said, walking off after a half-hour.

"This is a part of history," said John Ruise of Crown Point, Pa., who is in Dallas to attend a Veterans of Foreign Wars convention. "I thought more people would come."

The ones who did come mostly stood in silence as rounds fired from Mannlicher-Carcano rifles thudded into the stacks of sandbags.

Shaw said it was a stuck microphone on a Dallas policeman's radio Nov. 23, 1963, that made the tests necessary.

When he heard the radio recordings, Shaw said, he didn't hear much of interest.

"They tell me if you're prepared for it (in listening to the recordings)," Shaw said, "you can tell there are changes."

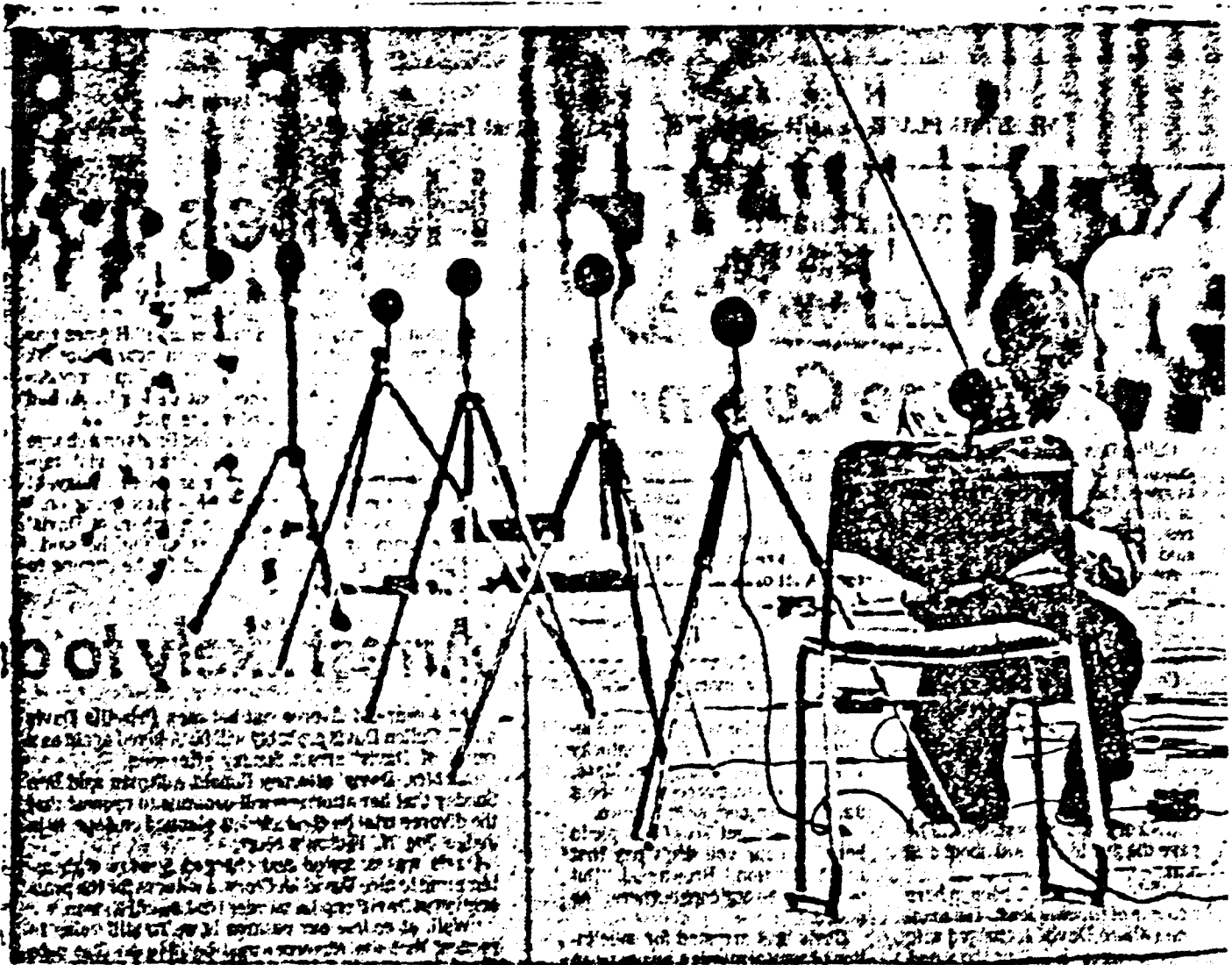
Based on those "changes" the Massachusetts firm found it necessary to delve deeper into the subject.

If they can determine that more than three shots were fired at the motorcade, it will bring the Warren Commission's conclusion of a lone gunman into question.

To assist the firm, Dallas police set up roadblocks for a wide area around Dealey Plaza, then set about firing the rifles from the depository's sixth floor. Other shots were fired from a grassy knoll near the building. And one shot was fired from a .38-caliber revolver, Shaw said.

Bolt, Beranek & Newman employees set up numerous sound monitoring devices along Houston and Elm streets and in the area.

One staff member from the House Assassinations Committee also attended the tests, Shaw said.



RE-ENACTMENT — In the Star-Telegram photo at top, a technician adjusts microphones on the street and, in

Associated Press Laserphoto below, a Dallas policeman in the depository zeroes in on the target.



<p>THE SOCIETY OF MUSICIANS OF THE UNITED STATES OF AMERICA</p>	<p>THE SOCIETY OF MUSICIANS OF THE UNITED STATES OF AMERICA</p>	<p>THE SOCIETY OF MUSICIANS OF THE UNITED STATES OF AMERICA</p>
---	---	---

THE SOCIETY OF MUSICIANS OF THE UNITED STATES OF AMERICA

(Mount Clipping in Space Below)

4 'bullet noises' heard in assassination tape

By Bob Dudley

Times Herald Washington Bureau

Sophisticated acoustical testing of a Dallas police tape-recording at the scene of President Kennedy's assassination furnished evidence today of a fourth gunshot which may have been fired at the Dallas motorcade November 22, 1963.

While the analysis of the recording was not clearly determined as conclusive of a heretofore unknown gunshot, the testing by the Cambridge, Massachusetts firm of Bolt, Beranek, and Newman indicated there was a high probability of such an event.

The firm's chief scientist, James E.

Barger, told the House Select Committee on Assassinations that the scientific assessments of the tape and a late reconstruction of the event showed four significant impulses created by the echoes and reverberations within Dealey Plaza.

"Is it fair to say there is evidence of four shots on the Dallas police tape?" Staff Counsel Gary Cornwell asked Barger after his lengthy and detailed presentation of test results.

"Yes," Barger answered. "That is a possible conclusion."

The Warren Commission concluded in 1964 that Lee Harvey Oswald probably fired only three shots at President Ken-

See 4 BULLET on Page 3

(Indicate page, name of newspaper, city and state.)

"The Dallas Times Herald"
Dallas, Texas

page 1A&3A

Date: 9/11/78
Edition: Texas

Title:

Character:

or

Classification:

Submitting Office: Dallas

4 'bullet noises' on tape

Continued from Page One

ardly. The first struck the President and former Texas Governor John Connally. The second was found to have missed entirely while the third fatally wounded the president in the head.

Evidence of a fourth gunshot, if corroborated, would suggest the presence of a second assassin firing simultaneously at the president because the space of time between the shots was too short for Oswald to have reloaded his rifle (or refired, approximately 2.3 seconds).

Barger's conclusions were that the second impulse came 1.8 seconds after the initial sound. Another 5.9 seconds intervened before the third shot. A fourth came about half a second later.

These conclusions also would be significant in that the span of time between the first and second, and the third and fourth shots would have come too quickly.

Chief Counsel Robert Blakey acknowledged that the presentation of the Massachusetts research firm, which also performed testing on the infamous eighteen and one-half minute gap in President Nixon's White House tapes, "will be troubling to some." He emphasized no sensational conclusions should be drawn.

"I would caution against those who would too quickly draw sensational conclusions from this evidence," Blakey said. "A final resolution of the questions that may be raised by today's evidence must await the conclusion of our hearings and the submission of our final report."

But the presentation of the Bolt, Barnick, and Newman analysis appears certain to fan renewed speculation that a conspiracy involving more than one assassin was behind the murder of the President.

The committee obtained the tape recording, which a Dallas motorcycle officer accidentally made during the gunfight earlier this year from former Assistant Police Chief Paul McCaghen.

McCaghen is now a private investigator in Dallas.

The committee immediately turned the recording over to the Cambridge firm for analysis. Barger said the firm employed various sophisticated filtering devices, not available at the time of the Warren Commission, to separate out extraneous noise and leave aural impulses which might signify gunfire. There were 17 such occurrences in all, Barger said.

On August 20, the panel recreated the sequence of gunfire in Dallas and the results, tape recorded by numerous microphones placed at various points along the motorcade route, were compared visually and electronically with the tape recording made accidentally by the motorcycle radio.

The comparison, Barger said, disclosed four separate correlations of the known sound of gunfire and other impulses on the original tape. The probability of the correlations were at a level said to be greater than mere coincidence or "false alarms."

In the presentation of the evidence, which took the form of a scientific detective story, Barger said his firm employed six separate screening tests to determine whether the echo patterns on the tape might not be gunfire.

In these tests, Barger said, the firm rerecorded gunfire through a police radio to determine distortion of waveforms eliminated occurrences of other radio transmissions, eliminated the barely-audible sound of a carillon bell tolling in the background and determined the time sequence of the alleged shots.

From the analysis, Barger placed the sharpest estimate of the time of the first shot at 12 seconds past 12:30 p.m. on November 22, 1963 and concluded the final alleged shot came about 10 seconds later.

Although he was asked to make the attempt, Barger testified he could not identify the type of rifle used in the slaying because of the distorted pattern reflected on the motorcycle recording.

(Mount Clipping in Space Below)

Witness sticks by Warren report

By KENT BIFFLE

©The Dallas Morning News, 1978

Sunday's re-enactment of the Kennedy assassination failed to change the opinion of at least one assassination witness.

The president of the Dallas Police Association, firing range officer Bobby Joe Dale, 45, said, "I agree with the Warren Commission."

Dale, who recalls hearing three shots on Nov. 22, 1963, was on a motorcycle five vehicles behind the presidential limousine.

After listening to the shooting Sunday, he said he had difficulty dis-

tinguishing the direction from which the bullets were fired just as he did the day Kennedy died.

The area surrounding the old Texas School Book Depository building is an acoustical freak. Echoes bounce around confusingly.

But Dale said the shots fired from the 6th-floor window Sunday sounded "similar" to those that killed Kennedy and wounded Gov. John Connally.

He noted, however, the changes to the neighborhood — new buildings and 15 years' growth to the trees.

The shooting attracted only a few sightseers to the cordoned-off area.

One woman motorist drove past one of the sandbag targets on Main after four shots had been fired. Police re-routed her.

A traveler who apparently dropped off a passing freight train wandered within 20 yards of a target before police shooed him away. He seemed undisturbed by all the shooting.

Newsmen on rooftops spotted a couple lying atop a monument in Dealey Plaza, within the restricted area. Unworried by the proximity of the targets, the man and woman apparently wanted a close-up view of the shooting.

At no time did the crowd of viewers at Elm and Houston number more than 100. Often newsmen outnumbered sightseers.

Police blocked off the test area at 5:30 a.m. An 18-year-old nursing student, Tammy Midkiff, had been partying all night with Arthur Zepeda, a 20-year-old painter, and Miss Laurie Morrison, 18, a student bartender. "We just decided to stay up all night and come see," Miss Midkiff said.

Only a few of the thousands attending the Veterans of Foreign Wars convention showed up to view the test.

See OBSERVERS, Page 12A.

(Indicate page, name of newspaper, city and state.)

"The Dallas Morning News" Dallas, Texas

page 1A&12A

Date: 8/21/78
Edition: Morning

Title:

Character:

or

Classification:

Submitting Office: Dallas

SEARCHED INDEXED
SERIALIZED FILED

AUG 2 1978

FBI DALLAS

Observers recall JFK assassination

Continued from Page 1A.

One of them, John Ruiz, a 59-year-old steelworker from Crown Point, Ind., said, "I've never really accepted the idea that Oswald was alone."

Tony Piccola, 59, a night security man at First City Bank, said, "I always felt Oswald acted alone — but with Castro in mind."

Piccola was serving lunch to customers at his now defunct Corvair Restaurant when he heard that Kennedy had been killed. "One guy just sat looking at his beer saying 'Damn it. Damn it,'" he remembered.

Piccola carries a photo of Kennedy in his wallet. "I loved the man."

Mrs. Geraldine Walker, a 57-year-old cab driver, said, "A lot of my fares are afraid of this city because of the assassination. Asians particularly fear Dallas."

She believes there was a conspiracy to kill Kennedy. "I think Oswald was killed to keep him from talking. There was a lot he could have told us."

Dick Seifer, 36, was recording the shots on an 8-channel machine. A salesman for Hewlett-Packard, an electronics firm, Seifer said he plans to do his own analysis of the gunfire test.

Mrs. Cathy Compton, 25-year-old wife of police marksman Jerry Compton, took photos inside the un-air-conditioned building while her husband blasted away. "It was hot as the devil up there," she said as she walked out into the bright sunlight.

One of the onlookers was Don Gazzaway, 43-year-old Mesquite librarian who played JFK in ABC-TV's "The Trial

of Lee Harvey Oswald." Gazzaway, who resembles Kennedy, said, "I was on the screen about half a minute."

A bit player in locally filmed movies, most recently in the "Dallas" TV series, Gazzaway said he refuses to do commercials, not because of his Kennedy-like features but because "I hate commercials."

A pretty brunette movie actress ("Logan's Run" and "Hooper"), Debbie Pruitt, 21, said she'd traveled from Los Angeles to witness the tests. She said she's researching the Kennedy case for a group of California movie makers. She not only believes there was a conspiracy against Kennedy but a conspiracy against the movie makers who are planning the Kennedy film. "A couple of people have been hurt," she said, explaining that their cars were "tamped with." She declined to elaborate on the nature of the planned film.

"I can't stand that Kennedy Memorial," she said. "Looks like they left out something."

The monument attracted only a few of those gathered at the police barricades.

About 50 Dallas policemen took part in Sunday's tests. A police spokesman said the cost was expected to be about \$2,000. He indicated the city may bill the committee because of overtime pay for some officers and a street crew made necessary by the acoustical researchers' delays.

Police reported that diverted traffic was light. Most disturbed by all the gunfire were the pigeons that fluttered up with each shot.

(Mount Clipping in Space Below)

Nov. 22 re-enacted

Police fire rifles, pistol in Dealey Plaza

By ERIC MILLER

The Dallas Morning News, 1978

Three Dallas police sharpshooters spent more than four hours Sunday morning re-enacting the assassination of President John F. Kennedy, including firing a pistol from behind the grassy knoll where some assassination buffs have theorized a second assassin may have been hiding.

The sharpshooters fired 56 live rounds into sandbags placed strategically at four different locations in Dealey Plaza where President Kennedy met his death nearly 15 years ago.

The re-enactment, conducted at the request of the House Assassinations Committee, was tape-recorded by the firm that analyzed the 18 1/2-minute gap in President Nixon's Watergate tapes and included the use of a highly sophisticated recording system. Officials hope the re-enactment and comparison with a tape recording made during the assassination will help to determine how many shots were fired at Kennedy Nov. 22, 1963.

THE OFFICERS — identified as C.I. Metcalf, Jerry Compton and Tom Knighten — fired two 6.5mm Italian-made Mannlicher Carcano rifles, identical to the rifle believed used by accused assassin Lee Harvey Oswald, and a .38-caliber Smith and Wesson pistol.

Neither police, acoustical experts, nor committee members would explain the reason for firing the pistol and police spokesman Bob Shaw said police officials were unaware of the commit-

tee's desire to include the pistol shots in the re-enactment until a meeting held late Saturday afternoon.

The pistol was fired only from behind the grassy knoll.

Only a small crowd of onlookers braved the early morning hours to watch the police officers fire the rifles from both the 6th floor window of the Texas School Book Depository Building, where officials believe Oswald was perched, and the well-known grassy knoll in Dealey Plaza.

THE OFFICERS' targets were three piles of sandbags stacked at three locations on Elm Street, just west of Hous-

Pictures, Pag. 12A.

ton. One of the piles was moved three times to a fourth location on Main Street near the triple underpass where a bullet was believed to have ricocheted.

Sunday's re-creation, recorded from a dozen microphones that were moved three times to different locations during the test, was conducted by acoustical experts Bolt, Beranek & Newman, of Cambridge, Mass. The test will attempt to provide further insight into a recording of the assassination made by a Dallas police officer's shortwave radio transmitter that could dispute the Warren Commission's conclusions that only three shots were fired during the assassination.

The firm also recorded the shots fired Sunday over a police transmitter to simulate the recording made in 1963.

AN ANALYSIS of the assassination

(Indicate page, name of newspaper, city and state.)

The Dallas Morning News
Dallas, Texas

PAGE 1A&12A

Date: 8/21/78
Edition: Morning

Title:

Character:

Classification:
Submitting Office: Dallas

SEARCHED	INDEXED
SERIALIZED	FILED
AUG 21 1978	
FBI - DALLAS	

recording was reportedly presented to the committee about three weeks ago and concluded that four — and possibly five — shots may have been fired at the president. But James Barger, heading the Dallas re-enactment for the acoustics firm, declined to comment on that report or the success of Sunday's test. Barger said his firm's analysis would be presented to the committee sometime in September.

At no time did the sharpshooters attempt to fire their weapons in rapid succession, indicating that the test was not intended to determine how quickly a marksman could fire the Italian-made bolt-action rifle.

While some of the shots fired by sharpshooters in Sunday's re-creation were less than one minute apart, some came as long as 17 minutes apart.

NEITHER OF the two officers who shot the Italian rifle were complimentary of it. But Jerry Compton said he easily could fire three shots into a stationary target in less than 6 seconds. Many proponents of conspiracy theories involving the assassination contend that the weapon supposedly used to kill Kennedy could not have been fired quickly enough to account for all the shots fired at the presidential motorcade.

Activity for Sunday's re-creation actually began at 5 a.m., when about 50 Dallas police tactical officers began sealing off Dealey Plaza to both automobile and pedestrian traffic. The actual firing began at 7:10 a.m. and ended at 11:28 a.m.

(Mount Clipping in Space Below)

Test shots fired at site of JFK's assassination

By MARY ELSON
Staff Writer

For five hours Sunday morning, gun shots reverberated through the plaza in Dallas where John F. Kennedy died almost 15 years ago. Acoustical experts hired by the House Select Committee on Assassinations attempted to recreate the sound of bullets that killed the president on Nov. 22, 1963.

Using microphones mounted on tripods along the last two blocks of the fatal route, the experts recorded the crack of 56 shots fired by Dallas police sharpshooters from the sixth-floor window of the Texas School Book Depository and the grass-covered knoll near the spot where the presidential motorcade passed that day.

Three police motorcycles in front of the Book Depository were revved up during part of the tests to simulate a portion of the background noise during the assassination.

The test shots were fired from vary-

ing angles into three sets of sandbags positioned at the spots on the street where Kennedy was hit. Twelve microphones resting on X's marked in yellow tape were moved three times in order to record the noise from different locations.

The Boston acoustical firm of Bolt, Beranek & Newman, headed by Dr. James Burger, is expected to compare the sound of the shots recorded Sunday with a Dallas police tape recording made on the day of the assassination. That tape contains a sound the firm believes might be a fourth shot.

After the partial re-enactment, Burger reportedly refused to answer questions about the tests.

"I'm sorry, but I really can't say anything until all the data is analyzed," he said.

Burger said the team's findings will be announced during public hearings beginning in September.

See ACOUSTICS on Page 3

(Indicate page, name of newspaper, city and state.)

"The Dallas Times Herald"
Dallas, Texas

PAGE 1A&3A

Date: 8/21/78
Edition: Texas

Title:

Character:

or
Classification:
Submitting Office: Dallas

SEARCHED	INDEXED
SERIALIZED	FILED
AUG 21 1978	
FBI - DALLAS	

Acoustics experts make shots tests

Continued from Page One

The gunfire began at 7:10 a.m. and ended at noon, about two and a half hours later than expected.

"We got a lot of our microphone cords tangled," Barger said.

The re-enactment was watched by four committee staff members, including deputy chief counsel Gary Cornwell, researcher Margo Jones and investigators Al Maxwell and Jack Moriarty. Two Secret Service agents, two members of the Dallas County Historical Society and Dallas County Public Works Director C. Judson Shook also were on the sixth floor of the book depository at various times.

No committee members were present.

Police sharpshooters Jerry Compton and C.L. McCall fired 8.5 mm Mannlicher Carcano rifles, similar to Lee Harvey Oswald's, into the two-foot tall targets made of six bound sandbags.

The department already had one of the Italian-made guns; another was purchased especially for the test from a local gun dealer for \$69, said police spokesman Bob Shaw.

Behind the city could be reimbursed

for all expenses incurred in the test. Original costs were expected to be about \$1,800, but Shaw estimated the total would run slightly more than \$2,000 because of the time overrun.

Police originally had been told only rifles would be used in the test, but during a meeting with police Saturday afternoon, staff members requested that a sharpshooter also fire a .38-caliber snub-nosed revolver from behind a fence on the grassy knoll.

The acoustical team and staff members refused to say why the revolver was requested. The gun is the same type Oswald used to kill officer J. D. Tippitt on the day of the assassination.

The three sharpshooters, detailed by Deputy Police Chief John Driscoll as "the best we've got," hit the small orange targets on the sandbags with all 36 shots.

With the sharpshooters was Patrolman Bobby Joe Dale, who 15 years ago rode in the president's motorcycle escort.

Tapes indicate that three shots were fired in less than six seconds on the day of the assassination, but no shots during

the Sunday test were fired in rapid succession. Several minutes elapsed between each of the 36 reports.

Asked why no rapid shots were fired, Cornwell said, "We thought a long time about it and decided to do it the way we did."

Shaw said the marksmen had practiced with the rifles before the tests, but never had tried to duplicate the three rapid shots heard on the tape.

"I doubt very seriously that they could do it," Shaw said.

The seven-person acoustical team began setting up equipment at the intersection of Houston and Elm Streets about 5:30 a.m., covering the pavement with microphones and hundreds of feet of cord leading to a U-Haul trailer filled with sensitive and expensive electronic gadgetry.

At the same time, more than 100 local, state and national news reporters set up their own recording and camera equipment on the rooftops of the Records Building, Bonham Terminal and the Hyatt Regency. Dozens of other reporters watched the re-enactment on the streets with binoculars, who stood

behind orange barricades next to the Book Depository and the Records Building.

The crowd of about 100 was made up of assassination buffs, amateur photographers, night-shift taxi drivers, foreign visitors and a large number of pure curiosity seekers. Many came because they saw a crowd and wondered what was happening; others said they had nothing better to do at 6 a.m. on a Sunday.

Nineteen-year-old Steve Heller of Houston, who says he had spent the last 14 years reading everything he could find about the assassination, was not alone in expecting a slightly more sensational scene than he witnessed.

"I'd heard they were going to be shooting at cadavers and have a motorcade and everything," he said. "But I want to see it anyway — I guess so I could say I was there when they re-created the assassination."

Police originally had planned to allow only media representatives near the site of the re-enactment but later opened the area to the public because the turnout was so small.

(Mount Clipping in Space Below)

Sounds of darkest hour ring out again in Dallas

By ROBERT T. GARRETT
Staff Writer

They stole into Dallas quietly, in the dead of night, and slipped silently away as the scorching August sun climbed in the midday sky.

When the city where Camelot died 15 years ago finally stirred to life Sunday, the only noise left at Dealey Plaza was the low humming of street-sweepers that whisked away the debris strewn across the pavement on which John F. Kennedy was killed.

As all but 100 or so of its citizens turned a deaf ear, Dallas re-enacted the sounds of its darkest hour in the latest effort by the House Select Committee on Assassinations to untangle the murder of the president.

For five hours, the congressional panel's investigators and a team of acoustics

experts orchestrated a slow drum roll of 56 gunshots, each striking sand bags and echoing into a dozen microphones spotted along the path Kennedy's motorcade traveled at approximately 12:30 p.m. on Nov. 22, 1963.

They called it a new-technology test of an old piece of physical evidence that the Warren Commission collected — a tape recording of the fatal shots as registered on the jammed receiver of a motorcycle officer's police radio.

But in every direction that observers on rooftops and atop platforms turned, the syndicate's evidence loomed larger than the confusing evidence under way below.

The commercial Kennedy Museum, symbol of how a tragedy became a profitable industry, the Kennedy Memorial.
See 100 on Page 2

(Indicate page, name of newspaper, city and state.)

"The Dallas Times Herald"
Dallas, Texas

page 1A63A

Date: 8/21/78
Edition: Texas

Title:

Character:

Classification:

Submitting Office: Dallas

SEARCHED	INDEXED
SERIALIZED	FILED
AUG 21 1978	
FBI - DALLAS	

Committee clears up some JFK-killing questions while raising some others

Continued from Page One

The committee repeatedly cautioned against drawing a hasty conclusion about the analysis, but a number of conspiracy-oriented groups already have begun referring to the mysterious "fourth shot" as a hard, solid fact, which the panel will have difficulty explaining.

In a tough and often acrimonious interrogation of former CIA Director Richard Helms, the panel established that the agency withheld from the commission the fact it had been formulating plots against Fidel Castro's life. Although it presented no evidence that the schemes forced the Cuban leader to retaliate against Kennedy, it repeatedly suggested Castro might have taken it as a provocation.

The committee's investigation also disclosed that in the weeks following the assassination 27 documents were found missing from Oswald's CIA dossier. Although the CIA has insistently denied the agency ever had any formal ties to the presumed assassin, the disclosure that files had been removed is almost certain to heighten speculation about CIA involvement with Oswald. The panel is still trying to locate the missing papers, but is openly doubtful they will ever be recovered.

Perhaps the single most important uncertainty about the president's slaying remains Oswald's motive for killing him, and in this matter the committee could do no better than the commission, which ascribed no motive specifically.

Like the commission, the panel seemed to rely most heavily on the assassin's widow, Marina Oswald Porter, who at first said she simply could not imagine Oswald's reason but under pressure said it was probably his desire for notoriety.

In the absence of a clearly determined reason for Oswald's alleged crime, the committee went to great lengths to explore possible conspiracies that may have supplied the motivation, ranging from a possible conspiracy directed by Castro to complicity with the KGB, Russia's secret intelligence apparatus.

Going as far as to obtain a four-hour tape-recorded interview with Castro, in which he denied any role in the assassination or advance knowledge of its planning, the committee nevertheless was clearly unable to prove other assassins were not involved — a feat the Warren panel also found impossible to perform.

"I recognize there have been loose ends which we hope to be able to tie down in our final report," Chairman Louis Stokes, D-Ohio, acknowledged at the conclusion of the hearings. "But, frankly, life itself contains loose ends . . . not every question that is asked can be answered, and those that can be answered cannot be answered to the satisfaction of all."

Nevertheless, the committee at one point seemed to invite second-guessing about conspiracy with the assertion of Chief Counsel Robert Blakey that American crime figures, angry at the Kennedy administration's war on syndicate operations, had the means, motivation and opportunity to kill the president.

"The question of organized crime involvement is still an open one," said Blakey, who as a specialist in Mafia operations seemed especially enamored with the prospect. "Nothing that has been uncovered excludes it. And much that is new points toward it."

But Blakey's suspicion seemed to rest heavily on a claim by a former Cuban exile, Jose Aleman, that he was told by Florida Crime Chieftain Santo Trafficante in June 1963 that Kennedy would never be re-elected because he was going to be "hit." There was no other evidence of such organized crime involvement presented publicly.

Yet when brought before the panel to repeat his statement Aleman, a former FBI informant, openly wavered, allowing for the first time that Trafficante might have only meant Kennedy would

suffer a crushing defeat at the polls. After receiving a grant of immunity, the Florida mobster gave his own emphatic denial he ever discussed assassination.

In the controversy and skepticism that is certain to follow the committee's final report, whatever its conclusions, it is probable that its solid scientific and documentary work will be overlooked, possibly because it explodes many cherished conspiracy theories and backs up the Warren Commission in many important ways.

Perhaps the most persistent conspiracy theory in the years since the assassination has been the possibility that an Oswald "impostor" actually performed the slaying, even though the main problem is that it assumes the double's main purpose was to frame Oswald rather than kill the president.

But in painstaking handwriting and photographic analysis, comparing the assassin's letters and signed papers, the committee was able to establish the Oswald who was arrested by the Dallas police was the same one who served in the Marines in the 1950s, ruling out the possibility of an impostor.

On another occasion, Oswald's handwriting was verified on a previously undiscovered photograph of the assassin standing in his backyard, posing defiantly with his Mannlicher-Carcano rifle and a pistol hanging from his belt. The handwriting affirmed the authenticity of the photo — one Oswald, and numerous conspiracy theorists, had claimed to be fake designed to frame the presumed assassin.

Another eccentric conspiracy saga was cashiered by the panel with its discovery of the "umbrella man," a bystander who was mysteriously opening a large black umbrella when Kennedy's motorcade passed by. Volumes had been written about the curious figure's supposed role in the slaying, but when the "umbrella man" came out of the cold he turned out to be only Louis Steven Witt, a mild-mannered Dallas insurance worker who had merely intended to huddle the president.

Besides the dismissal of several overt conspiracy theories, the committee also presented scientific evidence that added strong support to a number of the Warren Commission's most important — a most highly criticized — evidentiary findings.

A panel of forensic experts assembled by the committee reviewed the original autopsy records of the president's wounds and determined two distinct gunshots — fired from the rear — struck and killed Kennedy. There was no evidence, the panel found, of any gunfire from the front of the motorcade as repeatedly asserted by free-lance assassination investigators.

The so-called "single bullet" theory, or the Warren Commission's conclusion that one gunshot hit both Kennedy and Gov. John Connally, also was bolstered by scientific analysis.

Forensic pathologists, photographic experts and even engineers hired by the committee to analyze the crucial single-bullet assertion all testified it was not only possible but probable that one, high-powered rifle slug, fired from the sixth floor window of the Depository building, struck Kennedy and Connally.

The conclusion that one shot hit both men has been vigorously attacked by Warren Commission critics, who claim since one bullet could not have inflicted the wounds both men suffered, another bullet — fired by a second gunman — had to have been involved.

And in a remarkable tracing of the trajectory of the bullets, reconstructed through a scientific analysis of the bullet wounds in Kennedy and Connally, NASA engineer Tom Canning told the committee the path of the shots led directly back to the area of the Depository's sixth floor, where the Warren Commission said Oswald's sniper's perch was located.

Perhaps as much as the discovery of new evidence or the re-verification of the old, however, the committee's main-

dary intent, was to present the assassination case to the public, in the words of one top staff member, "almost as a trial." By dramatizing the facts of the case the panel hoped to furnish a coherent version of the evidence from which the public might draw its own conclusions.

In preparing a surrogate hearing for Oswald, who was killed before going to trial for Kennedy's murder, the committee appears to have at least partially succeeded, clearing up suspicions even the Warren Commission's supporters have harbored.

But when the panel finally sits down to assess perhaps the most enigmatic aspect of the assassination case, it will probably voice the same frustration as Oswald's widow, Marina, when she was asked to speculate on why the president was killed.

"It's very hard for me to comprehend," said the person who knew Oswald better than anyone. "The whole thing is so irrational, how do you find any rational explanation for it?"

Acoustics Experts Reenact '63 Kennedy Assassination in Dallas

By Nancy Smith

Special to The Washington Post

DALLAS—Shots rang out at the John F. Kennedy assassination site yesterday morning as experts conducted a sophisticated test to determine how many shots were fired at the presidential motorcade on Nov. 22, 1963.

The acoustical experts, called in by the House Assassinations Committee and employed by the same company that investigated the 18½-minute Watergate tape gap, declined to comment on the results of their test here. The firm, Bolt, Veranek and Newman of Massachusetts, is expected to present its findings to the House panel next month.

It took more than four hours for three Dallas Police Department sharpshooters to fire 56 rounds of live ammunition into sandbags strategically placed along the motorcade route.

The police officers fired two Italian-made Mannlicher Carcano rifles, identical to the one believed used by Lee Harvey Oswald, who was named by the Warren Commission as Kennedy's lone assassin. The officers fired from the sixth floor of the Texas Schoolbook Depository building, from the window where Oswald reportedly fired three shots at Kennedy.

Shots also were fired from a grassy knoll near the building with a .38-cal. Smith and Wesson revolver. The pistol was fired from behind the knoll, where some experts say a second assassin fired a fourth shot. Patrolman Tom Knight, who fired the revolver yesterday, would not comment on the reasons for its use. But it has been reported that the Jack Ruby pistol, delivered to the House panel last week, also was a .38-cal. revolver. (On Nov. 24, 1963, Ruby shot and fatally wounded Oswald.)

Yesterday's tests were recorded by more than 50 microphones and the recordings were to be compared against a Dallas police tape recording of the original gunfire that seemed to indicate a fourth shot.

The testing attracted some 200 spectators, about half of them from the news media. They started gathering around police barricades at about 5:20 a.m. to watch the testing crewmen set up their tripod-held microph

Almost an hour after daybreak, a policeman revved up his motorcycle to simulate the traffic noise during the assassination, and the first shot was fired from the depository window into one of four piles of sandbags placed along the parade route. The shots reverberated in a clockwise echo, against the Dallas County records building to the left, and around the post office straight ahead.

As the shots rang out, many in the crowd seemed to shudder, startled.

A number of out-of-town bystanders interviewed yesterday seemed to think the reenactment was worthwhile, but to the few local spectators it was an unnecessary resurrection of a tragic incident that Dallas, still smarting from the brand "City of Hate," would prefer to forget.

Cab driver Geraldine Walker, who stood behind the barricades starting at dawn, put it this way:

"I hear a lot of negative attitudes toward Dallas from the people in my cab. They remember the way Adlai Stevenson was treated and they remember how Richardson [a Dallas suburb] had a hate campaign. I have people in my cab from all over the world, and this is the main thing they want to see."

"What's the purpose of it? I don't understand it," said Mary McCord of the reenactment. "It happened 15 years ago and people are still crying over it."

But spectators from other areas said the reenactment was worthwhile. "This should have been done a long time before," said John Ruiz, who came from Indiana for a Veterans of Foreign Wars convention here. Rick Bennett of Framingham, Mass., said he "just wanted to come down to make sure they did what they said they were going to do, or whether it was all a farce."

Even a non-English-speaking Venezuelan military officer who was touring the John F. Kennedy Museum yesterday morning with his family agreed that restaging was valuable. "It is very important for us to know what happened," Lt. Col. Joseph Alvarez said in Spanish. "This act is important."

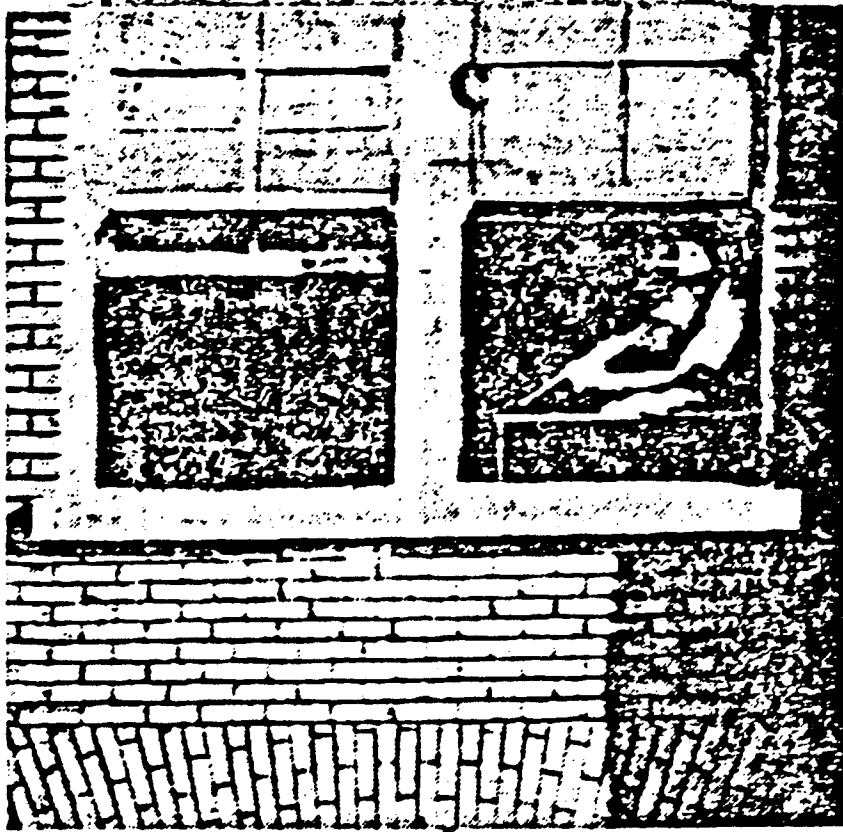
But no conclusions were announced, and most spectators left bewildered. As the only patrolman at the scene who witnessed the assassination 15 years ago said, "I don't know what they can prove. It's still just as confusing now as it was then."

Crim. Inv. _____
Ident. _____
Intell. _____
Laboratory _____
Legal Coun. _____
Plan. & Insp. _____
Rec. Mgnt. _____
Tech. Servs. _____
Training _____
Public Affs. Off. _____
Telephone Rm. _____
Director's Sec'y _____

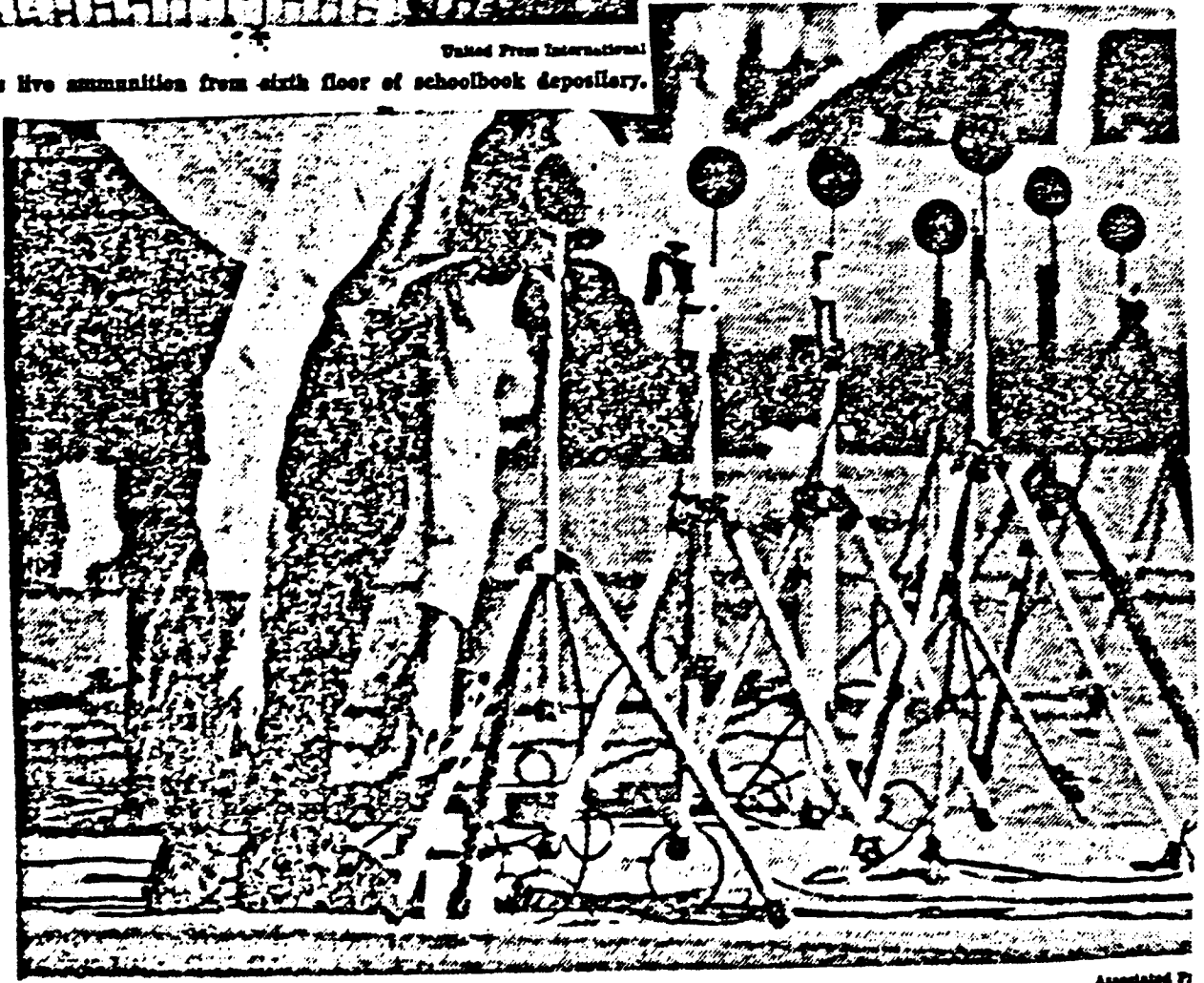
Press Clipping - Kennedy

The Washington Post A3
Washington Star-News _____
Daily News (New York) _____
The New York Times _____
The Wall Street Journal _____
The Atlanta Constitution _____
The Los Angeles Times _____

Date AUG 21 1978



United Press International
Policeman fires live ammunition from sixth floor of schoolbook depository.



Associated P
Microphones are set up to tape gunshot noise and determine how many were fired at presidential motorcade.

(Mount Clipping in Space Below)

Panel fails to halt all suspicions about JFK killing

By BOB DUDNEY

Times Herald Washington Bureau
 WASHINGTON — If the latest official inquiry into the Nov. 22, 1963, assassination of President Kennedy could be given a title, "Inherit the Wind" might well suffice.

As its evidentiary hearings closed last week in a final flurry of opaque conspiracy explorations, the House Select Committee on Assassinations finally ended the probe optimistically conceived two years ago as the vehicle that would dispel the suspicion left by the Warren

Commission's 1963-64 findings.

But even though the panel's final report on the Dallas slaying has yet to be drafted, it is clear that the ambition has failed. Despite the expenditure of thousands of hours and millions of dollars, the torch of controversy long carried by the Warren panel seems merely to have been passed along to the committee rather than extinguished.

The new inquiry has been able to clear up some nagging questions, and the basic conclusions reached by the commission — that Lee Harvey Oswald

was Kennedy's lone assassin and that Jack Ruby killed Oswald — have been, if anything, strongly bolstered by new evidence that the panel has uncovered.

But in confronting the major tasks of isolating Oswald's motive and disproving the possibility of undetected conspiracy the committee has found no answers and — like the commission — has learned they probably never will.

In addition, the committee has on its own raised a number of questions about Kennedy's assassination without offering adequate explanations at the same

time, a pitfall from which the Warren Commission has yet to escape. Judge Burt Griffin of Cleveland, a young staff counsel when the panel issued its report in 1964, summed up the committee's future in a bleak prophecy as the panel's final witness.

"Deep public concern about the assassination of President Kennedy will not end in the lifetime of anyone in this room," Griffin warned, adding, "You will soon become the target of those who attacked the Warren Commission, no matter what conclusions you finally

reach."

Of all the committee's disclosures during the month of September the one most likely to be seized upon is its presentation of "acoustical" evidence that four shots — rather than three — were fired at the presidential motorcade as it passed through Dealey Plaza nearly 15 years ago.

The Warren Commission's finding that Oswald fired only three rounds from the Texas School Book Depository is crucial, because the time required to reload and aim his Mannlicher-Carcano

rifle would not permit a fourth shot and evidence of additional gunfire would indicate more than one assassin was involved.

Although the analysis of a Dallas police tape recording of the shooting sequence preferred by Bolt, Barank & Newman, a Boston consulting firm, found four "impulses" resembling gunfire, the specialists seemed to openly back away from the assertion under intense examination by committee members.

(Indicate page, name of newspaper, city and state.)

"The Dallas Times Herald"
 Dallas, Texas

page 1A&26A

Date: 10/1/78
 Edition: Texas

Title:

Character:
 or

Classification:
 Submitting Office: DALLAS

(Mount Clipping in Space Below)

Experts think JFK shot came from knoll

By EARL GALE

AND CHARMAYNE MARSH

©The Dallas Morning News, 1978

Acoustical experts said Thursday they have "95 percent" proof four shots were fired at President John F. Kennedy the day he was assassinated and that the third shot came from the grassy knoll, and not from the Texas School Book Depository.

The evidence was developed by Queens College professors Mark R. Weiss and Ernest Aschkenasy from a tape recording of the shots picked up

by a Dallas officer's mike Nov. 22, 1963. It was supported by experts at the firm of Bolt, Beranek and Newman, of Cambridge, Mass.

The evidence provided the House Assassinations Committee with startling new information and threw its final days into chaos. The panel is to disband Dec. 31.

Committee aides said an emergency public session is scheduled Dec. 29, and the acoustics experts will be called to testify about the new information.

The new evidence appears to dis-

pute the Warren Commission's findings, which said Lee Harvey Oswald acted alone in killing Kennedy and that there were three shots. The evidence also lends more credence to about 60 witnesses.

Virtually ignored by the Warren Commission in 1963, the witnesses said they had reason to believe one or more shots came from the knoll area to the right and front of the presidential motorcade on Elm Street.

The commission settled for the stories of about 39 witnesses who said they

thought all the shots came from the Texas School Book Depository.

The new audio report runs counter to findings of the committee's staff, which hired the Bolt firm. It also conflicts with an acoustical study not yet presented to the committee and it doesn't correlate with autopsy and film evidence.

The staff has not shown committee members the acoustical report by Anthony Pellicano, who contends no shots can be heard on the tape.

Pellicano, of Chicago, said a motorcycle microphone that supposedly recorded the shot impulses was two miles away at Stemmons Freeway and Industrial Boulevard and therefore out of acoustical range. The Cambridge report placed its unidentified motorcycle in Dealey Plaza as part of the motorcade.

Pellicano had rushed his report by plane in time for presentation to the committee this week — as requested by a staff member — but was told Thursday it may not be shown to the committee

until Dec. 29 at the emergency session.

Autopsy photographs show the back of Kennedy's head was intact, which is incongruent with a shot from the grassy knoll striking his head in the right front.

The government photos, however, conflict with statements by most of the medical staff members attending Kennedy at Parkland Memorial Hospital. They claim a large portion of the back of his head was blown away.

See JFK on Page 6A.

(Indicate page, name of newspaper, city and state.)

"The Dallas Morning News" Dallas, Texas

Page 1A and 6A

Date: 12/22/78
Edition:

Title:

Character:
or

Classification:
Submitting Office: Dallas

JFK Evidence Conflicts with film, expert says

Continued from Page 1B

Other opinions at Parkland would indicate more than three shots were fired. Dr. Robert Shaw, the surgeon who operated on Gov. John Connally's chest after he was wounded while riding in Kennedy's limousine, has said he does not believe Connally was hit by a bullet that first struck the president, as the Warren Commission concluded.

Shaw said the bullet that hit Connally "was not consistent with the appearance of the bullet that was found on the governor's stretcher," which had only about two of 161 grains missing.

The single-bullet theory also has been disputed by a state highway patrolman guarding Connally's hospital room and by the supervisor of the operating room at Parkland. Both have said they handled metallic fragments reportedly taken from Connally's wounds and the fragments far exceeded the two grains supposedly missing from the bullet.

Neither the patrolman, Charles W. Harrison, nor the nurse, Audrey N. Bell, were called to testify before the Warren Commission or before the House Assassinations Committee staff.

The new audio report's contention that the third of four shots came from the knoll does not correlate with the short forward movement of Kennedy's head and then the violent backward snap shown in the

Abraham Zapruder film, noted assassination researcher David S. Lifton said.

THE ZAPRUDER film indicates the first hit came from behind, pushing Kennedy's head forward slightly before a second shot from the right front sharply reversed the head movement to the rear, Lifton said. The Cambridge firm has the knoll shot hitting the head first and the shot from behind closely following it, he said.

Lifton said he is "suspicious that there is only one shot from the knoll" because Parkland doctors generally considered the wound on the front of the neck as the entrance.

In the investigation, the committee's staff somehow reduced the number of witnesses on the knoll from 68 to seven, and they did not include Gordon L. Arnold of Dallas. Last August, Arnold said a man identifying himself as a Secret Service agent discouraged him from walking behind a wooden fence stop the knoll shortly before the shooting started.

The fence, in light of the new acoustical evidence, is being reconsidered as a possible second sniper's nest.

THE MAN WHO showed Arnold Secret Service credentials had to be an imposter because reports showed none of the 28 agents in Dallas were on foot in Dealey Plaza immediately before or after the shooting.

When Arnold was stopped behind the fence, he challenged the man's authority. The man "showed me a badge and said he was with the Secret Service and that he didn't want anybody up there," Arnold said.

Secondly, after Arnold retreated to the front fence high up on the knoll, he said he "felt" the first shot come from behind him, only inches over his left shoulder.

"I had just gotten out of basic training," Arnold said. "In my mind, live ammunition was being fired. It was being fired over my head. And I hit the dirt."

ARNOLD AND at least four other people, including two Dallas policemen who ran up near the book depository shortly after the shooting, said they met men who either showed identification as Secret Service agents or said they were agents.

Amateur photographer Zapruder, who would have been standing a few feet to the left of Arnold on a pergola, at first said he thought one shot "came from in back of me." He said he could not be positive, however, because "there was too much reverberation. There was an echo which gave me a sound all over."

Sam Holland, railroad signal supervisor for the Union Terminal, said he was standing on the overpass above Elm Street when he heard a shot and saw "a puff of smoke" come from the area of the wooden fence.

"I definitely saw the puff of smoke and heard the report from under these trees," Holland said.

HOLLAND SAID he immediately ran behind the fence, where he spotted a station wagon with mud on the bumper "as if someone had cleaned his foot, or stood up on the bumper to see over the fence."

Between the station wagon and the fence, Holland saw "a spot, I'd say 3 foot by 2 foot... like somebody had been standing there for a long period. I guess if you could count them, (there were) about 100 foot tracks in that little spot and also mud up on the bumper of that station wagon."

The House Assassinations Committee, without explanation, eliminated Holland from the more than 60 witnesses, along with 19 other railroad employees on the overpass who either heard shots coming from the knoll or saw smoke in the area.

Among the seven witnesses the committee credited, two were on the knoll and probably were Mr. and Mrs. William Newman. They were standing directly in front of the concrete wall of the pergola on the knoll and near the curb adjacent to the presidential limousine.

IN AN AFFIDAVIT filed with the sheriff's department the day of the assassination, Newman said he was looking directly at Kennedy when the president was "hit in the side of the head."

(Mount Clipping in Space Below)

Man claims he found live bullet buried under top of grassy knoll

By EARL COLZ

A Dallas man said he found a live round .45-caliber bullet, corroded and buried about 4 inches in the ground, at the top of the grassy knoll in Dealey Plaza.

Acoustics experts now contend a second gunman fired at President John F. Kennedy from the knoll in 1963.

Hal Lester said Friday he told a representative of the House Assassinations Committee Sept. 11 about the bullet, but he hasn't heard anything from the panel since his telephone call.

Lester, who sells reconditioned office machines, said he found the cartridge while searching for coins with a metal detector in May 1976.

"I spent several hours there look-

ing around for coins," Lester said. "All the coins I found were dated later than the assassination, but the bullet was buried deeper."

The steel-jacketed round-nose bullet originally was developed for military automatic handguns. It inflicts great damage to a human body when fired from a range of 30 yards or less, but generally is not very accurate beyond that distance. It also has a loud muzzle blast.

The head stamp on the cartridge reads "USC Co. 18," which gun experts say stands for the now defunct U.S. Cartridge Co. and a 1918 date of manufacture.

Lester said he found the bullet behind the 4-foot-high cement retaining wall leading from the west end of the white pergola stop

the grassy knoll. It was buried in dirt where the wall connects with the pergola, only a few feet to the left of where Abraham Zapruder was standing when he filmed Kennedy being shot.

The other end of the wall is less than 25 yards from the spot where Kennedy was shot. It also is closer to Elm Street than the wooden fence, which is a few feet behind.

Robert Groden, a staff photographic consultant for the house panel, has claimed for years a man armed with a rifle and standing in a classic military firing position at the end of the retaining wall is visible in movie film taken by amateur photographer Orville Nix. He also claims he can see the man through

the foliage in several frames of the Zapruder film.

Acoustics experts told the house panel this week they have "95 percent" proof four shots were fired at Kennedy and that the third shot came from the grassy knoll, not from the Texas School Book Depository.

The sound of the third shot, however, is now considered by the audio experts to be a rifle, not a pistol.

When the Cambridge, Mass., acoustical firm of Bolt, Beranek and Newman test fired guns in Dealey Plaza last summer, both a rifle and a pistol were used from behind the wooden fence stop the grassy knoll. No shots were test fired from behind the retaining wall.

(Indicate page, name of newspaper, city and state.)

"The Dallas Morning News" Dallas, Texas

Page 6A

Date: 12/23/78

Edition:

Title:

Character:

or Classification:

Submitting Office: Dallas

(Mount Clipping in Space Below)

Panel to consider 2-gunmen theory in slaying of JFK

By JOSEPH VOLZ
New York Daily News

WASHINGTON—The House Assassinations Committee meets today to figure out what to do about the conclusion of one of its experts, Queens College Professor Mark Weiss, that two gunmen fired at President Kennedy in Dallas 13 years ago.

The Warren Commission concluded that Lee Harvey Oswald was the lone assassin and was not part of any conspiracy.

But Weiss, a member of a panel which also analyzed the famous 18½ minute gap on one of President Nixon's White House tapes, insists that a shot was fired from a "grassy knoll" near the Kennedy parade route. Oswald did his firing from the Texas School Book Depository where he worked, according to the Warren Commission.

Weiss has not uncovered any new material. Only his acoustical examination of a five-minute tape made from a Dallas motorcycle transmitter is new. Another expert, Dr. James E. Berger of Bolt, Beranek and Newman, Inc., Cambridge, Mass., was less certain last September about any shots being fired from the grassy knoll. Berger examined the same tape and said that there was only a "50-50" chance that such a shot was fired or that there had been four shots

fired instead of three.

But Berger told committee members in a closed door session Monday night that he had no reason to doubt Weiss's findings.

Rep. Harold Sawyer, R-Mich., a committee member, contends that the Weiss tests prove "beyond a reasonable doubt" that four shots were fired from two directions. That so-called "fourth shot" supposedly fired seven seconds after the first shot, has been cited by conspiracy theorists to demonstrate that two gunmen must have been shooting. They argue that Oswald could not have fired all four shots so quickly.

But what was described as "startling" new evidence in some published reports will apparently not change the decision of the panel to go out of business Dec. 31. For one thing, the House is disturbed that the panel has spent \$5 million, an all-time Congressional record for any single investigation to examine the assassinations of Kennedy and Dr. Martin Luther King and probably would not appropriate any more funds.

A staff aide also noted that most of the staff has left for other jobs and there was "no desire" to continue the investigation past one day of public hearings next week on the Weiss interpretations.

(Indicate page, name of newspaper, city and state.)

"DALLAS TIMES
HERALD," DALLAS,
TEXAS

page 6A

Date: 12/22/78
Edition:

Title:

Character:

or

Classification:

Submitting Office: DALLAS

(Mount Clipping in Space Below)

Evidence claims 4 shots fired at JFK

GRAND RAPIDS, Mich. (AP) — New evidence indicates that four shots were fired, from two directions, at President John F. Kennedy when he was murdered in Dallas 15 years ago, two members of the House assassinations committee said Wednesday.

The Warren Commission found that only three shots were fired, all from the Texas School Book Depository. It also concluded that Lee Harvey Oswald acted alone in killing Kennedy.

Rep. Harold Sawyer, R-Mich., said the evidence shows "beyond a reasonable doubt" that one of the shots came from the so-called grassy knoll rather than the book depository.

Rep. Christopher Dodd, D-Conn., said in Hartford Wednesday night that the new evidence raises serious questions about the possibility that a second gun-

man participated in the assassination.

Sawyer said the disclosure came from two acoustical experts testifying Monday night during an executive session of the assassinations committee.

"They concluded that there were four shots, the third of which was fired from the grassy knoll," Sawyer reported. He said the experts testified there was a 95 per cent probability four shots were fired at Kennedy on Nov. 22, 1963.

Sawyer said he cannot recall the names of the two who provided the new evidence but he stressed they are experts in the field of acoustics.

"I don't know of any reason not to accept it," Sawyer said about the new evidence. But he added the disclosure "leaves me entirely up in the air" about who killed Kennedy.

In Washington, a committee spokes-

man said there would be no comment on the matter.

A knowledgeable source said: "I don't think Mr. Sawyer would go on the radio and lie."

Officials in the office of Rep. Louis Stokes, D-Ohio, the assassinations committee chairman, also would not comment on Sawyer's report.

The new evidence came from "a refinement of the earlier analysis" of a tape recording made during the Kennedy assassination of the sound coming from a motorcycle police officer's radio. The officer's radio transmitter was left on for about 5½ minutes, including the period when Kennedy was shot.

Sawyer described the technique used as one which allowed the experts to refine sounds on the tape "down to a very narrow window" so they could study tiny details, such as building echoes.

Dr. James E. Barger, an acoustics expert who testified at a public session of the committee Sept. 11, had said his work on the tape showed a 50-50 possibility there were four shots, with one

from the grassy knoll.

Sawyer said Barger studied the more recent work of the other two experts and agreed with their conclusion that four shots were fired. "Barger was there and he was totally in concurrence," Sawyer added.

Sawyer said "I'm probably in hot water on the whole thing" by disclosing testimony from an executive session. But he added, "the information is going to be made public anyway. It's not anything top secret."

The information emerged while Sawyer was appearing on a talk show at a Grand Rapids radio station. The congressman said he had no idea the program would focus upon the Kennedy assassination, but a college professor questioned him closely on the matter.

"There was no way I could answer them without getting into this," Sawyer said about the professor's questions.

Asked what will happen because of the new evidence, Sawyer said he is uncertain. The committee's work is supposed to be completed by Dec. 31.

(Indicate page, name of newspaper, city and state.)

"DALLAS TIMES
HERALD," DALLAS,
TEXAS

page 17A

Date: 12/21/78
Edition:

Title:

Character:
or

Classification:
Submitting Office: DALLAS

Panel to seek funding for JFK film analysis

By EARL GOLZ

The House Assassinations Committee decided Tuesday to seek funding for a computer analysis of the Charles L. Bronson film that may show two persons in the so-called assassin's window of the Texas Schoolbook Depository minutes before President John Kennedy was assassinated.

The decision for a scientific examination of the film coincides with new acoustical evidence of a possible conspiracy and a possible committee

request for a special prosecutor to continue the investigation after the panel's term expires this month.

The new acoustical evidence came from a Cambridge, Mass., firm. The firm told the committee last September four shots probably could be distinguished from impulses on a Dallas police radio tape recording made during the shooting in Dealey Plaza on Nov. 22, 1963.

The firm of Bolt, Beranek & Newman has presented the committee with

a more detailed analysis, which further strengthens the possibility of a fourth shot that would not have come from the direction of the book depository behind the president, *The News* has learned.

Committee spokesmen said they could not comment about the closed hearings, which were Monday and Tuesday.

The Cambridge firm's latest findings further challenge the Warren Commission's 1964 conclusion that Lee

Harvey Oswald, acting alone, assassinated Kennedy by firing three shots from a rifle on the sixth floor of the depository, striking the president twice.

Dr. James Barger, chief scientist with the Cambridge group, told the committee his firm has refined its analysis of the third of four shots supposedly heard on the police tape. The recording was made when a police motorcycle transmitter button was left open for five minutes in Dealey Plaza.

The firm has measured the velocity and distance of the third shot's sound waves and determined that it came from a rifle — not a pistol as previously thought — and traveled at a distance equal from the wooden fence atop the grassy knoll in Dealey Plaza to the presidential limousine, sources said.

The timing would have had the slug striking the president's head at about the same time he was hit in the head from behind by another shot.

Scientific expertise not existing in

1963 enabled the Cambridge firm to follow the bullet's path from the sound on a tape recording after the missile left the gun's muzzle. The Abraham Zapruder film, which showed the president's head being slammed back violently on impact of a bullet or bullets, was used to precisely time when the third of four shots was fired and the spot the limousine was on Elm Street.

The developments in the 2-year-old investigation occurred as committee

See JFK FILM on Page 7A

(Indicate page, name of newspaper, city and state.)

"The Dallas
Morning News"
Dallas, Texas

Page 1A and 7A

Date: 12/20/78
Edition:

Title:

Character:

or
Classification:

Submitting Office: Dallas

JFK film called 'significant'

Continued from Page 1A

members met to review potential evidence that may determine whether a conspiracy existed.

The presentation was so persuasive some committee staff members have suggested the appointment of a special prosecutor to continue the investigation after the committee disbands at the end of the month. The prosecutor would conduct the probe under the auspices of the U.S. Justice Department, sources said.

Experts in medical and ballistic fields have been asked to determine whether the new evidence could be correlated with their findings.

In addition, the committee has decided to find out what, if anything, the Bronson film shows in the 6th-floor window of the depository building about six minutes before the assassination.

The News has interviewed several witnesses who said they saw two people

in the depository window about the time the Bronson film was taken. One witness, an inmate in the county jail, said other prisoners saw a pair of men with a rifle in the depository. The prisoners were in a 6th-floor cell across the street from the depository, the witness said.

"The committee definitely regards the film as significant and worthy of further analysis," said Jane Downey, a committee staff counsel. "We are trying to find some means of financing a computer analysis for it."

The committee has spent all of more than \$5 million allotted it by congress for two years of investigation. It is "looking everywhere we can but so far we haven't come up with anything" to finance the computer processing of the film, Mrs. Downey said.

"As you know, we just don't have the money so we are looking for outside sources of funding," she said. "But we are not going to give up. We are going

to keep trying."

The cost of a computer analysis of the 92 frames that show the window is "probably in the area" of \$30,000, Mrs. Downey said.

The film was discovered last month by The News after a previously classified FBI memo indicated its existence. An FBI agent viewed the film three days after the assassination and said he could not see the depository building on any frames.

The 8-mm film was then returned to Bronson, who lived in Dallas at the time. He kept it for home movie use until the depository window scene was detected at a showing in his home in Ada, Okla., last month.

Another acoustical analysis of the police tape that did not pick up the sound of shots also was presented to the committee this week.

Anthony Pellicano, whose Chicago firm made the analysis free of charge — the Cambridge firm billed the com-

mittee about \$75,000 — said Tuesday a member of the committee's staff "had seen my report and they (the committee) are pleased . . . They will not be able to see me this week but will after the first of the year."

Pellicano, who says the open transmitter was two miles away from Dealey Plaza and therefore was out of acoustical range, scoffed at reports of new findings from the Cambridge firm.

Kennedy Press Clipping 7
 Assoc. Dir. _____
 Dep. AD Adm. _____
 Dep. AD Inv. _____
 Asst. Dir.:
 Adm. Servs. _____
 Crim. Inv. _____
 Ident. _____
 Intell. _____
 Laboratory _____
 Legal Coun. _____
 Plan. & Insp. _____
 Rec. Mgnt. _____
 Tech. Servs. _____
 Training _____
 Public Affs. Off. _____
 _____ Ra. _____
 Sec'y _____

Experts Track Mystery JFK Bullet

By George Lardner Jr.

Washington Post Staff Writer

New scientific tests for the House Assassinations Committee reportedly show that a shot fired at President Kennedy's motorcade from the grassy knoll in Dallas 15 years ago landed in or near the presidential limousine.

According to informed sources, acoustical experts hired by the committee also fixed the velocity of the bullet at rifle-shot speed of 2,200 to 2,300 feet per second, and concluded that it ended up close to or in Kennedy's Lincoln.

"It seemed to have stopped in the presidential limousine," one source said. Another source said it would be more accurate to say that it apparently landed "in the area of the presidential limousine, plus or minus 10 feet."

With little more than a week to go before its congressional mandate runs out, the House committee is to meet in secret session today to try to assess the reliability of the new scientific evidence indicating there may have been a conspiracy behind the president's assassination in Dallas on Nov. 22, 1963.

The Warren Commission concluded that only three shots, all from behind, all fired by Lee Harvey Oswald from the sixth floor of the Texas School Book Depository, were fired in Dealey Plaza as the motorcade passed through.

The House Assassinations Committee was on the verge of reaching a similar conclusion in a 600-page final report on the Kennedy and King assassinations that it was preparing to make public to wind up its two-year, \$5.8 million inquiry.

The chairman of the JFK assassination inquiry, Rep. Richardson Preyer (D-N.C.), said yesterday that the committee will probably vote to reopen its public hearings next week for a one-day airing of the startling new study.

"I think the public would want to be able to judge it for themselves," he said.

The acoustical experts, Mark Weiss and Ernest Aschkenasy of Queens College in New York City, concluded—from extensive tests with a Dallas police radio recording of the sounds in Dealey Plaza—that a fourth shot was fired from the grassy knoll, in front and to the right of the presidential motorcade.

"It's a prima facie case of conspiracy," one well-placed source said in a

See ASSASSINATION, A2, Col. 1

- The Washington Post A-1
- Washington Star-News _____
- Daily News (New York) _____
- The New York Times _____
- The Wall Street Journal _____
- The Atlanta Constitution _____
- The Los Angeles Times _____

Date DEC 22 1978
DEC 22 1978

ASSASSINATION, From A1

large summary of what it all means. "Everything must now be rethought." Other evidence, this source said, such as statements of eyewitnesses, shunted aside or explained away before, must now be re-examined in a more sinister light.

For instance, Forrest V. Sorrels, the Secret Service agent in charge of the Dallas office, who was riding in the lead car, told the Warren Commission that he thought the shots came from the grassy knoll "or terrace" to the right of the motorcade. So did Abraham Zapruder, the bystander with the 8-millimeter movie camera who took the famous film of the assassination.

"... That was my first thought, somebody up on the terrace, and that is the reason I looked there," Sorrels told the Warren Commission in 1964.

Acoustic expert Weiss and his colleague told the House committee in a secret briefing Monday night that there was a 85 percent or greater

probability of a fourth shot from the grassy knoll. They were supported by the chief scientist for a Cambridge, Mass. firm, Dr. James E. Barger of Bolt, Beranek & Newman, who had conducted an earlier, but less intensive study of the police tape and had concluded that there was a 50-50 probability.

After Barger testified before the committee, to the exasperation of several members, such as Rep. Harold S. Sawyer (R-Mich.), last Sept. 11, Bolt, Beranek & Newman recommended that the committee hire Weiss "to review our findings and undertake further independent analysis."

The chairman of the Massachusetts firm, Richard H. Bolt, and Weiss had worked closely together before, as members of the court-appointed panel that studied the 18½-minute gap in one of former president Nixon's Watergate tapes and found that the erasures were the result of several, apparently deliberate, manual operations.

Weiss was vice president of a New York firm known for using complex instruments to break down a sound into its component parts for analysis.

He is widely regarded as an expert in the use of techniques for reducing background noise and interference on speech recordings to increase intelligibility of underlying sounds.

The recording of the sounds of the assassination was made when a motorcycle patrolman left his microphone switch in the "On" position, deluging his transmitting channel with what seemed to be simply a lot of motorcycle noise while the assassination took place.

"The Warren Commission had this tape, as I recall, but to them it was just noise," Preyer said yesterday. "I don't believe they had the capability to do these [sophisticated studies] on it."

In the four-shot sequence that Barger had tentatively singled out, the first bullet came from the Book Depository. A second came from the de-

pository 1.8 seconds later. A third seemed to come from the grassy knoll 5.8 seconds after that, and the final shot came from the Book Depository just a half-second after that.

Weiss and his colleague, sources said, concentrated on the noise from the grassy knoll, the one that left Barger up in the air, and performed still more sophisticated tests, filtering out the motorcycle sounds, plotting the remaining echo patterns more precisely and determining the exact location of the motorcycle radio that picked them up.

The work was so elaborate that they fixed the position of the press bus coming around the corner and discerned what seemed to be a boxcar on nearby railroad tracks.

They also concluded, "beyond a reasonable doubt," according to several descriptions, that four shots had been fired, and that the third of these came from the grassy knoll.

Weiss and Aschkenasy could not be

reached for comment, but Bolt, Beranek & Newman said in a statement last night that they concurred in the more certain findings.

"It is therefore our view that there is a 85 percent or greater likelihood that the sounds of four gunshots are present on the tape and that the third shot came from the direction of the so-called grassy knoll in Dealey Plaza, Dallas, Tex.," the Bolt, Beranek & Newman statement said.

The committee appears likely to endorse the conclusion, although several members are still leery.

"This is a new science, and I've always wondered whether there might be some flaw in it just because it is so new," said one committee Democrat. "Maybe we'll find a flaw at the public hearing, but at this point it looks like a pretty solid study."

A bigger dispute may be touched off by what appears to be the committee's inclination to conclude that the bullet from the grassy knoll missed the presi-

dent's car. This would enable the panel to hold firm to its earlier conclusions and other scientific studies stating firmly that the president and Texas then-governor John B. Connally were hit by one bullet fired from the rear and that the president was killed by a subsequent shot to the head, which also came from behind.

"Kennedy was not hit from the front, but he was shot at from the front," one committee source said. "I think we've proved the 'single bullet' theory [that one bullet struck both Kennedy and Connally]. Ironically, we have also established that there were two gunmen."

Critics of the Warren Commission have contended for years that at least one of the bullets that hit the president came from the front. The only bullets and bullet fragments analyzed in the House inquiry came from Oswald's rifle, but the critics remain suspicious, pointing out that a number of bullet fragments are inexplicably missing.

- Assoc. Dir. _____
- Dep. AD Adm. _____
- Dep. AD Inv. _____
- Asst. Dir.:
- Adm. Servs. _____
- Crim. Inv. _____
- Ident. _____
- Intell. _____
- Laboratory _____
- Legal Coun. _____
- Plan. & Insp. _____
- Rec. Mgnt. _____
- Tech. Servs. _____
- Training _____
- Public Affs. Off. _____
- Telephone Rm. _____
- Director's Sec'y _____

Panel Told of 4 Shots at Kennedy

Special to The New York Times

WASHINGTON, Dec. 21 — The House Select Committee on Assassinations has received additional evidence that four shots were fired at President Kennedy in Dallas 15 years ago, reopening the debate over whether he was attacked by one or two assassins, committee sources said today.

According to these sources, two New York acoustics experts have identified the sound of a fourth gunshot on a Dictabelt tape recording made from the transmissions of a police motorcycle radio in Dealey Plaza in Dallas on Nov. 22, 1963, when the President was shot.

The New York Times prepared for its Aug. 10 issue an article reporting that the committee had found and analyzed such a tape, but a strike by pressmen prevented its publication. However, the article was distributed to clients of The Times's News Service.

First Analysis Called Inconclusive

According to the article, the first analysis, by James Barger of Bolt, Beranek & Newman Inc., an engineering concern in Cambridge, Mass., was inconclusive. Mr. Barger testified at a public hearing on Sept. 11 that he had found only a 50-50 chance that the tape recording carried the sound of a fourth shot.

Subsequently, the committee asked two other acoustical experts, Mark Weiss and a colleague from Queens College in New York, to conduct new tests.

The committee received a report last Monday during a closed session in which

the experts said that the tape contained the noise of a fourth shot and that it appeared to come from a grassy knoll in Dealey Plaza.

Although this evidence underwrites a theory that Mr. Kennedy was the victim of a conspiracy, it brings the committee investigators no closer to determining who was involved in the conspiracy or how it was arranged.

Warren Commission's Report

In September 1964, the Warren Commission released a report concluding that Lee Harvey Oswald fired three shots from the Texas Schoolbook Depository Building across the plaza, hitting Mr. Kennedy in the back of the head, and was solely responsible for the assassination.

If a shot came from the grassy knoll, which was in front of the President's car, it would establish that two assassins were involved. It is also clear to House investigators that if there was a second gunman, it is probable that Mr. Kennedy's death was the result of a conspiracy.

Robert F. Blakey, the committee counsel, was quoted as saying that "it could be coincidence that two people fired shots at President Kennedy from opposite directions, but this stretches credulity."

"There always was testimony that one of the four shots fired during the assassination had come from the grassy knoll," he added. "Now we have physical evidence."

- The Washington Post _____
- Washington Star-News _____
- Daily News (New York) _____
- The New York Times A-14
- The Wall Street Journal _____
- The Atlanta Constitution _____
- The Los Angeles Times _____

Date DEC 22 1978

JFK recording discounted

By EARL GOLE

(The Dallas Morning News, 1979)

Findings by acoustics experts that four shots were recorded on an original police Dictaphone belt during the assassination of President John F. Kennedy were "absolutely impossible" because the belt was "worn out" in 1964 after repeated replays, Dallas Police Capt. J.C. Bowles said Tuesday.

"I can guarantee you it was almost worn out by the time I got through making the original transcriptions for the Warren Commission," Bowles said.

Bowles was a sergeant in the police communications center when Kennedy was assassinated Nov. 22, 1963. He has denied from the outset that the original belt, in its unadulterated condition, picked up the sound of shots in Dealey Plaza or any other location in Dallas.

"Had a shot been fired in the sound (range) of the microphone on a police motorcycle, it would have transmitted some form of a shot sound clearly and audibly over the radio," he said. "And it would have been on all the tapes, the originals included."

However, even if shots had been picked up within acoustical range of a motorcycle with its microphone open for transmitting, Bowles said, "I will have to hold highly suspect anything they find on that (at this late date), because I had screwed that tape up myself (in transcribing from it)."

The puzzling aspect of the House Assassination Committee's acoustical

John Connally says panel hasn't proven a conspiracy in Kennedy assassination, Page 18A.

analysis is the firm of Bolt, Beranek and Newman of Cambridge, Mass., had a copy of a clear unadulterated reel-to-reel tape made off the original belt in 1964 before Bowles "altered it inadvertently" and wore it out while transcribing it.

The committee had the copy for almost a year before the original belt turned up in the possession of former police Capt. Paul McCaghren last August.

Dr. James Barger of the Cambridge firm told the committee last September

he could detect the sound of four shots on McCaghren's original belt but not on the copy made by Bowles before he transcribed the radio conversations for the FBI.

Bowles said he talked to two committee investigators the day after Barger made his statement. He told them it was "absolutely impossible" to hear shots on the original belt and "told them why."

One investigator replied, "We sure need to get with you just as soon as you can," Bowles said. But, he said, he heard nothing from the committee.

In September, Barger had said the possibility of four noise impulses being shots was "30-50." Later, Professor Mark Weis of Queens College in New York refined Barger's findings. On Dec. 29, he told the house committee the "probability" of four rifle shots being recorded on the belt was "95 percent."

Largely on the basis of the Barger-Weis analysis, the committee concluded Kennedy was assassinated "probably" as a result of a conspiracy.

(Indicate page, name of newspaper, city and state.)

"THE DALLAS MORNING NEWS," DALLAS, TEXAS

Page 1A

Date: 1/10/79
Edition: Morning

Title:

Character:
or

Classification:
Submitting Office: DALLAS

JFK test 'shows' 4 shots

GRAND RAPIDS, Mich. (UPI) — Tests on a tape recording made from the open microphone of a police motorcycle revealed "beyond a reasonable doubt" that a shot was fired from the grassy knoll in Dallas' Dealey Plaza when John F. Kennedy was killed, a House Assassinations Committee member said Wednesday.

In Washington, the panel met in executive session but sent word it would not comment on the remarks made by Rep. Harold Sawyer, R-Mich. The committee had considered the tape earlier and heard testimony on it.

Asked how the information differed from that previously explored by the committee, Sawyer said, "These are new. They are based in large part on the new material the others were. These are refinements. These are extensions and refinements."

"We were just really zeroing in on a final report when we had this very disturbing evidence presented," Sawyer said.

The shot from the knoll would be in addition to three that the Warren Commission concluded Lee Harvey Oswald fired from the Texas School Book Depository across the plaza.

Government investigators have said all previous evidence indicates Oswald was the lone gunman responsible for the Kennedy killing 15 years ago in Dallas.

In a Grand Rapids radio debate, Sawyer said the tape analysis reaching the panel in Washington early this week "poses a kind of 11th-hour problem."

The committee officially ends its 2-year, \$5 million investigations into the Kennedy and Martin Luther King assassinations on Dec. 31.

The tape test, Sawyer said, was "absolutely at variance with all of the evidence developed up to now" and provided support for suspicion of an assassination conspiracy.

"They (the experts) say, as a result of their studies, there is a 95-percent-plus probability that the

(Indicate page, name of newspaper, city and state.)

"The Dallas
Morning News"
Dallas, Texas

Page 15A

Date: 12/21/78

Edition:

Title:

Character:

or
Classification:

Submitting Office: Dallas

third shot of a series of four shots was fired from the grassy knoll," he said.

He said more than one person would have had to be involved in the assassination "if, in fact, a shot was fired from the grassy knoll." He said the analysis raises "strong evidence, if not overwhelming, of a conspiracy."

Despite the new development, Sawyer said he does not expect committee members to ask the house to extend the life of the panel beyond the end of this year.

"I honestly cannot say at this time what the committee is going to do," he said. "The evidence poses a severe problem."

The congressman said the committee already has started examining a 400-page draft of its final report and now would have to rework it.

(Mount Clipping in Space Below)

Experts think JFK shot came from knoll

By **KARL COLE**
and **CHARMAYNE MARSH**
©The Dallas Morning News, 1978

Acoustical experts said Thursday they have "75 percent" proof four shots were fired at President John F. Kennedy the day he was assassinated and that the third shot came from the grassy knoll, and not from the Texas School Book Depository.

The evidence was developed by Queens College professors Mark R. Weiss and Ernest Aschkenasy from a tape recording of the shots picked up

by a Dallas officer's mike Nov. 22, 1963. It was supported by experts at the firm of Bolt, Beranek and Newman, of Cambridge, Mass.

The evidence provided the House Assassinations Committee with startling new information and threw its final days into chaos. The panel is to disband Dec. 21.

Committee aides said an emergency public session is scheduled Dec. 29, and the acoustics experts will be called to testify about the new information.

The new evidence appears to dispute the Warren Commission's findings, which said Lee Harvey Oswald acted alone in killing Kennedy and that there were three shots. The evidence also lends more credence to about 60 witnesses.

Virtually ignored by the Warren Commission in 1963, the witnesses said they had reason to believe one or more shots came from the knoll area to the right and front of the presidential motorcade on Elm Street.

The commission settled for the stories of about 20 witnesses who said they

thought all the shots came from the Texas School Book Depository.

The new audio report runs counter to findings of the committee's staff, which hired the Bolt firm. It also conflicts with an acoustical study not yet presented to the committee and it doesn't correlate with autopsy and film evidence.

The staff has not shown committee members the acoustical report by Anthony Pellicano, who contends no shots can be heard on the tape.

Pellicano, of Chicago, said a motorcycle microphone that supposedly recorded the shot impulses was two miles away at Stemmons Freeway and Industrial Boulevard and therefore out of acoustical range. The Cambridge report placed its unidentified motorcycle in Dealey Plaza as part of the motorcade.

Pellicano had rushed his report by plane in time for presentation to the committee this week — as requested by a staff member — but was told Thursday it may not be shown to the commit-

tee until Dec. 29 at the emergency session.

Autopsy photographs show the back of Kennedy's head was intact, which is incongruent with a shot from the grassy knoll striking his head in the right front.

The government photos, however, conflict with statements by most of the medical staff members attending Kennedy at Parkland Memorial Hospital. They claim a large portion of the back of his head was blown away.

See JFK on Page 6A.

(Indicate page, name of newspaper, city and state.)

"The Dallas
Morning News"
Dallas, Texas

Page 1A and 6A

Date: 12/22/78
Edition:

Title:

Character:

or
Classification:

Submitting Office: Dallas

JFK evidence conflicts with film, expert says

Continued from Page 1A.

Other opinions at Parkland would indicate more than three shots were fired. Dr. Robert Shaw, the surgeon who operated on Gov. John Connally's chest after he was wounded while riding in Kennedy's limousine, has said he does not believe Connally was hit by a bullet that first struck the president, as the Warren Commission concluded.

Shaw said the bullet that hit Connally "was not consistent with the appearance of the bullet that was found on the governor's stretcher," which had only about two of 161 grains missing.

The single-bullet theory also has been disputed by a state highway patrolman guarding Connally's hospital room and by the supervisor of the operating room at Parkland. Both have said they handled metallic fragments purportedly taken from Connally's wounds and the fragments far exceeded the two grains supposedly missing from the bullet.

Neither the patrolman, Charles W. Harbison, nor the nurse, Audrey N. Bell, were called to testify before the Warren Commission or before the House Assassinations Committee staff.

The new audio report's contention that the third of four shots came from the knoll does not correlate with the short forward movement of Kennedy's head and then the violent backward snap shown in the

Abraham Zapruder film, noted assassination researcher David S. Lifton said.

THE ZAPRUDER film indicates the first hit came from behind, pushing Kennedy's head forward slightly before a second shot from the right front sharply reversed the head movement to the rear, Lifton said. The Cambridge firm has the knoll shot hitting the head first and the shot from behind closely following it, he said.

Lifton said he is "suspicious that there is only one shot from the knoll" because Parkland doctors generally considered the wound on the front of the neck as the entrance.

In the investigation, the committee's staff somehow reduced the number of witnesses on the knoll from 69 to seven, and they did not include Gordon L. Arnold of Dallas. Last August, Arnold said a man identifying himself as a Secret Service agent discouraged him from walking behind a wooden fence stop the knoll shortly before the shooting started.

The fence, in light of the new acoustical evidence, is being reconsidered as a possible second sniper's nest.

THE MAN WHO showed Arnold Secret Service credentials had to be an imposter because reports showed none of the 28 agents in Dallas were on foot in Dealey Plaza immediately before or after the shooting.

When Arnold was stopped behind the fence, he challenged the man's authority. The man "showed me a badge and said he was with the Secret Service and that he didn't want anybody up there," Arnold said.

Seconds after Arnold retreated to the front of the fence high up on the knoll, he said he "felt" the first shot come from behind him, only inches over his left shoulder.

"I had just gotten out of basic training," Arnold said. "In my mind, live ammunition was being fired. It was being fired over my head. And I hit the dirt."

ARNOLD AND at least four other people, including two Dallas policemen who ran up near the book depository shortly after the shooting, said they met men who either showed identification as Secret Service agents or said they were agents.

Amateur photographer Zapruder, who would have been standing a few feet to the left of Arnold on a pergola, at first said he thought one shot "came from in back of me." He said he could not be positive, however, because "there was too much reverberation. There was an echo which gave me a sound all over."

Sam Holland, railroad signal supervisor for the Union Terminal, said he was standing on the overpass above Elm Street when he heard a shot and saw "a puff of smoke" come from the area of the wooden fence.

"I definitely saw the puff of smoke and heard the report from under these trees," Holland said.

HOLLAND SAID he immediately ran behind the fence, where he spotted a station wagon with mud on the bumper "as if someone had cleaned his foot, or stood up on the bumper to see over the fence."

Between the station wagon and the fence, Holland saw "a spot, I'd say 3 foot by 2 foot... like somebody had been standing there for a long period. I guess if you could count them, (there were) about 100 foot tracks in that little spot and also mud up on the bumper of that station wagon."

The House Assassinations Committee, without explanation, eliminated Holland from the more than 60 witnesses, along with 10 other railroad employees on the overpass who either heard shots coming from the knoll or saw smoke in the area.

Among the seven witnesses the committee credited, two were on the knoll and probably were Mr. and Mrs. William Newman. They were standing directly in front of the concrete wall of the pergola on the knoll and near the curb adjacent to the presidential limousine.

IN AN AFFIDAVIT filed with the sheriff's department the day of the assassination, Newman said he was looking directly at Kennedy when the president was "hit in the side of the head."

- 1 - Mr. Bassett
- 1 - Mr. Foster
- 1 - Mr. Mintz
- 2 - Mr. Coulson

February 8, 1979

Honorable Louis Stokes
 Chairman
Select Committee on Assassinations
 U.S. House of Representatives
 Washington, D. C. 20515

FEDERAL GOVERNMENT

Dear Mr. Chairman:

During my testimony before your Committee on December 11, 1978, Congressman Christopher Dodd raised with me the issue of the constitutionality of the capital punishment provisions of the Presidential Assassination Statute, and asked me to respond at a future time regarding this issue.

I have reflected upon this matter, and it is my opinion that it would not be appropriate for the Director of the FBI to comment upon the constitutionality of a particular statute. This issue would be more appropriately addressed by the Department of Justice.

I would like, however, to refer you to a recent case that deals with the death penalty provisions of Title 18, United States Code, Section 1111. That case is United States v. Kaiser, 545 F.2d 467 (5th Cir. 1977). In that case, the Fifth Circuit ruled that the death penalty provisions of the statute are unconstitutional.

I hope this will be of some assistance to you in your inquiry.

EX-114 REC-53 62-117270-1428

Sincerely yours,

FEB 12 1979

William H. Webster
 Director

- Assoc. Dir. _____
- Dep. AD Adm. _____
- Dep. AD Inv. _____
- Asst. Dir.:
- Adm. Servs. _____
- Crim. Inv. _____
- Ident. _____
- Intell. _____
- Laboratory _____
- Legal Coun. _____
- Plan. & Insp. _____
- Rec. Mgnt. _____
- Tech. Servs. _____
- Training _____
- Public Affs. Off. _____
- Telephone Rm. _____
- Director's Sec'y _____

Delivered to Blackby on 2/13/79

DOC

CM:DOC:d1j (8)

MAIL ROOM

APPROVED:

Director _____
 Assoc. Dir. _____
 Dep. AD Adm. _____
 Dep. AD Inv. _____

Adm. Serv. _____
 Crim. Inv. _____
 Ident. _____
 Intell. _____
 Laboratory _____

Legal Coun. *M/ger*
 Plan. & Insp. _____
 Rec Mgnt. _____
 Tech. Servs. _____
 Training _____
 Public Affs. Off. _____

UNITED STATES GOVERNMENT

UNITED STATES DEPARTMENT OF JUSTICE
FEDERAL BUREAU OF INVESTIGATION

Memorandum

1 - Mr. Herndon

TO : Mr. McDermott

DATE: 1/16/79

FROM : B. P. Herndon *BPH/asm*

1 - Mr. Kelly

1 - Mr. Richards

SUBJECT: HOUSE SELECT COMMITTEE ON ASSASSINATIONS
(HSCA)

Reference Legal Counsel to Director memorandum dated 1/12/79.

PURPOSE

To advise the Director regarding the Laboratory's capability in the field of digital image enhancement, and relate feasibility and costs concerning the analysis of the Charles L. Bronson film utilizing non-Bureau facilities and consultants.

DETAILS

REC-111

62-117240-1429

The Laboratory has a video digitizer for use with the Digital Equipment Corporation (DEC) computers utilized by the Laboratory. This system was obtained for preliminary research and study into the applications of image processing on forensic evidence. It is anticipated the system hardware will be fully functional by late February, 1979, with at least two years scheduled for initial software conversion, experimentation and application studies. However, the Laboratory is capable of conducting limited rudimentary digital experiments with the equipment that is presently operational and can perform a number of photographic studies. It must be noted that the Laboratory's digital system is experimental and designed for low-resolution real-time operation, as opposed to the high-resolution examinations conducted in the earlier assassination studies.

2 FEB 13 1979

For the Laboratory to adequately conduct high-resolution studies on the Bronson film, which consists of approximately 90 frames of color 8-millimeter film, it is estimated that 2 or 3 outside facilities and at least 3 consultants, as suggested by the HSCA would be necessary. Outside facilities are required for quality film reproduction, high-resolution digitizing and computer analysis. In addition, the services of at least one full-time and one part-time Special Agent would be required. Based on limited unofficial inquiries, it is estimated the cost of this study would be approximately \$50,000.

Enc. 1-

- 1 - Mr. Adams
- 1 - Mr. McDermott
- 1 - Mr. Mintz
- Mr. Cochran



BPH/GBR:asm (8)

CONTINUED - OVER

Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

John

Asst. Dir.:	_____
Dep. AD Adm.	_____
Dep. AD Inv.	_____
Asst. Dir.:	_____
Adm. Servs.	_____
Crim. Inv.	_____
Ident.	_____
Intell.	_____
Laboratory	<i>BPH/asm</i>
Legal Coun.	_____
Plan. & Insp.	_____
Rec. Mgnt.	_____
Tech. Servs.	_____
Training	_____
Public Affs. Off.	_____
Telephone Rm.	_____
Director's Sec'y	_____

Richards

Memorandum from B. P. Herndon to Mr. McDermott
 Re: HOUSE SELECT COMMITTEE ON ASSASSINATIONS
 (HSCA)

The results of the study could range from a no conclusion (high probability) to a definite conclusion that 2 individuals appear in the questioned book depository window (low probability), substantiating the conspiracy theory.

The only obvious benefit to the FBI as perceived by the Laboratory is the experience and analytical knowledge gained that can be directly applied to the Bureau's own image processing efforts. Enclosed for background information is a report entitled "JOHN F. KENNEDY ASSASSINATION FILM ANALYSIS," conducted by Francis Corbett, Itek Corporation, Lexington, Massachusetts. It should be noted that the photographs of this enclosure are reproductions and, therefore, are of limited quality.

RECOMMENDATIONS

(1) In view of our limited capability in the field of digital image enhancement and the fact that FBI conclusions could be considered self-serving by many assassination buffs, it is recommended that should the Department agree to examine the Bronson film, it should be contracted to outside experts by the Department.

APPROVED: <i>WCH</i>	Adm. Serv. _____	Legal Coun. _____
Director _____	Crim. Inv. _____	Ident. Div. _____
Assoc. Dir. _____	Intell. _____	Rec. Mgmt. _____
Chief of Lab. _____	Lab. _____	Tech. Serv. _____
Chief of Ident. _____	Plan. & Insp. _____	Training _____
Chief of Rec. Mgmt. _____	Public Aff. _____	Off. of Cong. & Public Aff. _____

(2) If the Department agrees to such an examination, that an FBI Laboratory expert be permitted to serve as an observer on behalf of the Department and Bureau to further enhance the Laboratory's capability in digital image enhancement.

APPROVED: <i>WCH</i>	Adm. Serv. _____	Legal Coun. _____
Director _____	Crim. Inv. _____	Plan. & Insp. _____
Assoc. Dir. _____	Intell. _____	Rec. Mgmt. _____
Chief of Lab. _____	Lab. _____	Tech. Serv. _____
Chief of Ident. _____	Plan. & Insp. _____	Training _____
Chief of Rec. Mgmt. _____	Public Aff. _____	Off. of Cong. & Public Aff. _____

JOHN F. KENNEDY ASSASSINATION FILM ANALYSIS

Francis Corbett*
Ittek Corporation
10 Maguire Road
Lexington, Massachusetts 02173

Abstract

Ittek recently conducted a detailed evaluation of the major 8-millimeter movie films of the J. F. Kennedy assassination. Questions were addressed based on their relevance to controversies or uncertainties that have been raised over the years (by other studies of the films) concerning the assassination. This led to many analyses of the films and required various analytical techniques. A detailed analysis of the Hughes film was performed. This film shows the Texas School Book Depository (TSBD) building windows and the Presidential limousine just before the first shots were fired. Photo-optical, mensuration, and stereophotogrammetric analyses of both the Hughes and Zapruder films were also performed. This technical analysis resulted in both new information on the imagery of the films, and the establishment of reasonably certain explanations of the phenomena observed on the films.

Objective

It is the objective of this paper to describe the techniques of image analysis used on the Zapruder and Hughes films, and to show the results achieved with them.

Image Analysis Methods and Techniques

1. Digital Image Enhancement

An 8-millimeter movie (Hughes) of the TSBD windows was analyzed by three basic methods: (1) inverse Fourier transform filtering to sharpen the imagery, (2) multiple-frame integration to improve the signal-to-noise, and (3) binary quantization to eliminate gray levels in the finished product in order to observe more clearly an object of interest in the sixth-floor corner window of the building. The intent of the total enhancement process was to make this object and its motion more detectable. The inverse Fourier transform filtering used a Wiener filter of the form

$$\frac{\exp(-N^2\pi^2\sigma^2)}{[\exp(-N^2\pi^2\sigma^2)]^2 + (\text{noise})^2}$$

Figures 1 and 2 show the results. These techniques were also applied to the Zapruder film for edge enhancement.

2. Stereophotogrammetry

The graphical and analytic techniques of stereophotogrammetric measurement were (1) applied to the Hughes film to generate ordinal depth plots of objects of interest in the TSBD windows, (2) applied to the Zapruder film to generate depth profiles of occupants of the Presidential limousine for a bullet trajectory study and for perspective corrections, and (3) applied to objects on the "grassy knoll" to determine relative depths and to assist in object identification.

By applying the basic equation of photogrammetry

$$h' = bf/p$$

where h' = distance from camera to object
 b = distance between cameras
 f = focal length
 p = X or stereoscopic parallax

relative depths of objects of interest were determined from both parallax measurements made on an STK-1 stereocomparator, and by use of corrective graphical techniques from "ground truth" data.

Figure 3 shows the results of analysis performed on the Hughes film of the TSBD windows.

*Author's note: This paper is similar in content to one recently published by SPIE on the proceedings of a recent seminar (Optics in Law Enforcement, Reston, Virginia, April 1977). The data is derived from the same source, but the objectives for the two papers are slightly different.



Fig. 1. Digitally enhanced Hughes window imagery. This figure shows computer-processed images of four windows in the Texas School Book Depository. The original film was an 8-mm, 88-frame sequence taken by Robert Hughes about 7 seconds before the first shot. In each picture here, 22 frames have been integrated and sharpened using digital processing techniques. Each successive picture contains a different integration so that the full sequence is displayed in this composite. When viewed as a movie, this sequence shows motion of three men known to be in the windows on the fifth floor and motion of an object in the corner sixth floor window.

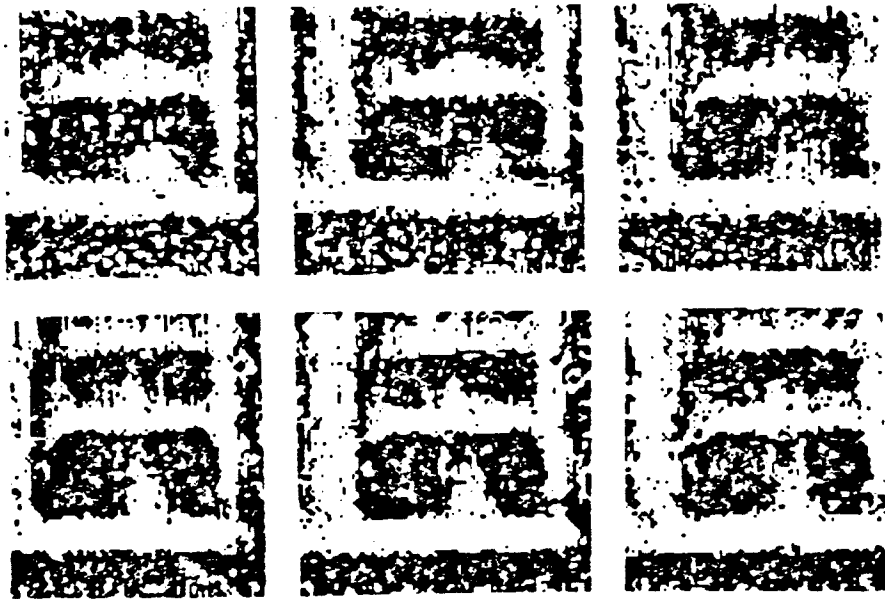


Fig. 2. This figure shows computer-processed images of the sixth-floor corner window of the Texas School Book Depository. The original images were taken by Robert Hughes about 7 seconds before the first shot. The Presidential limousine during this sequence is approaching and turning the corner beneath the building. Each photo here is a composite of 22 sharpened frames, which were then binarized. This result is generated using digital image processing techniques. This sequence shows the window from the beginning to the end of the original 8-mm movie sequence. An object in the window changes shape during this sequence. When viewed as a movie the object appears to move from the edge toward the middle of the window.

Figures 4, 5, and 6 show the most significant application of stereo measurement performed during the study. The results show that the relative location of President Kennedy and Governor Connally in the limousine were determined and then related to a possible bullet trajectory from the TSBD sixth-floor corner window.

3. Photointerpretation

Photointerpretation [by both static and dynamic (movie) methods] was used throughout the program, primarily for three purposes: (1) to determine what actions or phenomena in the films should be subjected to quantitative evaluation, (2) used on the Zapruder film to assess movements of Governor Connally near the time of the President's first wound and to judge their significance, and (3) used to qualify the movements of President and Mrs. Kennedy prior to and just after infliction of the fatal wound at Zapruder film frame 313. The results of part 2 of this interpretation are depicted in Figure 7, and are summarized at the end of the paper.

4. Precision Photographic Processing, Spectral Enhancement, and Coherent Spatial Filtering

The objectives of each of these techniques respectively were to produce high-quality, controlled-gamma copies of the Hughes and Zapruder movie frames for digital and photo-optical analyses, green and red record separation duplicates, spectrally enhanced high gamma copies of Zapruder frame 313 for definition of particulate matter, and coherent spatial filtering for edge enhancement of particles shown in Zapruder frame 313.

Figure 8 shows a result of the spectral color separation enhancement. The purpose here was to produce a sharp delineation of the particles in frame 313 in order to perform more accurate mensuration for a momentum transfer analysis of the President's movements.

5. Digital Plotting From Mensuration Data, and Photo-Optical Change Detection Including Integrated Enhancements

A result of the mensuration and plotting from a composite of two overlaid Hughes frames is shown in Figure 9. Here motion or shape change of an object in the sixth-floor corner window of the TSBD is shown. Motion of this object was also found by "blink detection". Two frames, one near the beginning and one at the end of the Hughes sequence, are aligned on a screen. By shuttering back and forth between the two, differences become well defined. The result is described in Figure 10.

Photo-optically integrated images of the TSBD windows of interest were also generated. An improvement in signal-to-noise of the image was produced from this process. The integrated enhancements were made by combining three frames from the movie sequence on an Itek integrating printer.

Results of the overlaying of outline digital plots from the Zapruder film are shown in Figures 11 and 12. The purpose here was to assess the President's motions at the time of the fatal shot (frame 313) on the Zapruder film.

6. Mensuration

Precision measurements were made primarily from the Zapruder film using a Mann 880 comparator. The goals and objectives of this work were: (1) to produce calculations of the velocity, accelerations, and forces President and Mrs. Kennedy were subjected to, (2) detection of unusual movements of the President, (3) comparison of the President's reaction to a wound and Governor Connally's movements (see Figure 7), (4) perspective corrections, by least squares fitting, which were applied to residual motion calculations, and (5) a heuristic hypothesis that Mrs. Kennedy caused JFK's backward motion.

The end result of the mensuration efforts performed on the Zapruder frames that depict the fatal shot and reactions to it was to find the cause of the President's backward motion that takes place immediately after the fatal shot.

The result of the calculations of the residual motion is shown in Figure 13. Zapruder frame 312 (Figure 14) is the reference coordinate frame for Figure 13. This data on the residual motions of the President and Mrs. Kennedy was the basis for analysis of the forces involved here, which ultimately led to the hypothesis to explain these motions.

From the force analysis, accelerations of JFK and Mrs. Kennedy were computed from perspective-corrected mensuration data and residual motions were evaluated by application of Newton's law:

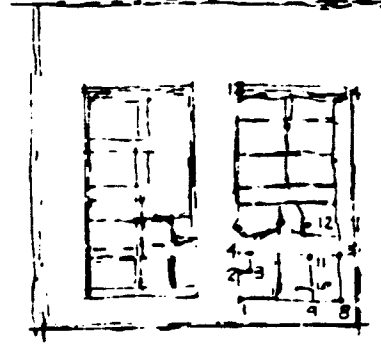
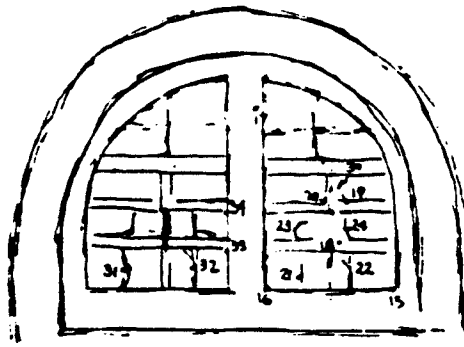
$$F = \frac{kd(mv)}{dt}$$

results showed Mrs. Kennedy was subjected to a significantly greater force than JFK as he reversed direction. From an impulse analysis

$$\int_{t_1}^{t_2} F dt = mv_2 - mv_1$$

she was shown to have the dominant momentum-altering characteristics throughout the collision interaction between her and JFK.

Figure 15 shows the quantitative result of this force analysis.



Edge of Windows	Objects	Edge of Windows	Objects
15	21	1	3
16	22	2	10
17	23	4	11
18	24	5	12
33	31	6	
34	32	8	
	19	9	
	29	13	
	39	14	

Two windows nearest the southeast corner are depicted with annotations that describe the points measured in the stereo analysis. Ordinal graphs produced from this analysis showed points 19, 29, and 39 to be at the plane of the window.

Fig. 3. Stereo analysis of Texas School Book Depository sixth-floor windows

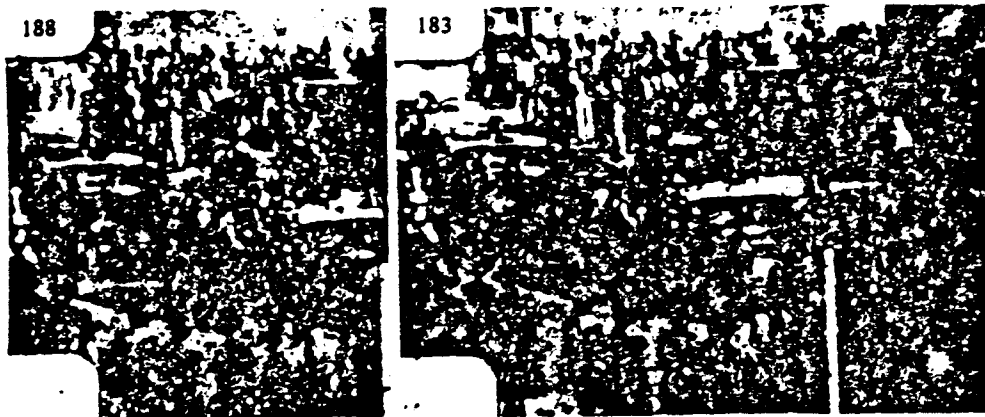
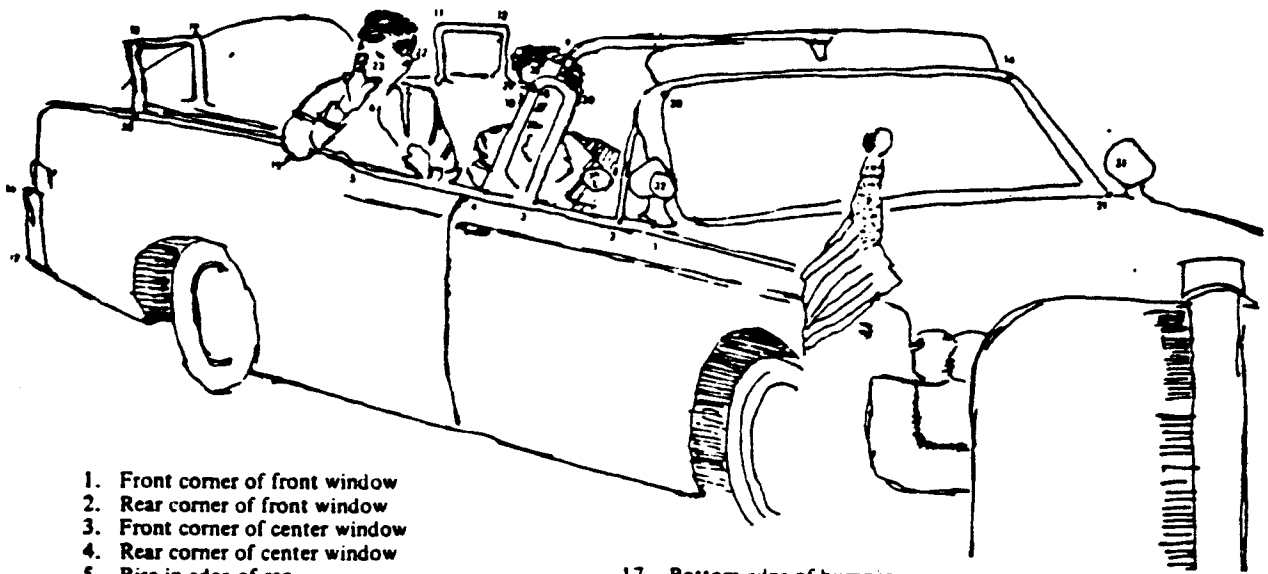
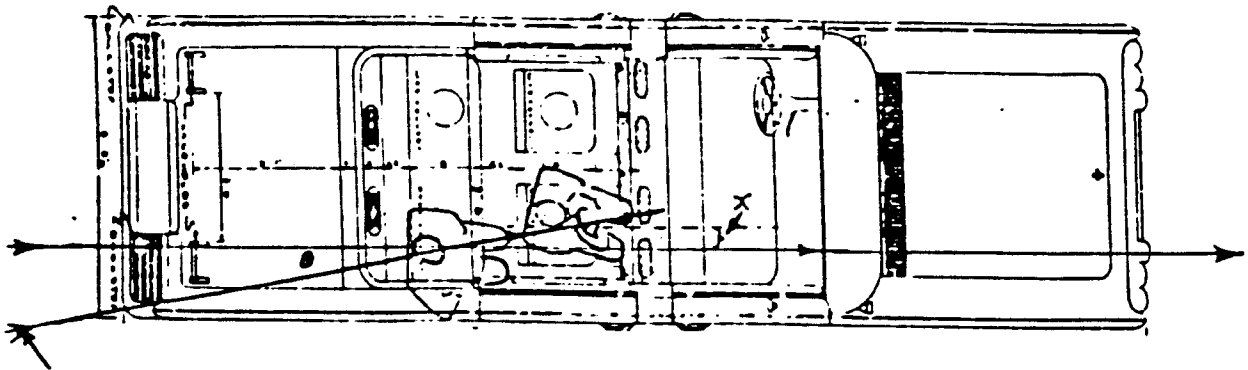


Fig. 4. Zapruder frames 188 and 183. These two frames produced a clear stereo view of the car and occupants just prior to passing behind the Stemmons Freeway sign. Measurements were made from the stereo pair (and others) to determine the relative locations of JFK and Governor Connally in the car. This stereo pair can be viewed quite comfortably without the aid of a stereoscope. The three-dimensional effect is vivid. The measurements showed Governor Connally further recessed into the car than JFK.



- | | |
|--|---|
| 1. Front corner of front window | 17. Bottom edge of bumper |
| 2. Rear corner of front window | 18. Corner of Secret Service nearest handle |
| 3. Front corner of center window | 19. Other side of nearest handle |
| 4. Rear corner of center window | 20. Corner of windshield (top front) |
| 5. Rise in edge of car | 21. Edge of car at light (driver's side) |
| 55. Edge of car at handle | 22. JFK's left ear |
| 6. Right side edge of jacket and shirt near JFK's neck | 23. JFK's left eye |
| 7. Left side edge of jacket and shirt near JFK's neck | 28. Connally's hairline |
| 8. Connally's eye | 29. Between Connally's eyes |
| 9. Back of Connally's head | 30. Top front corner of center window |
| 10. Connally's nose | 31. Light (left side) |
| 11. Farthest Secret Service man's handle | 32. Light (right side) |
| 12. Farthest Secret Service handle | |
| 14. Farthest corner of top of windshield | |
| 15. JFK's elbow | |
| 16. Edge of top of rear bumper | |

Fig. 5. Depth Profiles. A tracing made from frame 183 shows the points used to produce the stereo depth profiles of the car and occupants. The relative depths of JFK and Governor Connally were determined using the graphical data and data on the car.



- The approximate locations of JFK and Governor Connally at about Zapruder frame 186 are shown in the figure.
- A possible bullet flight path is shown for the period of time immediately following.
- $\theta \cong 11.5^\circ$ = angle between car longitudinal axis and TSBD sixth-floor corner window.
- $x = 6.4 \pm 2.2$ inches, derived from stereophotogrammetric data.

Fig. 6. Service scale drawing of the Presidential limousine.

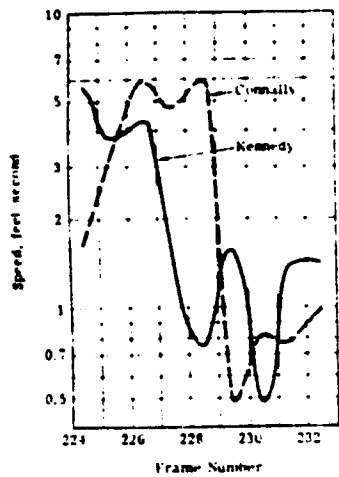


Fig. 7. This graph shows the relationship between the voluntary movement of JF-K's right hand as it moves toward his throat, and a movement of Governor Connally's right hand. Speed of the hand movements as they proceed upward is plotted versus frame number. Connally's peak speed is about two frames behind Kennedy's.



Fig. 8. Spectrally enhanced, high contrast photograph of Zapruder frame 313. Direction of major particles is shown to be forward and up.

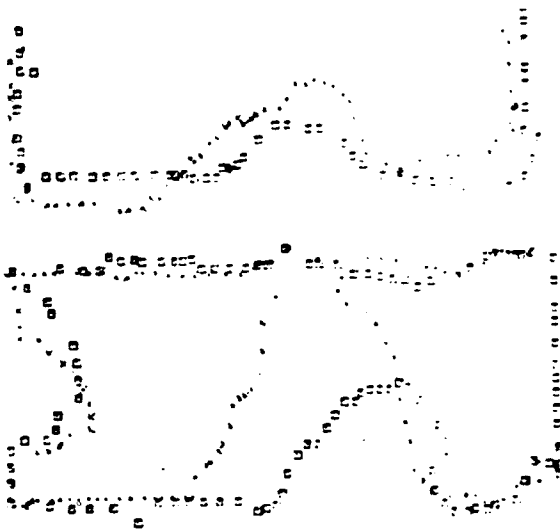


Fig. 9. Computer-generated superimposed outline of sixth-floor corner window from Hughes frames 13 and 14. Frame 14 is denoted by the X's. Special processing techniques were used to enhance the original color movie taken by Robert Hughes about 7 seconds prior to the shots, from which this outline was made. Two frames, one near the beginning and the other at the end of the Hughes movie sequence, were digitized on a comparator and then overlaid and plotted by computer. A change in the shape or position of an object in the window can be seen. The O's denote one frame, the X's denote the other.



Fig. 10. Hughes frame 5 taken at the beginning of the 5.5-second sequence. Frame 84 (bottom) shows in comparison to frame 5 that the object in the sixth-floor corner window has moved a detectable amount over the 4- to 5-second interval between exposures.



Fig. 11. Zapruder frame 313. Trajectories of ejected particulate matter found on frames 313 and 314. Plotting of the trajectories allowed for more accurate momentum transfer calculations.

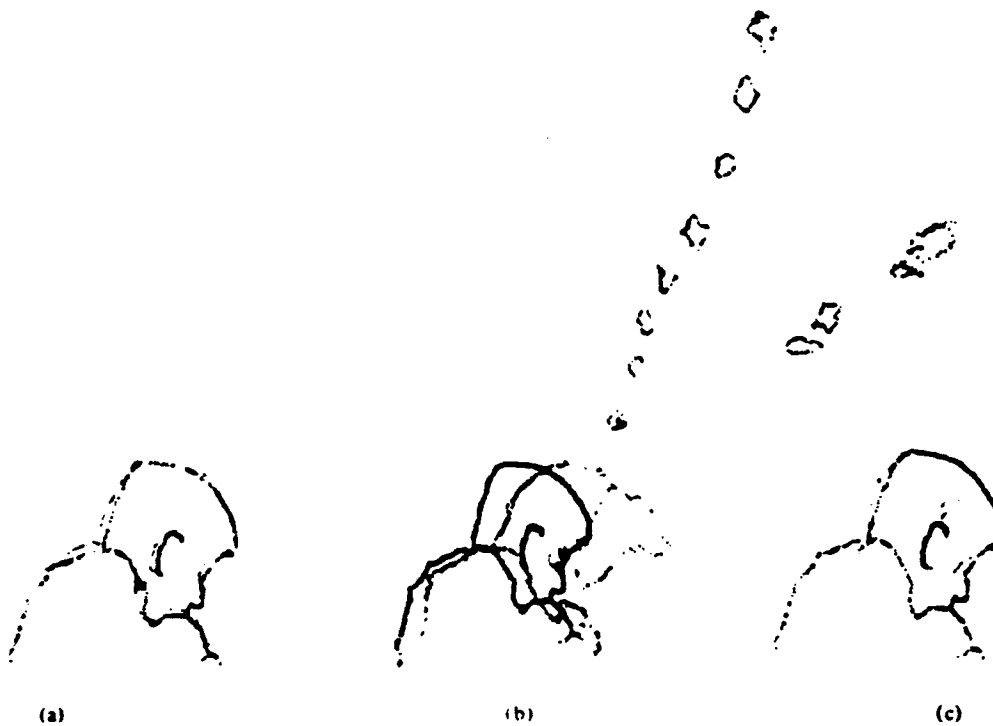
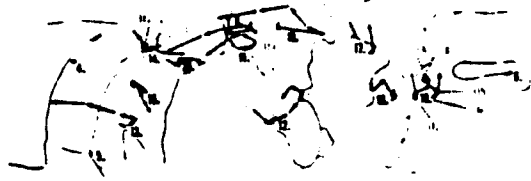


Fig. 12. Relative positions of JFK for three two-frame comparisons. (a) Frames 308-312: a light drift forward. (b) Frames 312-313: with the particles from 313. (c) Frames 312-316: in 316 his head has returned to just behind the 312 position. Frame 312 in each is represented by the square pattern.



Car reference points are shown. Key body locations for key Zapruder frames are annotated on the diagram. Point 9, at the back of JFK's head, shows a slight reversal from frames 313-314. Point 11, his shoulder, reverses at about frame 315. Point 19, Mrs. Kennedy's left shoulder, reverses at frames 311-312, 313-314, and 315-316. Her right elbow reverses at frames 313-314.

Fig. 13. Plot of motion residuals of JFK and Mrs. Kennedy from frames 308-320.

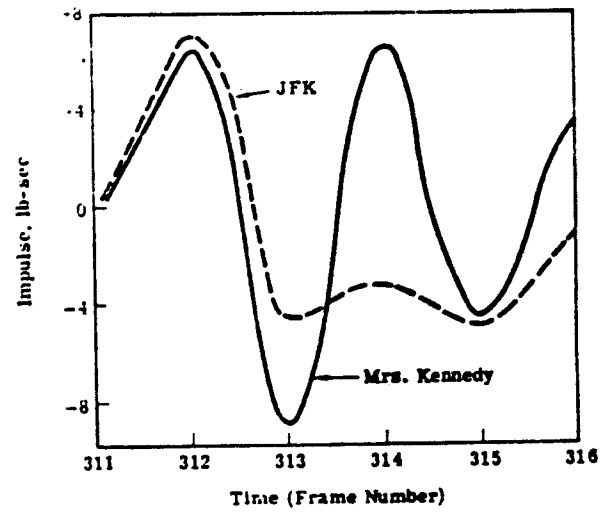


Fig. 15. Impulse versus time (frame number) for JFK/Mrs. Kenn collision/interaction.

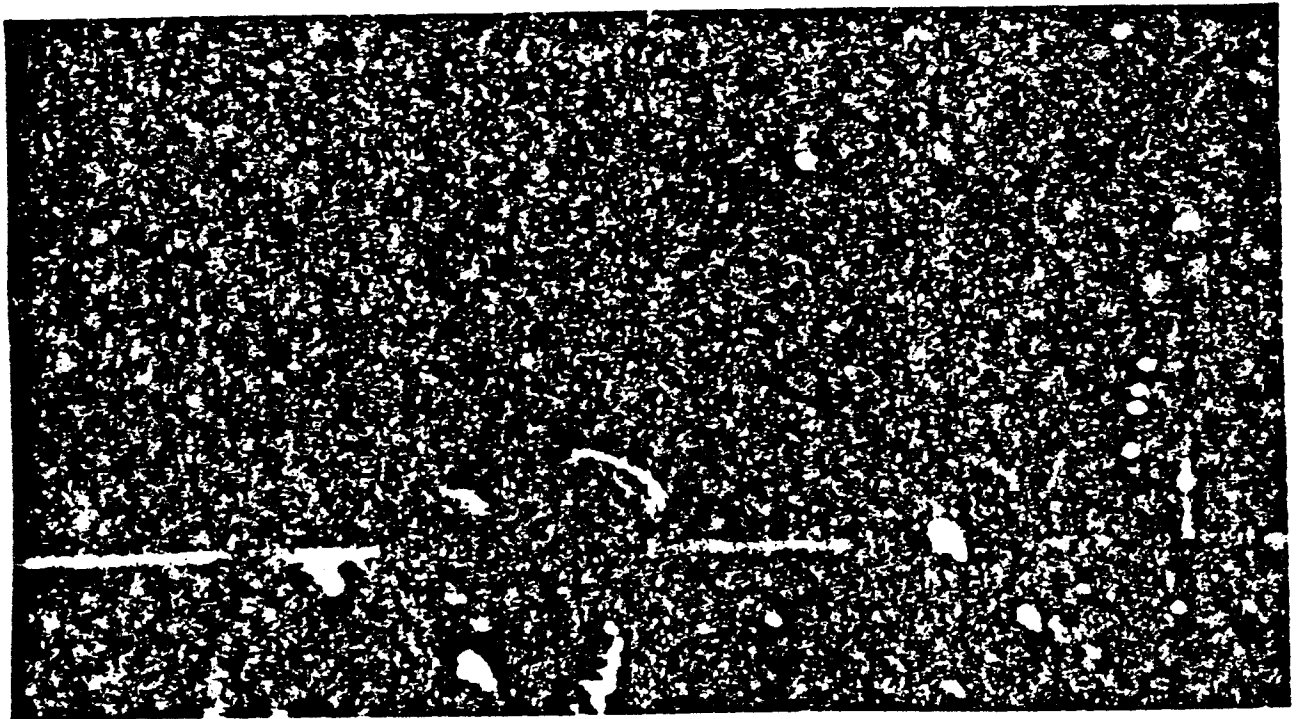


Fig. 14. Zapruder frame 313. This frame was significantly sharper than the surrounding frames.

Summary of the Results and Conclusions

se image analysis methods applied to the Zapruder and Hughes films produced the following results.

Motion of an object or person was detected in the sixth-floor corner window of the Texas School Book Depository.

Identification of this object was not possible despite enhancement techniques applied to the imagery. No other motions or evidence indicating the presence of another person(s) in other sixth-floor windows visible in the Hughes film were found.

No evidence could be found that would indicate that President Kennedy was struck before the Stemmon's Freeway sign blocked Zapruder's view.

President Kennedy was first wounded most probably after frame 212 and before frame 223.

The positions of President Kennedy and Governor Connally in the car at about 1-3/4 seconds before (i.e., frame 186 vicinity) President Kennedy was struck by a bullet (i.e., frame 218 vicinity) and the locations of their wounds are consistent with the hypothesis that both were struck by a single bullet traveling on a trajectory from the sixth-floor corner window of the Texas School Book Depository.

Governor Connally begins a rapid and seemingly involuntary change in physical appearance at about Zapruder frame 225. Part of this change (hand and arm movement) is similar to President Kennedy's voluntary reaction (hand and arm movement) to a wound, first observed at frame 224. Governor Connally's hand movement lags behind President Kennedy's by about two frames, or about 1/9 of a second.

All *major* particles ejected from the President's head at frame 313 travel in a forward direction and his head moves forward about 2.3 inches between frames 312 and 313, under the impact of the blow.

The motions of Mrs. Kennedy and the President immediately after frame 313 indicate that Mrs. Kennedy contributed to or caused the backward motion of the President after frame 313.

No evidence of gunmen purported to be either on the grassy knoll or behind the stockade fence was found.

Acknowledgements

I would like to thank all those who participated in this research project. Specifically, Marcia Berg, Gerald Ahert, William D'Agostino, Bert Rogers, and Vincent Schirf for the digital analysis. Several other people worked long and hard on the photo-optical and mention analysis. George Morin, Charles Meserve, and Ronald Ondrejka deserve special thanks. Howard Hall provided guidance to ensure all the key questions were addressed and Bernard Birnbaum of CBS did a superb job of providing us with the best imagery to do job.

Bibliography

1. Itek Corporation, Image Enhancement Through Superimposition of Multiple Images, Final Report, AFC No. AF 33(600)43383, 1.
2. Thompson, M. (Ed.), "Manual of Photogrammetry", Vol. 1, American Society of Photogrammetry, Falls Church, Virginia, 1966, 2.
3. Schwedfsky, K., "An Outline of Photogrammetry", Chapter 2, Pitman & Sons, London, 1959, pp. 21-27.
4. Jensen, N., "Optical and Photographic Reconnaissance Systems", Chapter 1, Wiley, New York, 1968.
5. Goodman, J. W., "Introduction to Fourier Optics", McGraw-Hill Book Company, New York, 1968.
6. Sears and Zemansky, "University Physics", Chapter 8, Addison-Wesley Publishing Company, Reading, Mass., Fourth Printing, 7.
7. Stephenson, "Mechanics and Properties of Matter", Wiley, New York, 1960, pp. 38-40.
8. Beers, Y., "Introduction to the Theory of Error", Addison-Wesley Publishing Company, Reading, Mass., 1962.
9. Parsons, "Statistical Analysis, A Decision-Making Approach", Chapter 10, Harper & Row, New York, 1974.
10. Haar, T., "Elements of Hamiltonian Mechanics", North Holland, Amsterdam, 1964.
11. Synge and Griffith, "Principles of Mechanics", McGraw-Hill Book Company, New York, Second Edition, 1949, pp. 235-236.

XXXXXX
XXXXXX
XXXXXX

FEDERAL BUREAU OF INVESTIGATION FOIPA DELETED PAGE INFORMATION SHEET

_____ Page(s) withheld entirely at this location in the file. One or more of the following statements, where indicated, explain this deletion.

- Deleted under exemption(s) _____ with no segregable material available for release to you.
- Information pertained only to a third party with no reference to you or the subject of your request.
- Information pertained only to a third party. Your name is listed in the title only.
- Document(s) originating with the following government agency(ies) _____, was/were forwarded to them for direct response to you.

_____ Page(s) referred for consultation to the following government agency(ies); _____ as the information originated with them. You will be advised of availability upon return of the material to the FBI.

21 Page(s) withheld for the following reason(s):
Material contained in this serial refers exclusively to the investigation of the assassination of Dr. Martin Luther King, Jr.

For your information: These pages are considered to be outside the scope of your request for JFK materials.

The following number is to be used for reference regarding these pages:
62- 117290- 1430 PAGES 1-3 ENCL PGS 1-17, 21

XXXXXX
XXXXXX
XXXXXX

XXXXXXXXXXXXXXXXXXXXX
X DELETED PAGE(S) X
X NO DUPLICATION FEE X
X FOR THIS PAGE X
XXXXXXXXXXXXXXXXXXXXX

XXXXXX
XXXXXX
XXXXXX

FEDERAL BUREAU OF INVESTIGATION
FOIPA DELETED PAGE INFORMATION SHEET

_____ Page(s) withheld entirely at this location in the file. One or more of the following statements, where indicated, explain this deletion.

- Deleted under exemption(s) _____ with no segregable material available for release to you.
- Information pertained only to a third party with no reference to you or the subject of your request.
- Information pertained only to a third party. Your name is listed in the title only.
- Document(s) originating with the following government agency(ies) _____, was/were forwarded to them for direct response to you.

_____ Page(s) referred for consultation to the following government agency(ies); _____ as the information originated with them. You will be advised of availability upon return of the material to the FBI.

2 Page(s) withheld for the following reason(s):
HSCA communication - outside the purview of the FOIA per
Court Order

For your information: _____

The following number is to be used for reference regarding these pages:
62- 117290- 1430 ENCLOSURE PAGES 18, 19

XXXXXX
XXXXXX
XXXXXX

XXXXXXXXXXXXXXXXXXXXX
X DELETED PAGE(S) X
X NO DUPLICATION FEE X
X FOR THIS PAGE X
XXXXXXXXXXXXXXXXXXXXX

XXXXXX
XXXXXX
XXXXXX

FEDERAL BUREAU OF INVESTIGATION FOIPA DELETED PAGE INFORMATION SHEET

1 Page(s) withheld entirely at this location in the file. One or more of the following statements, where indicated, explain this deletion.

Deleted under exemption(s) (b)(6) - INFORMATION IN PARA. 5 ONLY with no segregable material available for release to you.

Information pertained only to a third party with no reference to you or the subject of your request.

Information pertained only to a third party. Your name is listed in the title only.

Document(s) originating with the following government agency(ies) _____, was/were forwarded to them for direct response to you.

_____ Page(s) referred for consultation to the following government agency(ies); _____ as the information originated with them. You will be advised of availability upon return of the material to the FBI.

_____ Page(s) withheld for the following reason(s):

For your information: THE REMAINING INFORMATION ON THIS PAGE REFERS TO THE ASSASSINATION INVESTIGATION OF DR. MARTIN LUTHER KING, JR.

The following number is to be used for reference regarding these pages:
62-117290-1430 ENCL. PG. 20

XXXXXX
XXXXXX
XXXXXX

XXXXXXXXXXXXXXXXXXXXX
X DELETED PAGE(S) X
X NO DUPLICATION FEE X
X FOR THIS PAGE X
XXXXXXXXXXXXXXXXXXXXX

FEDERAL GOVERNMENT

Assistant Attorney General
Criminal Division
Attention: Mr. Robert L. Keuch
Director, FBI

- 1 - Mr. Mintz
Attn: Mr. Heller
- 1 - Mr. Cregar
Attn: Mr. Van Wagenen
1/8/79
- 1 - Mr. Bassett
- 1 - Mr. Ryan
- 2 - Mr. Foster

T
O

HOUSE SELECT COMMITTEE ON ASSASSINATIONS
U. S. HOUSE OF REPRESENTATIVES (HSCA)

To Mr. Bassett
for info
any action
necessary
HJG

Enclosed are the original and two copies of a memorandum responding in full to an HSCA request of December 18, 1978, which asked that our September 14, 1978, response to 16 interrogatories pertaining to Yuri Nosenko be declassified in toto.

The September 14, 1978, document has been referred to the Central Intelligence Agency (CIA) for its concurrence in the declassification of certain material. The CIA has advised that it does not object to the declassification of particular information. The CIA has also suggested a correction with regard to a specific date, presumably based upon information in its files. The CIA suggestion is being brought to the attention of the Committee for its consideration.

Handwritten initials/signature

The enclosed memorandum, in part, reiterates our September 14, 1978, response with all classification markings deleted.

You are requested to furnish one copy of the memorandum to the HSCA and, if you approve, one copy to the Office of Legislative Counsel, CIA, for that agency's information.

62-117290-1430x

Enclosures (3)

JUL 15 1980

NOTE: This matter has been coordinated with SA Van Wagenen, Section CI-1, Intelligence Division, and with Mr. Scott Breckinridge, Office of Legislative Counsel, CIA, whose letter of confirmation is attached to the file copy together with a copy of the 9/14/78, response which he reviewed. Intelligence Division concurs that FBI file information does not warrant correction of a date as suggested by CIA, since the few months involved between 12/8/68 (CIA date) and 4/3/69 (FBI date) do not raise significant questions with regard to the bona fides of Nosenko or the date he again became available for interview by the FBI.

MAILED 2
JAN 9 1979

- Assoc. Dir. _____
- Dep. AD Adm. _____
- Dep. AD Inv. _____
- Asst. Dir.:
- Adm. Servs. _____
- Crim. Inv. _____
- Ident. _____
- Intell. _____
- Laboratory _____
- Legal Coun. _____
- Plan. & Insp. _____
- Rec. Mgnt. _____
- Tech. Servs. _____
- Training _____
- Public Affs. Off. _____
- Telephone Rm. _____
- Director's Sec'y _____

DJC:udg (9)

66A
Handwritten initials and numbers

APPROVED:

Director
Asst. Dir.
Dep. AD Adm.
Dep. AD Inv.

Adm. Serv.
Crim. Inv.

Handwritten initials/signature

- Legal Coun. _____
- Plan. & Insp. _____
- Rec. Mgnt. _____
- Tech. Servs. _____
- Training _____
- Public Affs. Off. _____

Handwritten initials/signature

MAIL ROOM

Return to Clark Rm. 898

FBI/DOJ

- 1 - Mr. Mintz
Attn: Mr. Heller
- 1 - Mr. Cregar
Attn: Mr. Van Wagenen
- 1 - Mr. Bassett
- 1 - Mr. Ryan
- 2 - Mr. Foster

January 8, 1979

FEDERAL GOVERNMENT

R

O

HOUSE SELECT COMMITTEE ON ASSASSINATIONS
U. S. HOUSE OF REPRESENTATIVES (HSCA)

This responds in full to a December 18, 1978, letter to the Attorney General signed by G. Robert Blakey, Chief Counsel and Director, HSCA, which asked that the FBI declassify, in toto, a Secret, September 14, 1978, response made to 16 interrogatories pertaining to Yuri Ivanovich Nosenko which were propounded by the Committee in its letter of September 5, 1978.

Declassification of the September 14, 1978, response required coordination with the Office of Legislative Counsel, CIA, which interposed no objection to declassifying certain portions of that response.

The Committee's attention is invited to the fact that CIA did suggest, with regard to the response to interrogatory number "8", that the FBI "... may wish to correct the dates on which the FBI did not have direct access to Mr. Nosenko, to read 3 April 1964 until 8 December 1968."

62-117290-1430X1

JUL 15 1980

For the convenience of the Committee, the following declassified, verbatim reiteration of the September 14, 1978, response is provided.

ORIGINAL AND TWO SENT TO ASSISTANT ATTORNEY GENERAL, CRIMINAL DIVISION, ATTENTION: MR. ROBERT L. KEUCH.

sent 1-8-79 JJC

DJC:vss (9)

- Assoc. Dir. _____
- Dep. AD Adm. _____
- Dep. AD Inv. _____
- Asst. Dir.:
- Adm. Servs. _____
- Crim. Inv. _____
- Ident. _____
- Intell. _____
- Laboratory _____
- Legal Coun. _____
- Plan. & Insp. _____
- Rec. Mgnt. _____
- Tech. Servs. _____
- Training _____
- Public Affs. Off. _____
- Telephone Rm. _____
- Director's Sec'y _____

APPROVED: _____	Adm. Serv. _____	Legal Coun. _____
_____	Crim. Inv. _____	Plan. & Insp. _____
_____	Ident. _____	Rec. Mgnt. _____
_____	Intell. _____	Tech. Servs. _____
_____	Laboratory _____	Training _____
_____	_____	Public Affs. Off. _____

60 AUG 26 1980

MAIL ROOM

Return to [unclear] 8988

Mr. Heller 5/1/84