

Mr. EDGAR. I just wanted to say, on behalf of this member, and I think I speak for the others, how deeply indebted we are to you for taking up the chairmanship of this particular committee over the last year and a half and providing the leadership that this committee so desperately needed. You came on at a tough time, and I think you deserve our deep gratitude for your efforts as chairman. I just want to say thank you.

CLOSING REMARKS BY CHAIRMAN LOUIS STOKES

Chairman STOKES. Thank you very much. It has been for me a great experience.

I guess one of the things I am most proud of is that in the 10 years I have been in the Congress I have never seen a congressional committee work as harmoniously, in such a nonpartisan way, as this committee has, and it has been a real honor to have chaired this committee.

I am very proud of the type of support I have gotten from the ranking minority member, Mr. Sam Devine of Ohio, who has been staunch in his support of this committee in every respect and has been tireless in his efforts on behalf of this committee, along with the other members of the minority side; and, of course, our two distinguished subcommittee chairmen, Judge Richardson Preyer, who chaired the Kennedy investigation, and Congressman Fauntroy, who chaired the King investigation, and both of whom worked tirelessly, many, many hours in executive session and in the full sessions, and all of you gentlemen—Mr. Dodd, Mr. Edgar, Mr. Fithian—who I know attended those executive sessions and worked long hours while you tried to do your other congressional work, many times at a very personal sacrifice—I think the country is indebted to all of you. Thank you.

[Additional material included at the request of Congressman Richardson Preyer:]

LAW OFFICES

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December 27, 1978

Congressman Richardson Preyer
Chairman
House Subcommittee on Assassination
of John F. Kennedy
2344 Rayburn House Office Building
Washington, D.C. 20515

DEC 27/1978

Subject: Investigation of the assassination of John F. Kennedy

Dear Chairman Preyer:

At the time of the assassination of President John F. Kennedy, I was serving as United States Senator from Texas, and was riding in the car with then Vice President and Mrs. Lyndon Johnson in the Dallas Presidential Motorcade.

Having used firearms since I was a small boy, and having qualified, while serving on the staff of the 97th Infantry Division in World War II, with rifle, carbine, pistol and bazooka, and having hunted since with rifles and shotguns, I have some familiarity with the noise made by the firing of such weapons.

In the Motorcade in Dallas, the first explosion was so distinct in its nature, that my mental processes immediately registered "rifle shot" - it was an immediate mental reaction without conscious thought process on my part.

On many occasions since, I have stated that there were definitely three explosions, or shots (this while the F.B.I. was expounding its two shot theory), but during all of these years I have been troubled by the fact that the two subsequent explosions did not sound like that first clear sound of indisputable rifle fire, clear as a signal. I assumed that the difference might have been caused by the

changed position of the car, or other movement.

The recent revelations of a possible fourth shot possibly clear up that doubt as to the reason for the difference in sound between the different explosions.

When I read of the scientific experiment through firing weapons at different positions in the parade route at Dallas, I attempted to telephone the Chairman of the Full Committee, the Chairman of the Sub-Committee, the Chief Counsel or Deputy Chief Counsel of the Assassinations Committee and Sub-Committee, but could reach none of you, but was relegated to someone so far down the line that they did not seem to understand my recommendation at that time.

I have been on hunting trips a number of times when two hunters, neither knowing that the other hunter was firing, fire simultaneously at game, each thinking that they had killed it, each hearing only one explosion. With those experiences in mind, what I recommended to some one of the Committee staff (whom I took from our telephone conversation to know nothing about gunfire) was that firing from the Text Book Depository window and the grassy knoll be synchronized and be made simultaneously, with proper sensitive listening devices at all proper points, in an effort to see if science, so applied, would throw any light on the doubts which increase with the years, as to the accuracy of the Warren Commission Report. My recommendation may never have gotten past the person on your staff to whom it was given, as that person seemed not to understand it.

After the first shot was fired, the Motorcade seemed to momentarily slow down; the resulting close proximity of the principal cars being shown on a photograph which I mailed to the Warren Commission (that Commission having declined to call me as a witness), taken from the Saturday Evening Post, a cropped version of which was printed in the Warren Commission report with my letter of transmittal to that Commission.

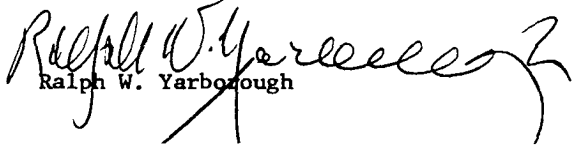
The Warren Commission report stated that the Motorcade speeded up, and took off, but it did not say when. The

Motorcade did not speed up and take off until all the three explosions had occurred.

In the interest of history, I request that this letter be printed with your report.

If your sub-committee will put aside preconceived ideas, if any, from reading the Warren Commission Report (which I do not charge you have), but pursue truth wherever it leads, you will render a service to history, and build a higher confidence among your countrymen for the integrity of public institutions.

Respectfully yours,


Ralph W. Yarborough

RWY/bc

Chairman STOKES. I would like at this time to make some additional closing remarks:

This concludes the public hearings of the Select Committee on Assassinations. As I previously noted, the committee will meet in executive session this evening, to discuss and vote on its ultimate findings and recommendations, which will be submitted on January 3, 1979, to the Clerk of the House. It will also be made public at that time.

The final report of the committee is now being edited for security declassification, and publication. The final report, a transcript of our public hearings and various appendices will be sent to the Government Printing Office by March 30. They will also be made public at that time.

As January 3 is the termination date of the select committee, all work on the editing of the report, the public hearings and other documents will be done under the auspices of the Clerk of the House.

It seems appropriate now, therefore, to reflect on some of the implications of what this committee has done.

The committee has presented evidence clearly pointing to the identity of the assassins in both cases.

The committee has developed evidence of the outlines of a likely conspiracy in the assassination of Dr. Martin Luther King, Jr., and if it is accepted, the evidence heard by the committee today could point to a conspiracy in the assassination of President Kennedy.

The committee has also carefully assessed the performance of the various Federal agencies and looked into each of the assassinations.

The committee has also looked at what recommendations should be made for the future.

The question, nonetheless, arises: What course of action should our society now take with the work of the select committee having come to an end?

As I have said repeatedly, this committee is not a judicial body. In its legislative hearings the committee has looked to the past in a search for facts that might enable it to make recommendations for the future. I emphasize what not all have realized: The committee did not set out to prove or disprove any theory; it did not set out to prove or disprove the existence of a conspiracy in either investigation.

Throughout the investigations of both assassinations, the committee addressed four questions:

Who was or were the assassin or assassins? Was there a conspiracy? How well did the Federal agencies perform their protective and investigative duties? And what, if any, recommendations should the committee make for the future?

Our legislative work is now done. For the committee to proceed to investigate the issue of individual responsibility in either assassination would be unnecessary and inappropriate, unnecessary because the committee has learned what it needs to know to recommend legislative and administrative reform, inappropriate because fact-finding for the purposes of making recommendations, not an assessment of individual responsibility, is and has been the committee's only mandate.

The assessment of personal guilt is something that the Constitution has rightfully allocated to the Executive branch to investigate and for the judicial process to weigh.

Now I recognize, of course, that there are still loose ends in both of these investigations that I had hoped our work might have tied down. I regret that these matters are still outstanding.

As I have observed before, life itself has loose ends. It may well be that those who continue the investigations also will not be able to resolve all of the troubling issues that this committee has exposed. It has been, after all, many years since these assassinations occurred. I wish them well and hope that they will assess our work and make use of it, just as this committee has assessed and made use of the results of the investigations that preceded it.

We have not been perfect, but we have tried to be conscientious and candid in our work. If history records we at least did that, I then will be satisfied.

There is at least one lesson that our society ought to draw from this committee's work, and I would like to leave that with you this afternoon: Never again should our society respond as it did in the aftermath of the deaths of these two great patriots. We did not give these men the type of investigations in death which were commensurate with the dignity of their lives. We cannot, of course, rewrite history. We cannot bring back President John F. Kennedy or Dr. Martin Luther King, Jr. The past can be a die for the future. We can and we must promise ourselves that this history will never be again repeated in this Nation.

I thank you.

If there is nothing further at this time, the committee is adjourned.

[Whereupon, at 5:03 p.m., the hearing was concluded.]

ADDITIONAL MATERIAL SUBMITTED BY MR. ROBERT GRODEN

The following letter, with accompanying photographs and captions, was received by the committee from Robert Groden after the termination of the public hearings, and after the committee had voted upon its findings and recommendations. Therefore the committee was not able to evaluate, and did not rely upon, the letter or its attachments, in reaching any conclusion in connection with its investigation. The materials, however, are set forth here for the benefit of those who may continue to study these subjects. The captions are those of Mr. Groden, and not the committee.

Robert J. Groden
385 Florida Grove Road
Hopelawn, N.J. 08861

Rep. Louis Stokes, Chairman
House Select Committee on Assassinations
Washington, D.C. 20515

Dear Chairman Stokes:

As Photographic Consultant to the Committee, I've been exposed to a question of central importance relating to the results of the acoustics tests that I feel I can shed some light upon.

The question is 'was the open transmitter button that received the sounds of the gunshots, in the plaza'.

Professors Weiss and Aschkenasy have proven scientifically that the 'stuck mike' was in Dealey Plaza and further, that the motorcycle with the open microphone was 120 feet behind the President's car at the moment of the impact on the President's head.

I am enclosing several photographic exhibits which are the best evidence to corroborate the analysis by the acoustics panel.

The motorcycle seen in the enclosed photographs is Officer H.B. McLain's. This determination was made by the House Committee and was confirmed by McLain himself in his public testimony in December, 1978.

Officer McLain was riding on the left side of the motorcade at the level of the convertible press cars. This is where the police tape analysis places the open microphone.



Robert J. Groden
Photographic Consultant,
House Select Committee on Assassinations

In connection with Groden exhibit No. 1 above, which portrays a motorcycle riding on the left side of the motorcade as it approaches Dealey Plaza from Main Street, the committee secured, through the cooperation of the Dallas Police Department, a copy of the daily solo motorcycle assignment log sheet for the week of November 22, 1963.

The log sheet reflects that during that week officer McLain was assigned to ride motorcycle No. 352, as Mr. Groden states his exhibit No. 1 reflects.

GRODEN EXHIBIT # 1



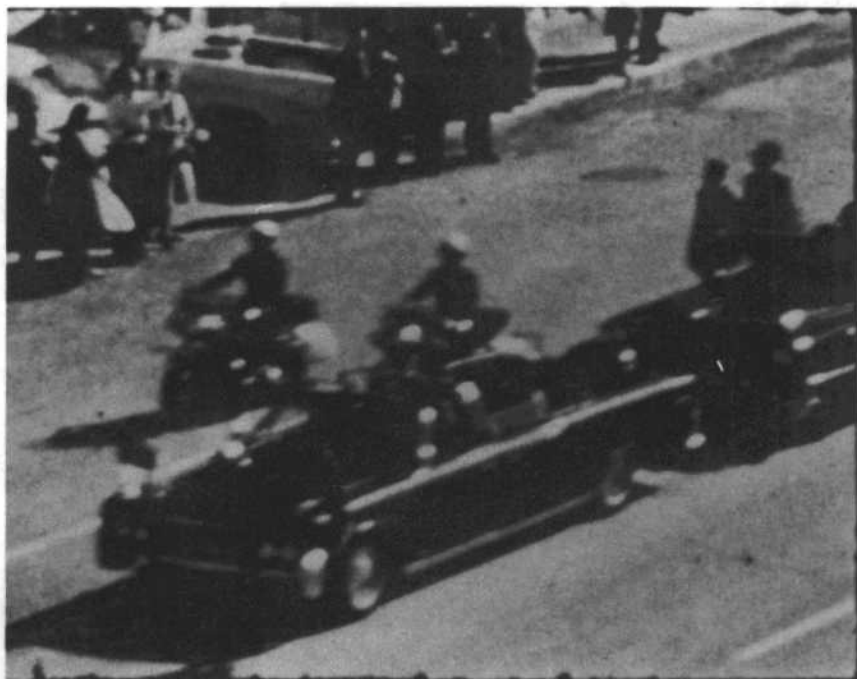
A frame from the Dallas Cinema Associates film showing the Presidential motorcade on Main St. a few blocks before Dealey Plaza which is the open area in the background. In the foreground is officer H. B. McLain riding his motorcycle, #352.

GRODEN EXHIBIT # 2



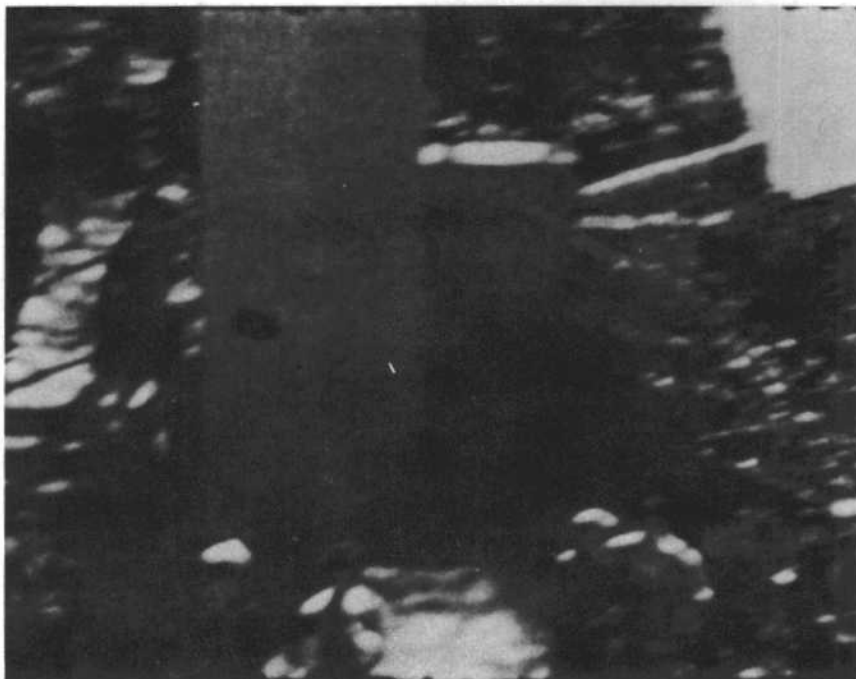
With the motorcade on Houston St. and the President at the corner of Houston and Elm, Officer McLain is now in the foreground making the turn from Main to Houston and starting to speed up to the corner of Elm. (From the Robert Hughes film).

GRODEN EXHIBIT # 3-1A



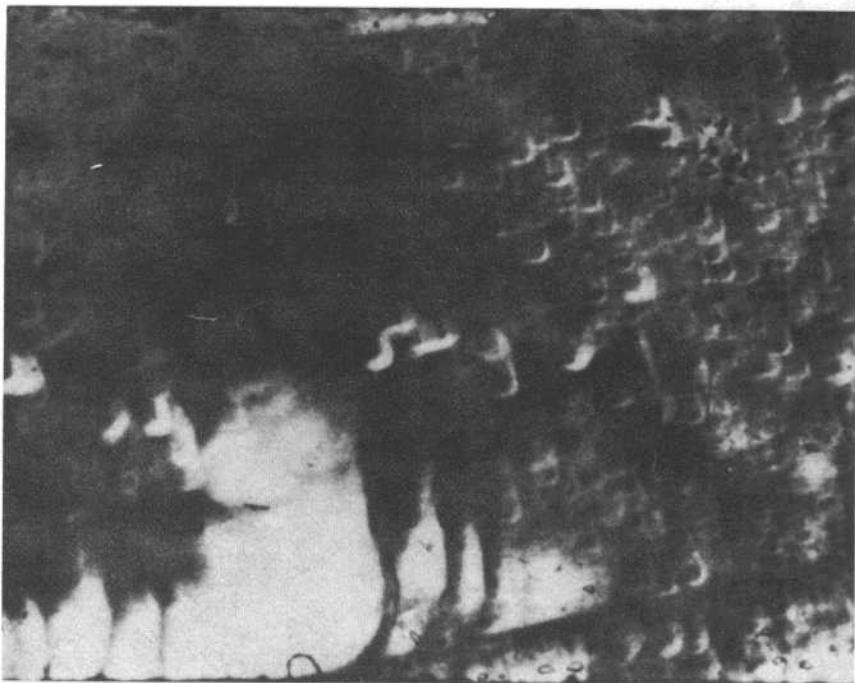
A film taken from the fourth floor of the Texas School Book Depository Building by Mrs. Elsie Dorman shows the President's car beginning the turn onto Elm St. from Houston St.

GRODEN EXHIBIT # 3-1B



Mrs. Dorman pans the crowd as they watch the President pass directly in front of them and in front of the T.S.B.D.

GRODEN EXHIBIT # 3-1C



The crowd looks down Elm St. following the President with their eyes.

GRODEN EXHIBIT # 3-1D



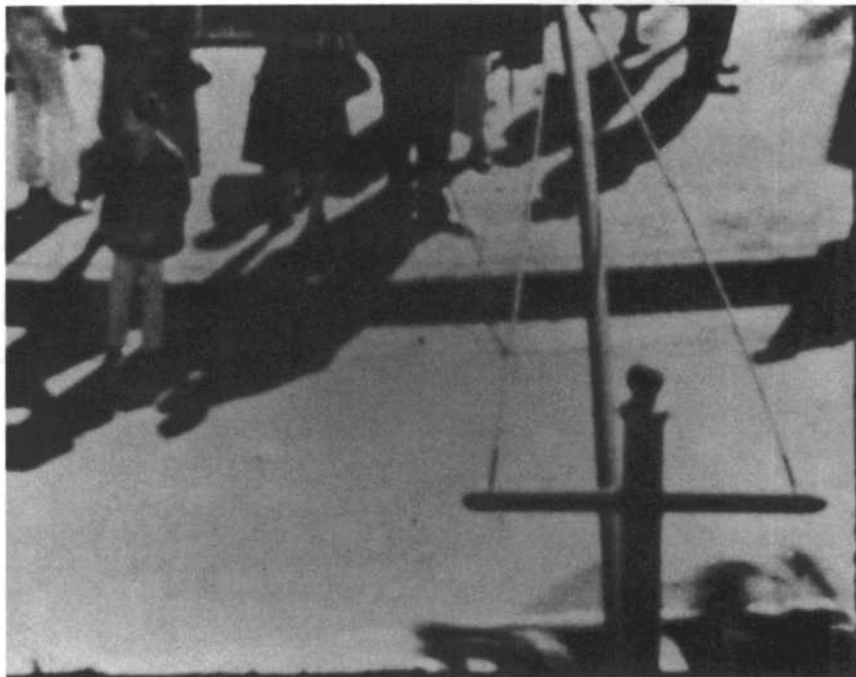
As Mrs. Dorman pans back, she catches the tail end of the Vice-Presidential car (lower right corner).

GRODEN EXHIBIT # 3-1E



Right behind the Vice President's car is its follow-up car . . .

GRODEN EXHIBIT # 3-2A



Then Mayor Cabell's car appears beneath a light pole in front of the depository building.

This sequence is shot non-stop from this point on and acts as a clock. From this point until the point when Officer McLain reaches the Elm Street corner we have an accurate clock of six seconds. According to the account of the events on the Dallas police tape given by Professors Weiss and Aschkenasy, both Dallas Mayor Cabell's car and Officer McLain's motorcycle should have been exactly where these scenes from the Dorman film show them to be.

GRODEN EXHIBIT # 3-2B



Panning the crowd to the Elm-Houston corner.

GRODEN EXHIBIT # 3-2C



At the Elm-Houston corner.

GRODEN EXHIBIT # 3-2D



Panning up a few feet on Houston toward Main but still at the Elm St. corner.

GRODEN EXHIBIT # 3-2E

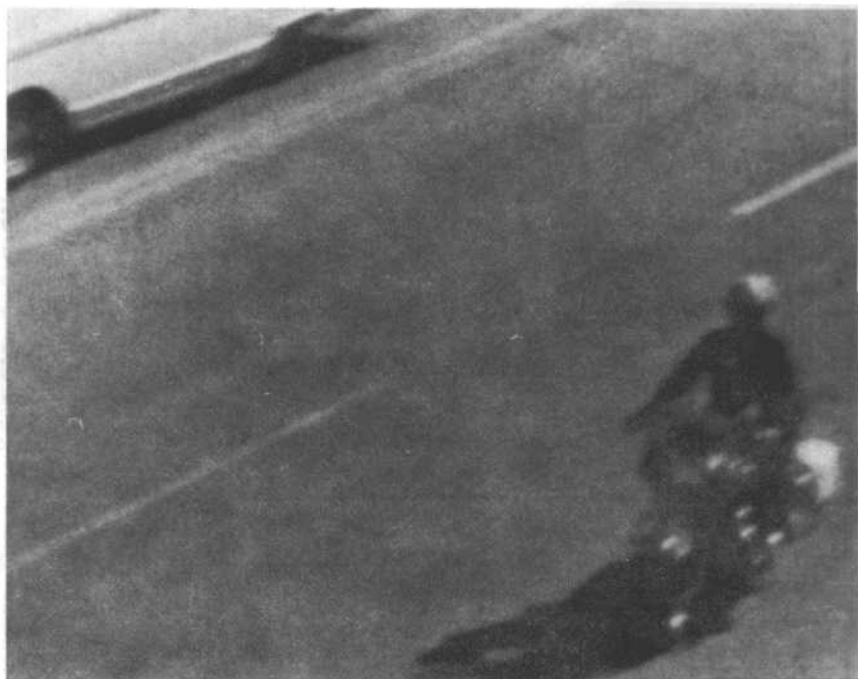


Officer McLain appears at the top of the picture as the shooting begins just around the corner on Elm St.



Officer McLain at the Elm-Houston corner beginning the turn. At this point he's leaning his bike into the turn. The shadow of a bystander can be seen in the street at the apex of the corner.

GRODEN EXHIBIT # 3-2G



Blow-up and detail from the Dorman 8mm original showing Officer H. B. McLain. Officer McLain is riding parallel to one of the press convertibles. He was the only officer riding on the left side of the motorcade anywhere near his position. This sequence of film is the best evidence that McLain was indeed in position to be the officer with the open microphone.

GRODEN EXHIBIT # 3-2H



Officer McLain actually in the Elm-Houston turn between the time of the first shots and the time of the last shots. He is looking down Elm Street at this point.

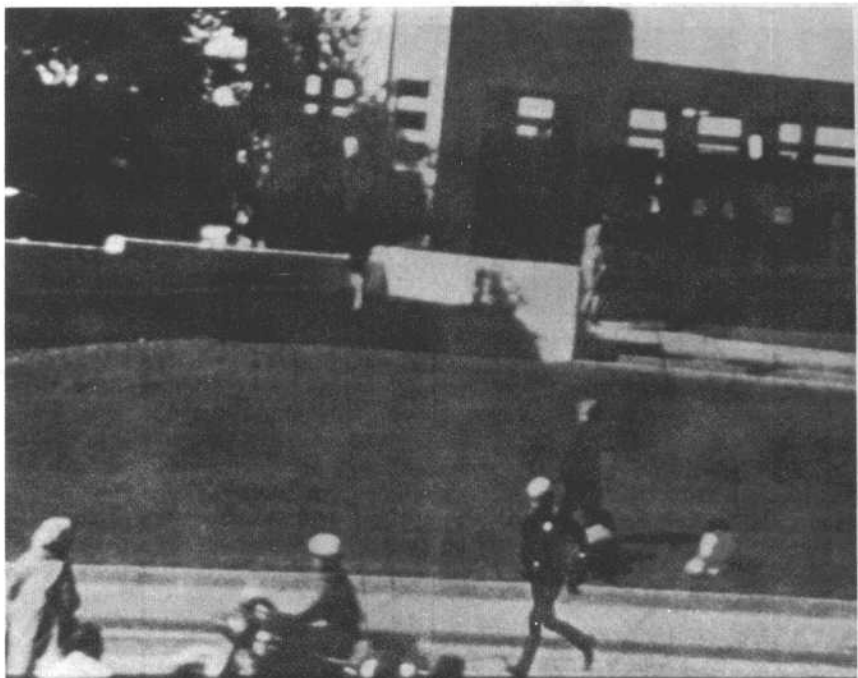
GRODEN EXHIBIT # 4

© 1979 by Jack Daniel. All rights reserved.



Film by Jack Daniel shows Elm St. in Dealey Plaza in the background and the President's car racing toward the camera. The only visible motorcycle policeman on Elm St. is B. J. Martin. The other flanking cycles all stopped farther back up Elm. Officer McLain at this point was coasting down from the head of Elm St. and is too far back to appear in the sequence. This is consistent with the findings of the acoustics panel which found that the motorcycle with the depressed microphone transmitter button had waited approximately a half minute before accelerating to leave the plaza.

GRODEN EXHIBIT # 5



A frame from the film taken by Mark Bell shows a Motorcycle Officer (in all probability McLain) coasting down Elm St. This frame was exposed at least 28 seconds after the moment of the explosion of the President's head. The timing cannot be set any finer because Mr. Bell had to stop to rewind his camera. I have allowed 10 seconds to permit the rewinding of the camera. The police tape reveals that the motorcycle did not accelerate until a half minute after the last shot was fired. If Mr. Bell took approximately ten seconds to rewind the film, then this is McLain and this is yet additional proof that the police tape recording resulted from his microphone being open in Dealey Plaza. However, even if this is not McLain, the other exhibits provided are strong proof of the fact that it indeed was his microphone that picked up the sound of the shots.

DAILY ASSIGNMENTS FOR SOLO MOTORS
AND SELECTIVE ENFORCEMENT MEN

Sergeant B. L. Strong 230 in charge

Officer	Call #	Equlpt. #	Days off	Assignment
1. Collins, H. E.	171			
2. Britton, P. W.	172		AL	9-5
3. Glasgow, V.	173			
4. Brooks, J. W.	174			
5. Phillips, J. M.	175			

Sergeant A. Smith 170 in charge

Officer	Call #	Equlpt. #	Days off	Assignment
1. Martin, B. J.	131	344		
2. Garrick, J. B.	132	358		
3. McBride, G. C.	133	360		
4. Baker, M. L.	134	346		
5. Freeman, H. R.	135	345		
6. Hargis, E. W.	136	347		
7. Brewer, E. D.	137	348		9-3
8. Jackson, D. L.	138	356		
9. Marshall, L. H.	139	338		
10. Hay, W. J.	141	349		
11. Haygood, C. A.	142	357		

Sergeant A. Smith 2 in charge 10 pm Radar (4 pm to 12 M Sat. & Sun.)

Officer	Call #	Equlpt. #	Days Off	Assignment
1. Garrison, B. C.	191			
2. Wilson, B. E.	192		AL	9-3
3. Harmon, G. H.	193			
4. Williams, N. L.	194		AL	9-3
5. Roark, W. J.	195			

Sergeant S. Ellis 3 in charge 4 pm to 12 M Solo (5 pm to 1 am Sat. & Sun.)

Officer	Call #	Equlpt. #	Days off	Assignment
1. Chaney, J. M.	151	337		
2. Lumpkin, V. G.	152	343		
3. Courson, J. W.	153	355		
4. Featherston, W. R.	154	353	AL	
5. McLain, H. B.	155	352		
6. Gray, L. E.	156	351		
7. Taylor, J. H.	157	341		
8. Featherston, W. R.	154	353		
9. Wafford, E. D.	159	342		
10. Dale, B. J.	161	350		
11. Williams, J. W.	162	354		

Days off Sgt. Smith, Sgt. Strong, Sgt. Courson, Sgt. Feath

Finally, the following memorandum describes the process of correlating the acoustics analysis with the Zapruder film:

MEMORANDUM

TO: All Select Committee Members

FROM: G. Robert Blakey, Chief Counsel and Director ^{GB} 2-22-79

DATE: February 22, 1979

RE: Fine Points of Correlation of Tape to Film

As noted during the course of our public hearings, any attempt to derive the maximum knowledge from the available acoustical and photographic evidence requires that at least an approximate correlation be made between the timing of the shots as recorded on the Dallas Police Department tape and the visual record contained in the Zapruder film. One such correlation was presented during the hearings in the form of a copy of the Zapruder film with four shots dubbed onto it at the approximate times that the occupants of the limousine would have heard the sounds of the gun fire. In fact, two different versions of the film were shown on December 29th. In the first, the sound of the fourth shot (from the TSBD) coincided with the fatal head wound seen at Zapruder frame 313, and in the second, the third (grassy knoll shot) coincided with that wound.

Under the time constraints of preparing for the hearings on December 29th and with the recognition that neither the running speed of the DPD dictabelt nor of Zapruder's camera was known with absolute precision, the frames used on December 29th for such correlation purposes were based only on the actual spacing of shots on the DPD tape (totaling 7.9 seconds from the first to the last) and the "average" running speed of Zapruder's camera, which the FBI determined in 1964 to be 18.3 frames per second.

Nevertheless, so that the Committee's final report may be more exact and that you can understand the basis for the increased precision we have continued to refine our data and it may be helpful to note in this memorandum the results of our efforts to be more precise as well as what is set forth in the final reports of BB&N, Weiss and Aschkenasy, and what was contained in a letter from FBI Director Hoover to the Warren Commission of February 3, 1964.

In its final report, BB&N advises the Committee that its best estimate is that the DPD dictabelt was recording approximately 5% too slowly on November 22, 1963, a fact also noted in the hearing on the 29th. The FBI's letter of February 3, 1964, also stated as quoted in full below:

At the request of members of your staff the FBI Laboratory has made a further study of the film speed of the camera used by Mr. Abraham Zapruder in filming the eight millimeter motion picture of the President's assassination. You have previously been furnished the results of the Laboratory examination of this camera which places the film speed at 18 1/3 frames per second. The Laboratory was requested to establish, if possible, the variation between the film speed of the camera when the drive spring is fully wound and when the spring is almost run down.

This study has been made by checking the film speed of the Zapruder camera at ten second intervals throughout the full running time of a fully wound camera. Several checks were made on a full roll of film and it was found that the film speed of the camera when fully wound runs at an average speed of from 18.0 to 18.1 frames

2 - correlation of tape to film

per second (fps) for the first ten seconds. It gradually increases to 18.3 to 18.5 fps for the next twenty seconds, then gradually decreases slightly to 18.1 fps for ten seconds before the final twenty seconds that run at an average speed of 17.6 to 17.9 frames per second. Mr. Zapruder has stated that the camera was fully wound when he started filming the President's motorcade. Since all of Mr. Zapruder's assassination film was exposed well within the first half of time the camera will run on one winding, the rundown film speed should not be considered in the calculations. Therefore, the above figures result in our previous average frames per second speed for the assassination film of $18 \frac{1}{3}$ or 18.3 frames per second.

Shots 1, 2 and 4 were found by BB&N to begin on the DPD tape at 137.70, 139.27 and 145.61 seconds, respectively. Shot number three was found by Weiss and Aschkenasy to begin at 144.90 seconds. If the spacing between those shots is adjusted by the approximate 5% error in running speed of the dictabelt, the probable true timing of the shots, beginning with shot number one as zero, is 0.0, 1.65, 7.6 and 8.3 seconds.

Using those best estimates of the true timing of the shots, it is possible to calculate the frame number on Zapruder's film at which any event of interest occurred, and to do so for any assumed running speed of the camera. Nevertheless, it would not be accurate to simply multiply the corrected time spacing of the sounds as recorded, by the assumed number of frames per second running speed, unless, of course, you wanted to know only what frame was being exposed when the microphone picked up the sound of each shot.

If, for example, what you wished to know was which frame of the film was exposed when the bullet struck (or passed by) the limousine on the first shot, and you assumed the camera was running at 18.5 frames per second, and that the fatal head wound was caused by the fourth (TSBD) shot, your calculations would proceed as follows:

1. The distance from the motorcycle to the TSBD at the time of the first shot was approximately 124 feet.
2. Since sound traveled at approximately 1123 fps on 11/22/63 in Dealey Plaza (it being about 650 in the Plaza at that time), the sound took about .11 second to reach the microphone after the muzzle blast occurred. Stated conversely, the trigger was pulled .11 second before the 0.0 point in time on the tape.
3. If the fatal head shot is observable at frame 313, we can assume the bullet struck one frame earlier, at 312. A Mannlicher-Carcano bullet travels at approximately 2000 fps. Since the limousine was approximately 265 feet from the TSBD window at frame 312, the trigger was pulled $\frac{265}{2000} = .13$ seconds before frame 312. The motorcycle was only about 145 feet from the TSBD at this time. Consequently, dividing 145 by 1123, it is apparent that the microphone recorded that sound .13 seconds after the trigger pull, or at about the same time that the bullet impacted.
4. It is now possible to determine the frame at which the trigger pull on shot number one occurred. You simply take the total corrected tape time (8.3 seconds), add the

3 - correlation of tape to film

.11 second delay from shot number one trigger pull to recording time (step number 2), multiply by 18.5 frames per second ($8.41 \times 18.5 = 155.6$), and subtract from 312. The trigger was first pulled at frame 156.

5. Finally, by allowing for bullet travel time to the limousine (about 143 feet), it can be determined that the bullet struck at about frame 157 ($156 + (\frac{143}{2000} \times 18.5) = 157$).

Similar calculations can be made for other events of interest. One example is the question of what frame was being exposed when Zapruder heard each shot. This information, of course, is useful for comparison with the blur analysis conducted by the photographic panel.

The following is a chart setting forth the results of such calculations, using three different estimates of camera speed, 18.0, 18.3, and 18.5 frames per seconds:

Shot No.	Tape Time	Trigger Pull Time	Hearing Shock Wave in Limo.		Hearing Muzzle Blast by Zapruder ³			Weapon to Limo. ²	Motorcycle to Weapon ¹
1	0.11	0		161 177		165	181		
			0.07	159 175	0.24	162	178	143'	124'
				157 173		160	177		
2	1.76	1.66		191 208		194	210		
			1.74	189 206	1.90	192	209	165'	107'
				188 205		191	208		
3	7.69	7.49		296 312		296	312		
			7.55	296 312	7.55	296	312	111'	220'
				295 312		296	312		
4	8.44	8.31		312 328		314	330		
			8.44	312 328	8.55	314	330	266'	144'
				312 329		314	330		

¹Sound: 1123 fps

²Bullet: 2000 fps

³Zapruder to TSB0: 270'

Zapruder to Knoll: 60'

