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ASSASSINATION OF PRESIDENT JOHN FITZGERALD KENNEDY,
DALLAS, TEXAS
NOVEMBER 22, 1963

[redacted]

refer DOJ

On August 27, 1980, and September 15, 1980, Captain James C. Bowles, Community Service Division, Dallas, Texas Police Department, furnished the following information:

Captain Bowles was a supervisory police sergeant in the Communications Division of the Dallas, Texas Police Department from 1956-1966. Captain Bowles stated that he does not have a great deal of expertise concerning the technical specifications of the Dallas Police Department communications equipment in use on November 22, 1963. Captain Bowles stated that he thinks he probably has the best over-all knowledge of all the personnel still employed by the Dallas Police Department of the way the communications system generally operated at the Dallas Police Department during that period of time. Captain Bowles stated that he obtained this knowledge by working in the Communications Division during 1963 and by considerable

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research he has done on his own concerning the communications system of the Dallas Police Department during approximately the past three years.

Captain Bowles stated that since he did not have personal knowledge of the technical specifics of the radio system in operation at that time, he would like to refer specific equipment questions to the City of Dallas Communications (b)(7)(C) Services. He recommended that [redacted] a long time Communications Services employee, be initially contacted concerning this inquiry.

Captain Bowles stated that he has personal knowledge that Channel One was utilized for routine communications and operations on November 22, 1963. All radio traffic on Channel One was recorded at the Dispatch Center of the Dallas Police Department using a Dictaphone A 2TC Model 5 belt recorder. The output of the bridge mixer was connected directly into the voice operated relay of the recording device. The recordings were alternated between two dictaphone machines so as to allow the recording belt to be changed with minimal interruption of the recording process. He noted that the worm gear on the dictaphone was characteristically unreliable inasmuch as it often failed to maintain proper tracking. Improper tracking caused repeating of tracks in the playback mode.

Channel Two on November 22, 1963, was utilized by motorcade associated with the visit of President Kennedy to Dallas, Texas. Channel Two radio transmissions were recorded at the Dispatch Center by means of a Gray Audograph disc type recorder connected in the same fashion as the dictaphone recorder was to Channel One. A companion unit was provided to maintain uninterrupted coverage.

The original belts and discs, containing recordings of radio transmissions at or about the time of the assassination of President Kennedy were provided to the FBI within a few days of that event. Several days later an FBI Agent returned the belts and discs to Captain Bowles personally, with the explanation that the FBI was experiencing difficulty in preparing a transcript of those recordings due to a lack of familiarity with the Dallas Police Department radio parlance and terminology.

Captain Bowles maticulously reviewed the original belts and discs in order to prepare a transcript. It was necessary to stop and start the playback machine many times in order to prepare an accurate transcript. The stylus of the dictaphone playback machine was inserted into previously recorded track on many occasions and in many different locations. It is Captain Bowles' opinion that the playback process, including the numerous placings of the stylus on the previously recorded track, may have created degradations of the original recorded material, as well as actually adding new impulses to the track.

Captain Bowles stated that he made a reel-to-reel tape recording of the original dictaphone belts using a Wollensak recorder provided him by the FBI during the time he was transcribing the original belts in the early part of 1964. One original copy was provided to the FBI, and he personally retained another copy. The reel-to-reel recordings were made by playing the originals on the appropriate playback devices and placing the microphone of the tape recorder next to the playback speaker. There was no direct wire connection between the playback device and the tape recorder.

(b)(7)(c)

On September 17, 1980, Mr. [redacted] Communications Services, City of Dallas, 3920 Forest Avenue, Dallas, Texas, was contacted and advised that he would prefer that Mr. [redacted] Communications Services, City of Dallas, be initially contacted for the desired equipment information.

(b)(7)(c)

On September 19, 1980, Mr. [redacted] Communications Services, City of Dallas, 3920 Forest Avenue, Dallas, Texas, and [redacted] who in 1963 was a radio engineering supervisor for the City of Dallas, furnished the following information to Special Agents [redacted] and Radio Maintenance Technician [redacted]

(b)(7)(c)

Mr. [redacted] and Mr. [redacted] stated that the information they are providing concerning the Dallas Police Department Communications System as it existed on November 22, 1963, is based on Mr. [redacted] personal recollection and the composite recollection of other employees with whom Mr. [redacted] discussed this matter.

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The radio system consisted of two channels, namely Channel One and Channel Two.

Channel One was a duplex repeater operation. The main transmitter was a Motorola device located at Fair Park, Dallas, Texas, and transmitting on 45.66 M/Hz. The auxiliary transmitter operated on the same frequency, was manufactured by RCA, and was located on the Fifth Floor of the Dallas City Jail, 106 South Harwood. Two Motorola receivers were utilized operating on 45.74 M/Hz. One was located on the Jefferson Tower Building in the 200 block of West Jefferson, Dallas, Texas, and the other was located on the Stoneleigh Hotel, Dallas, Texas. These were connected by dedicated telephone line to the Disptach Center, 106 South Harwood. All antennas were Andrews quarter-wave trombones with ground plane. These telephone lines carried a "1FR" designation and were high grade audio lines. The lines were interfaced with the receivers by use of Western Electric 111C repeat coils. The lines entered a select switch to enable muting of either receiver. The received signal then entered a Collins monitor amplifier and from that went into a loudspeaker on the dispatch console. The signal from the monitor amplifier also fed a Western Electric type 52A headset, a bridge mixer which was connected to a dictaphone recorder, and a dispatcher and mobile audio mixer. The headset microphone fed a Collins pre-amplifier. That device fed the bridge mixer and the dispatcher and mobile audio mixer, supra. Both of these mixers were active amplifiers utilized to isolate the input signals, one from the other. The dispatcher and mobile audio mixer fed a Collins line amplifier which was then connected to the main or auxiliary transmitter by use of a selector switch. The main transmitter was connected by a high grade audio quality dedicated line, and the auxiliary transmitter was connected by house cable.

Mobile units transmitted on 45.74 M/Hz. Motorcycles, both two and three wheel models, were equipped with Motorola Model T 31 BAT-1130A transceivers with a hand-held military style teardrop microphone, using a transistorized element.

The Channel Two system was a simplex operations utilizing 45.78 M/Hz. The equipment designations and connections were the same as for Channel One except for the deletion of the dispatcher and mobil audio mixer, the substitution of a Gray Audiograph disc recorder attached to the bridge mixer rather tha a dictaphone, and the substitution for the Stoneleigh Hotel receiver site by a receiver located on the Southland Center, Dallas, Texas.

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(b)(7)(c) Mr. [redacted] displayed a radio of the type believed to have been used during November, 1963. It carried the following designation:

"Transistorized Dispatcher Radiophone
Serial Number G26786
Transmitter type CC1500
Model T31 BAT-1130A
Motorola, Inc., Chicago, Illinois".

(b)(7)(c) (b)(7)(c) (b)(7)(c) The technical specifications for the transceiver including the microphone are not known to Mr [redacted] and Mr. [redacted] These specifications should be available through Motorola, Chicago, Illinois. They noted that [redacted] a former Communication Services employee, who now works for Motorola at Biloxi, Mississippi, might have further recollection of the details of the radio system as it existed during November, 1963.

The telephone interconnection circuits were specified by the technical personnel of Radio Station WRR, a station owned by the City of Dallas. It is believed the circuits were of the same type utilized by the broadcast industry. The exact frequency response of the lines is not known, but is believed to be greater than the response of lines commonly in use for this purpose in 1980. The response is believed to have been at least 200-3000 Hz.

(b)(7)(c) It is the opinion of Mr. [redacted] that the frequency limitations of the final recording made of the radio transmissions were caused by the limited frequency response of the recording devices themselves. He noted that the 45 M/Hz band is inherently noisy, with numerous bursts of static caused by sunspot activity and other factors.

(b)(7)(c) Mr. [redacted] noted that the audio in the Motorola transceiver was switched directly by the push-talk button on the microphone. This feature indicates that audio cannot be broadcast without the push to talk button being depressed or physically broken so that the switch contacts inside the microphone are jammed. If there was an internal malfunction of the transceiver and the push to talk button were not depressed, only an unmodulated carrier would have been emitted.

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(b)(7)(c) Mr. [redacted] noted that on the tape recordings made from Channel One at or about the time of the assassination of President Kennedy, there appears a sound of a chime or bell. That sound has been said by motorcycle patrol officers to be identical to the sound caused by driving a motorcycle across a metal manhole cover.

Attached hereto are two charts depicting the Dallas, Texas Police radio system as of November 22, 1963. These charts were drawn by Special Agent [redacted] FBI, (b)(7)(c) Dallas, and are based on information provided by Dallas, Texas Police Department personnel as set forth above.