EXHIBIT 1

ANALYSIS OF PHOTOGRAPHS OF

KENNEDY ASSASSINATION USED AND NOT USED BY THE WARREN COMMISSION

GENERAL

Exhibits 1A & B show all known photographers and photographs as of August 1, 1967 taken at the Kennedy assassination site on November 22, 1963. A few photos are included in the list which were taken at other locations on November 22 or at the site at times other than on the day of the assassination. These are included only because of their importance in determining what happened during the assassination.

Exhibit 1A shows in chart form a list of objects or people of importance to an analysis of what happened as they appear or do not appear in each of the photographs.

Exhibit 1B shows in table form a list of all photographers, the type of photographs they took, and what each one shows. In the case of still cameras each photo of importance taken by the same photographer is listed separately. In the case of movies or television footage, each sequence of importance taken by the same photographer is listed separately. A sequence is defined as a continuous series of frames unbroken by stopping and starting the movie camera. In a few cases, where only a short break occurs (less than a few seconds) with the camera pointed in the same direction, it is considered to be one sequence.

TOTAL NUMBER OF PHOTOGRAPHS

As of August 1, 1967 the author has found evidence of a total of 224 photographs taken by a total of 57 photographers. Of this total, 39 where movie sequences taken by 11 photographers, 13 were television sequences taken by 8 TV cameramen, and 166 were still photos taken by 32 photographers. The balance of 6 photographs taken by 6 photographers are not identifiable as to type. The photographers appear in other photographs taking pictures. However, the type of camera cannot be determined.

Of the 57 photographers, all but 14 can be identified by name. In six of these cases, the photographs are available even though the photographer remains unknown.

WHAT THE PHOTOGRAPHS SHOW

As stated before, nearly all of the 224 photographs were taken in Dealey Plaza on November 22, 1963 prior to 5 p.m. Twenty eight photographs were taken at the time of the shots or within a few seconds before the first shot or after the last shot. Forty five photographs show the grassy knoll area all within minutes of the time the shots were fired. Thirty two photographs show the TSBD building within minutes of the shots. One shows the building the morning of November 22.

WARREN COMMISSION USAGE

The Warren Commission used 21 of the 224 photographs; about 9%. They were taken by seven of the 57 photographers; about 12%. In addition, the Commission looked at four more photographers' pictures which were published in sources other than the 26 volumes.

The FBI saw less than half of those unseen or unused by the Commission. About 40 to 45% of the photographs were never examined by any official investigating body including the Commission, the FBI, the Secret Service, or the Dallas Police.

EXHIBIT 1B

Legend-Type of Photo M-Movie P-Still Photo T-Television Footage C-Color B-Black & White

LIST OF PHOTOGRAPHS AND PHOTOGRAPHERS

| Ph | oto | Photograp | her | Seq. | |
|----|---------------|-----------|-----|------|--|
| # | Type | Name | # | # | Photo Shows |
| | | | | | |
| 1 | MC | Zapruder | 1 | 1 | JFK on Elm-Houston St. to Overpass |
| 2 | MC | Nix | 2 | 1 | JFK on Houston St. before shots |
| 3 | MC | Nix | | 2A | JFK on Elm St. just before, during & after head shot |
| 4 | MC | Nix | | 2B | Grassy knoll and cars on Elm just after head shot |
| 5 | MC | Muchmore | 3 | 1 | JFK on Houston St. |
| 6 | MC | Muchmore | | 2 | JFK on Elm Just before, during & after head shot |
| 7 | MC | Hughes | 4 | 0 | JFK on Houston from Main St. 2/3 of way to Elm |
| 8 | MC | Hughes | | 1 | JFK on Houston & Elm & Depository 6th Floor window |
| 9 | MC | Hughes | | 2 | Camera cars on Houston St Man on Dal Tex fire escape |
| 10 | MC | Hughes | | 3 | Grassy knoll after shots |
| 11 | MC | Hughes | | 4 | Grassy knoll after shots |
| 12 | MC | Hughes | | 5 | County Courts Bldg. , Dal Tex & Main & Houston |
| 13 | MC | Hughes | | 6 | Parking Lot |
| 14 | MC | Hughes | | 7 | Plaza looking south from arcade |
| 15 | MC | Hughes | | 8 | Parking Lot |
| 16 | MC | Hughes | | 9 | Depository Bldg - top |
| 17 | MC | Hughes | | 10 | Depository Doorway & Dal Tex |
| 18 | MC | Martin | 5 | 0 | JFK on Houston St. |
| 19 | MC | Martin | | 1 | JFK in front of Depository Bldg |
| 20 | MC | Martin | | 2A | Grassy knoll & Elm St. after shots |
| 21 | MC | Martin | | 2B | Grassy knoll & Elm St. after shots |
| 22 | MC | Martin | | 3 | Parking Lot |
| 23 | MC | Martin | | 4 | Depository Bldg. entrance-Swarthy man |
| 24 | MC | Mentesana | 6 | 1 | Top of Depository - 2 cops on 7th floor |
| 25 | MC | Mentesana | | 2 | Front of Depository – gun on street |
| 26 | MC | Bell | 7 | 1 | JFK on Houston St. |
| 27 | MC | Bell | | 2 | JFK in front of TSBD |
| 28 | MC | Bell | | 3 | JFK approaching triple overpass on Elm |
| 29 | MC | Bell | | 4 | Grassy knoll area just after shots |
| 30 | MC | Bell | | 5 | Grassy knoll area after shots |
| 31 | MC | Bell | | 6 | Center of Plaza after shots |
| 32 | MC | Bell | | 7 | Grassy knoll area |
| 33 | MC | Bell | | 8 | Plaza from building on south later in day |
| 34 | MC | Bell | | 9 | Plaza from building on south later in day |
| 35 | \mathbf{PC} | Bond | 8 | 1 | Motorcycles rounding Houston & Main |
| 36 | PC | Bond | | 2 | JFK rounding Houston & Main |
| 37 | \mathbf{PC} | Bond | | 3 | JFK on Houston |
| 38 | PC | Bond | | 4 | Grassy knoll & Elm St. after shots |
| 39 | PC | Bond | | 5 | Grassy knoll & Elm St. after shots |
| 40 | PC | Bond | | 6 | Grassy knoll & Elm St. after shots |
| 41 | PC | Bond | | 7 | Grassy knoll after shots |
| 42 | PC | Bond | | 8 | Grassy knoll after shots |
| | | | | | |

| Pł | noto | Photograph | er | Seq. | |
|-----|------|--------------|-----|------|--|
| # | Type | Name | # | # | Photos Show |
| | | | | | |
| 43 | PC | Bond | | 9 | Grassy knoll after shots |
| 44 | PB | Moorman | 9 | 1 . | Motorcycle cop rounding corner Elm & Houston |
| 45 | PB | Moorman | | 2 | Grassy knoll & JFK at time of head shot |
| 46 | PB | Altgens | 10 | 1 | JFK on Houston Street |
| 47 | PB | Altgens | | 2 | JFK after second shot hit & before head shot |
| 48 | PB | Altgens | | 3 | JFK after head shot. Overpass & people on it |
| 49 | PB | Altgens | | 4 | Arcade after shots. Two people on floor |
| 50 | PC | Willis | 11 | 1 | JFK on Main Street |
| 51 | PC | Willis | | 2 | JFK on Houston Street |
| 52 | PC | Willis | | 3 | JFK on Houston Street |
| 53 | PC | Willis | | 4 | JFK in front of TSBD |
| 54 | PC | Willis | | 5 | JFK after first shot |
| 55 | PC | Willis | | 6 | Elm Street & grassy knoll after shots |
| 56 | PC | Willis | | 7 | Elm Street & grassy knoll after shots |
| 57 | PC | Willis | | 8 | TSBD Doorway |
| 58 | PC | Willis | | 9 | Houston St. looking north from Elm, TSBD & Dal Tex |
| 59 | PC | Willis | | 10 | TSBD front. Doorway & 5 eastern windows |
| 60 | PC | Willis | | 11 | Houston St. looking north from elm |
| 61 | PC | Willis | | 12 | TSBD (all of it) from Houston & Main |
| 62 | PC | Willis | | 13 | Man arrested outside Dal Tex Bldg |
| 63 | PC | Willis | | 14 | White station wagon on Elm about 12:45 |
| 64 | PB | Betzner | 12 | 1 | JFK on Houston |
| 65 | PB | Betzner | | 2 | JFK in front of TSBD |
| 66 | PB | Betzner | | 3 | JFK on Elm about time of first shot |
| 67 | PB | Bothun | 13 | 1 | Arcade after shots |
| 68 | PB | Assoc. Press | 14 | 1 | JFK on Houston St. (Photog may be in Much 1) |
| 69 | PB | Assoc. Press | 15 | 2 | Group of photos taken outside Parkland Hosp. |
| 70 | PB | Assoc. Press | • | 3 . | Copy of Moorman 2-Clearer than published |
| 71 | Т | Ron Reiland | 16 | 1 | Inside Texas Theatre before & during Oswald arrest |
| 72 | PB | Rickerby | 17 | 1 | Arcade & West Cupola (Life) after shots (3 people) |
| 73 | PB | Rickerby | | 2 | Arcade & Photographers taking pictures (Cam 2) |
| 74 | PB | Dillard | 18 | 1&2 | TSBD 6th floor window from Cam 3 |
| -75 | PB | Dillard | | 3 | Overpass & camera cars on Elm |
| 76 | Т | Darnell | 19 | 1 | Near TSBD (Channel 5 Dallas) in Cam 3 |
| 77 | PB | Beers | 20 | 1 | Outside TSBD afterward (Dallas Morn News) |
| 78 | PB | Beers | | 2 | Outside TSBD afterward |
| 79 | Т | Underwood | 21 | 1 | Outside TSBD afterward (CBS) |
| 80 | Т | Weigman | 22 | 1 | Scene on Elm grassy knoll, TSBD doorway from Cam l |
| 81 | Т | Weigman | | 2 | Newmans on ground Cong 1&2 on Elm |
| 82 | T | Couch | 23 | 1 | Grassy knoll after shots from Cam 3 |
| 83 | T | Couch | | 2 | Cop with revolver south of Elm |
| 84 | T | Couch | ~ ~ | 3 | Grassy knoll - Cop with cycle at curb |
| 85 | PB | Murray | 24 | 1* | (Black Star) In front of TSBD 12:33 p.m. Nov. 22 |
| 86 | PB | Murray | | 2 | Parking lot 12:34 North section |
| 87 | PB | Murray | | 3 | Parking Lot 12:34 South section |
| 88 | PB | Murray | | 4 | Elm Street ext. looking toward TSBD 12:34 |
| 89 | PB | Murray | | 5 | Center of Plaza from knoll 12:35 |
| | | | | | |

* James Murray, Black Star photographer took a total of 215 black and white photos during the Nov. 22-24 period. 93 of these are listed herein because they were all taken in Dealey Plaza and On Nov. 22 prior to 5 p.m. The rest were taken the evening of Nov. 22 in Dealey Plaza and

* (cont.) on Nov. 23 & 24 in Dealey Plaza, also at the Police Station and at the Trade Mart. They show Oswald's arrival at the station, activity around the station and at the Trade Mart, and at Parkland Hospital when Oswald was shot.

| Phot | 0 | Photogra | apher | Seq. | |
|------------|------|----------|-------|------|---|
| <u># 1</u> | Гуре | Name | # | # | Photos Show |
| | | | | • | |
| 90 | PB | Murray | | 6 | Closeup of large group on north curb of Elm 12:35 |
| 91 | PB | Murray | | 7 | Closeup of couple on north side Elm looking to TSBD 12:36 |
| 92 | PB | Murray | | 8 | Looking toward Overpass from corner Elm & Houston 12:37 |
| 93 | PB | Murray | | 9 | Arcade & knoll from center of Plaza 12:38 |
| 94 | PB | Murray | | 10 | Police examining shot on gnd. S of Elm 12:39 (Hertz clock |
| | | - | | | shows time) |
| 95 | PB | Murray | | 11 | Official in suit lighting cigarette. Spot on ground 12:39 |
| 96 | PB | Murray | | 12 | Official in suit picking up something from ground 12:39 |
| 97 | PB | Murray | | 13 | Official in suit holding something in hand 12:39 |
| 98 | PB | Murray | | 14 | Second official in suit touching spot on ground 12:39 |
| 99 | PB | Murray | | 15 | Police standing around spot on ground 12:39 |
| 100 | PB | Murray | | 16 | Police picking up other objects from spot & another spot |
| | | - | | | 12:40 |
| 101 | PB | Murray | | 17 | TSBD, Plaza & knoll from Commerce St. (Hertz clock |
| | | - | | | shows time) 12:40 |
| 102 | PB | Murray | | 18 | TSBD, Plaza & knoll from Commerce St. 12:40 |
| 103 | PB | Murray | | 19 | Front door of TSBD from south of Elm 12:42 |
| 104 | PB | Murray | | 20 | Front door of TSBD from south of Elm 12:42 |
| 105 | PB | Murray | | 21 | Front door of TSBD closeup 12:42 |
| 106 | PB | Murray | | 22 | Front door of TSBD closeup 12:43 |
| 107 | PB | Murray | | 23 | Negro boy in police car - front of TSBD |
| 108 | PB | Murray | | 24 | Front door TSBD closeup |
| 109 | PB | Murray | | 25 | View east on Elm St. from Houston & Elm, Dal Tex. & |
| | | | | | Co. Records |
| 110 | PB | Murray | | 26 | County Records Bldg - northwest corner |
| 111 | PB | Murray | | 27 | View north on Houston from south of Elm |
| 112 | PB | Murray | | 28 | TSBD from Houston & Main |
| 113 | PB | Murray | | 29 | TSBD front & doorway from Houston & Elm |
| 114 | PB | Murray | | 30 | TSBD front & doorway from Houston & Elm |
| 115 | PB | Murray | | 31 | TSBD doorway – crowd in front |
| 116 | PB | Murray | | 32 | Cop with rifle。 Dal Tex Bldg in background |
| 117 | PB | Murray | | 33 | View north on Houston from Elm |
| 118 | PB | Murray | | 34 | View of overpass from Elm |
| 119 | PB | Murray | | 35 | Crowd on Elm & eastern cupola from south of elm |
| 120 | PB | Murray | | 36 | TSBD front doorway |
| 121 | PB | Murray | | 37 | TSBD front door |
| 122 | PB | Murray | | 38 | TSBD front door |
| 123 | PB | Murray | | 39 | Official being interviewed in front of TSBD |
| 124 | PB | Murray | | 40 | Official being interviewed in front of TSBD |
| 125 | PB | Murray | | 41 | Policeman or newsman on sixth floor of TSBD yelling |
| _ | _ | | | | down and pointing to SE corner |
| 126 | PB | Murray | | 42 | Policeman or newsman on sixth floor waving hat out |
| | | | | | window |

| Pho | oto | Photographer | Seq. | |
|-----|------|--------------|------|--|
| # | Type | Name # | # | Photos Show |
| | | | | |
| 127 | PB | Murray | 43 | Three ladies on top floor fire escape landing of Dal Tex |
| 128 | PB | Murray | 44 | Cops with rifles in front of Dal Tex (Famous Photo) |
| 129 | PB | Murray | 45 | Cops with rifles in front of Dal Tex (Famous Photo) |
| 130 | PB | Murray | 46 | Cops with rifles in front of Dal Tex (Famous Photo) |
| 131 | PB | Murray | 47 | Cops with rifles in front of Dal Tex (Famous Photo) |
| 132 | PB | Murray | 48 | Man being interviewed in Sheriff's office – possibly |
| | | | | Larry Flora |
| 133 | PB | Murray | 49 | Man being interviewed in Sheriff's office – possibly |
| | | | | Larry Flora |
| 134 | PB | Murray | 50 | Four men in Sheriff's office |
| 135 | PB | Murray | 51 | Man being interviewed |
| 136 | PB | Murray | 52 | Man being interviewed |
| 137 | PB | Murray | 53 | Man being interviewed |
| 138 | PB | Murray | 54 | Cops beside Dal Tex Bldg – Houston St. side |
| 139 | PB | Murray | 55 | Cops beside Dal Tex Bldg – Houston St. side |
| 140 | PB | Murray | 56 | Group in front of Dal Tex – closeup |
| 141 | PB | Murray | 57 | Barb B Q place near Dal Tex |
| 142 | PB | Murray | 58 | Barb B Q place near Dal Tex |
| 143 | PB | Murray | 59 | Barb B Q place near Dal Tex |
| 144 | PB | Murray | 60 | Man waiting inside Sheriff's office |
| 145 | PB | Murray | 61 | Man waiting inside Sheriff's office |
| 146 | PB | Murray | 62 | Group outside Dal Tex - arrest |
| 147 | PB | Murray | 63 | Front of TSBD & Elm Street ext looking west |
| 148 | PB | Murray | 64 | View south on Houston from Elm – arrest |
| 149 | PB | Murray | 65 | View south on Houston from Elm – arrest |
| 150 | PB | Murray | 66 | In Sheriff's office |
| 151 | PB | Murray | 67 | In Sheriff's office |
| 152 | PB | Murray | 68 | In Sheriff's office |
| 153 | PB | Murray | 69 | In Sheriff's office |
| 154 | PB | Murray | 70 | Girl on phone in Sheriff's office |
| 155 | PB | Murray | 71 | View across Plaza from Houston |
| 156 | PB | Murray | 72 | Switchboard in Sheriff's office |
| 157 | PB | Murray | 73 | Switchboard in Sheriff's office |
| 158 | PB | Murray | 74 | Cab driver in cab by Plaza |
| 159 | PB | Murray | 75 | In Sheriff's office |
| 160 | PB | Murray | 76 | Overpass from Elm & Houston |
| 161 | PB | Murray | 77 | Overpass from Elm & Houston |
| 162 | PB | Murray | 78 | Overpass from Elm & Houston |
| 163 | PB | Murray | 79 | TSBD West end - top floor |
| 164 | PB | Murray | 80 | TSBD west end - all floors |
| 165 | PB | Murray | 81 | Houston & Elm activity |
| 166 | PB | Murray | 82 | Houston & Elm activity |
| 167 | PB | Murray | 83 | Houston & Elm activity |
| 168 | PB | Murray | 84 | Houston & Elm activity |
| 169 | PB | Murray | 85 | Houston & Elm activity - Arrest? |
| 170 | PB | Murray | .86 | TSBD East end top floors - no clock |
| 171 | PB | Murray | 87 | TSBD East end top floors - no clock |
| | | | | |

| Pł | noto | Photographer | | Seq. | |
|-----|------|---------------------|-----------|--------|--|
| | Type | Name | # | # | Photos Show |
| | | | | | |
| 172 | PB | Murray | | 88 | TSBD East end top floors – no clock |
| 173 | PB | Murray | | 89 | TSBD East end top floors - clock shows |
| 174 | PB | Murray | | 90 | TSBD East end top floors – no clock |
| 175 | PB | Murray | | 91 | TSBD East end top floors – no clock |
| 176 | PB | Murray | | 92 | TSBD East end top floors - no clock |
| 177 | PB | Murray | | 93 | TSBD East end top floors - no clock |
| 178 | Т | Atkins | 25 | | Not sure he took anything - Cam 1 |
| 179 | PB | Cancellare | 26 | 1 | Newmans on ground - Weigman, Craven, Altgens |
| 180 | PB | Cancellare | | 2 | Newmans on ground - closeup |
| 181 | PB | Cancellare | | 3 | Parking lot |
| 182 | PB | Cancellare | | 4 | Plaza & Elm Street from knoll |
| 183 | PB | Stoughton | 27 | - | Not sure he took anything Cam 2 |
| 184 | PB | Burrows | 28 | 1 | Camera cars on Houston St. from Cam 2 |
| 185 | PB | Burrows | 20 | 2 | Camera cars on Houston St. from Cam 2 |
| 186 | PB | Grant | 29 | 2 | Not sure he took anything Cam 2 |
| 187 | MC | Dorman | 30 | 1 | |
| 188 | PC | Unidentified | 31 | | JFK on Houston - glimpses on Elm before & after shots |
| 100 | 10 | (Foley) | 51 | 1 | TSBD on a.m. of Nov. 22 - 6th flr. window |
| 189 | MC | Mrs. Beck | 20 | | Nich sums film and the date date of the |
| 109 | | | 32 | , | Not sure film exists - taken during shots |
| | PB | Weaver | 33 | 1 | TSBD 6th floor window before first shot |
| 191 | PB | Powell | 34 | - | Cannot find him |
| 192 | PB | Volkland | 35 | 1 | JFK on Stemmons Freeway - back of TSBD & Parking lot |
| 193 | MC | DCA | 36 | | 10 other sequences in addition to Martin & Mentesana |
| 194 | M | Wise (Anon) | | 1 | ? |
| 195 | PB | Gene Daniels | | 1** | Oswald's room - landlady & man hanging curtains Nov.23 |
| 196 | T | T. Alyea | 39 | 1 | Houston St. outside & inside TSBD after shots |
| 197 | T | Couch | | 4 | Outside and inside TSBD after shots |
| 198 | PB | Cablack | 40 | 1 | Grassy knoll after shots |
| 199 | PB | Cablack | | 2 | Grassy knoll after shots |
| 200 | PB | Associated Press | 41 | 4 | JFK on Stemmon-rifleman in background |
| 201 | PB | Associated Press | 42 | 5 | Officers & newsmen inside TSBD at 6th Flr. window |
| 202 | PB | United Pres | s 43 | 1 | Officers carrying "paper bag" out of TSBD |
| 203 | PC | MacCammon | n 44 | 1. | Oswald being arrested inside Texas Theatre |
| 204 | PC | MacCammon | MacCammon | | |
| 205 | PC | MacCammon | MacCammon | | |
| 206 | PC | | MacCammon | | |
| 207 | PC | | MacCammon | | |
| 208 | PC | | MacCammon | | |
| 209 | PC | MacCammor | | 6 7 | |
| 210 | PC | MacCammor | _ | 8 | |
| 211 | T | Craven CBS | | 1 | Houston St. from Cam 1 before shots |
| 212 | Ī | Craven | 10 | 2 | Grassy knoll area after shots |
| | | | | - | crossy short area area shore |
| | | | | | |

**Gene Daniels, Black Star photographer, took a total of 260 black and white, 35 mm still photos during the Nov 22-24 period. A few of these were taken the afternoon and evening of Nov. 22 and the rest on Nov. 23 & 24. There are scenes at Dealey Plaza, TSBD, Sheriffs

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****(cont.)** office, police station, police press conferences, Oswald's rooming house and room, Oswald's public appearances, and views of Elm Steet from Dal Tex Bldg. through telescopic sight.

| Photo | | Photographer | | Seq. | |
|-------|------|-------------------------|----|------------|---|
| | Туре | Name | # | # | Photos Show |
| 213 | PB | Shulke Black Star | 46 | 1 | |
| 214 | PB | Herron Black Star | 47 | 1 | |
| 215 | РВ | Hershorn Black Star | 48 | 1 | |
| 216 | РВ | Jackson Times Herald | 49 | 1 | |
| 217 | ? | Babushka Lady | 50 | | Cannot find her. Appears in many pictures S. of Elm |
| 218 | ? | Unidentified Man | 51 | * 4 | Appears in Muchmore 1 |
| 219 | Μ | Unidentified Man | 52 | | Appears in Martin 3 |
| 220 | ? | Overpass Man | 53 | | Policeman says he saw someone on overpass taking pictures |
| 221 | ? | Unidentified Woman | 54 | | Brennan says he saw her taking pictures |
| 222 | ? | Unidentified Woman | 55 | | Appears in Altgens 1. Original negative at AP |
| 223 | ? | Unidentified Woman | 56 | | Appears in Altgens 2 |
| 224 | PC | Similas | 57 | | Not sure he took anything |