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CHAPTER 5. The Field Enumeration

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Chapter 5. THE FIELD ENUMERATION

DATA COLLECTION PROCEDURES

The 1970 Census of Population and Housing was taken as of April 1, 1970 in two basic ways, both of which were designed to make maximum use of self-enumeration:

1. Mail-out/mail-back. In large metropolitan areas and some adjacent counties (altogether including about 60 percent of the total United States population), householders received by mail shortly before Census Day questionnaires addressed to their particular housing units. Eighty percent of the housing units received a questionnaire containing only the questions asked on a 100-percent basis (i.e., for all persons and housing units); the remainder (sample housing units) received a questionnaire containing these same questions as well as those asked only on a sample basis. The householder was asked to complete the questionnaire and mail it back on April 1 to the census district office for his area. Enumerators then contacted only those households that did not return questionnaires or that had given incomplete answers to the questions.

2. Conventional. For the remaining 40 percent of the population, most of which was located in predominantly rural areas (or cities within these areas), mail carriers delivered unaddressed questionnaires to all households on their routes. All households received a questionnaire containing only the 100-percent questions (identical in content to the questionnaire delivered in the mail-out/mail-back areas). The householder was asked to complete the questionnaire and hold it for the enumerator, who visited every housing unit. At each unit designated for the sample, the enumerator asked the same additional questions that appeared on the questionnaires delivered to the sample housing units in the mail-out/mail-back areas.

Figure A indicates the areas in which the mail-out/mail-back census techniques were employed for the 50 States and the District of Columbia. All other areas were enumerated by the conventional procedure. (The enumeration of Puerto Rico, American Samoa, the Canal Zone, Guam, the Virgin Islands, the Trust Territory of the Pacific Islands, and other outlying areas is described in a separate chapter.)

Within the areas enumerated by the mail-out/mail-back technique, two operating procedures were used. A "centralized" procedure was followed in the central cities of large metropolitan areas, and a "decentralized" procedure was used elsewhere. In the decentralized procedure, all the filled-in questionnaires which were mailed back were given to enumerators who, working from their homes, checked in the questionnaires for their ED's (enumeration districts), edited them, and contacted those housing units for which incomplete

questionnaires were returned, or in which householders failed to return them at all.

The centralized procedure, used in the largest cities, covered about 12 percent of the population enumerated by the mail-out/mail-back technique. In this procedure, clerks in the district office received, checked in, edited, and when necessary followed up by telephone (to the extent possible) the returned questionnaires. Enumerators were assigned only those housing units for which a questionnaire had not been returned or which had returned an incomplete questionnaire that could not be completed by telephone. By having as much of the operation as possible take place under close supervision in one office, control of the large number of questionnaires was facilitated, and the efforts of a small force of enumerators was concentrated on personal-visit followup.

The use of one conventional and two mail data-collection procedures required the planning of three different kinds of census (for background, see chapter 1), the writing of three sets of manuals, and the preparation of three sets of training materials. The enumeration required opening 393 temporary district offices in the United States, and hiring approximately 174,000 temporary field workers to collect and process the data. This chapter describes (1) the organization of the temporary offices and the selection of field personnel; (2) the supplies and equipment, and the logistics involved in establishing these offices; (3) the training program; and (4) the conventional, decentralized, and centralized procedures as they were prepared, carried out, and controlled in the field.

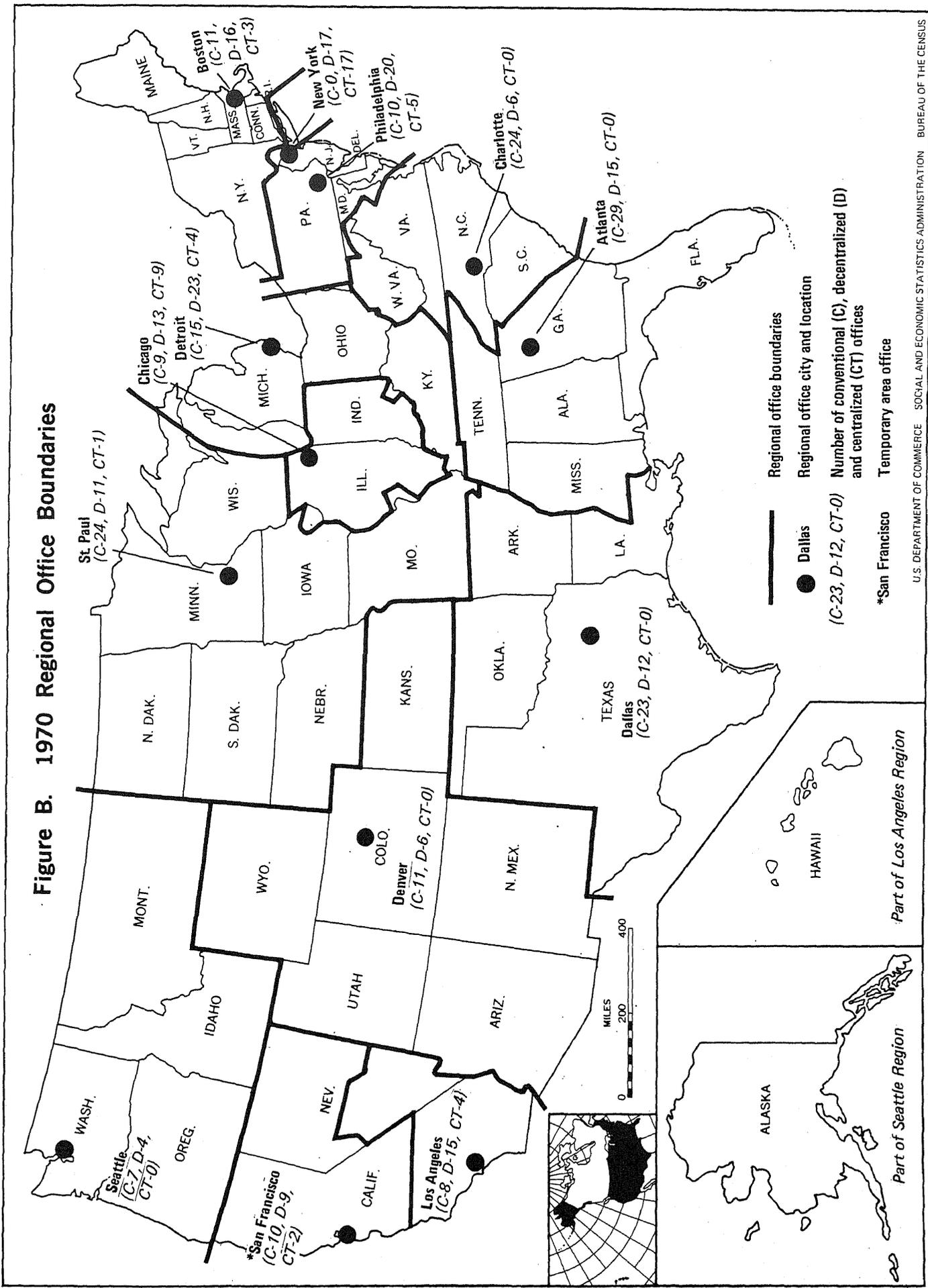
FIELD ORGANIZATION AND SELECTION OF PERSONNEL

Structure of the Field Organization

When preparatory work for the 1970 census began, the Bureau had 12 permanent regional field offices. These offices, which reported to a field headquarters staff in Washington, were responsible for collection of data for major censuses and regular surveys, such as the monthly Current Population Survey and the National Health Survey. When required, they also were responsible for special censuses of small areas.

Due to the heavy concentration of population on the west coast, a 13th office was established in San Francisco, Calif., for the 1970 census. It was on this base of 12 permanent regional offices and one temporary area office that the Bureau built the field structure for the 1970 population and housing censuses. The map (Fig. B) delineates the areas covered by each of the regional offices and the one temporary area office.

Figure B. 1970 Regional Office Boundaries



Regional office boundaries
Dallas
 (C-23, D-12, CT-0)
San Francisco
 (C-10, D-9, CT-2)
Regional office city and location
 Number of conventional (C), decentralized (D)
 and centralized (CT) offices
 Temporary area office

Three hundred and ninety-three temporary district offices were established in the 50 States and the District of Columbia. In addition, six temporary district offices and one temporary area office were established for the census in Puerto Rico. In 181 of the district offices, the census was taken in the conventional manner; that is, an enumerator visited each household to collect the information. In 167 of the district offices, the census was taken by the decentralized mail method. In the remaining 45 district offices, the centralized mail method was used to collect the census information.

See appendix A for opening and closing dates of district offices by regional office and census method. Detailed staffing and operations calendars are displayed in appendix B.

Insofar as possible, district offices were situated in central locations in their districts. The location of the district office and its date of opening were generally considered local news and given publicity in the local newspapers and by local radio and television stations.

As in previous censuses, the area covered by each district office was divided into crew leader districts, and each crew leader district, in turn, was divided into enumeration districts (ED's). ED's varied in size, depending on population density and the number of housing units to be covered, and did not cross political boundaries. ED's ranged in area from half of a block in high-density cities to large areas in sparsely populated sections of the country. One ED in Sweetwater County, Wyo., for example, covered 1,400 square miles. As far as possible, ED's were delineated so as to provide a suitable workload for one enumerator to complete in 3-4 weeks.

In conventional district offices, the average number of enumerators assigned to a crew leader for management and control purposes was 15. In decentralized district offices the number was also 15, except in the inner city areas of selected cities, where the number was 10. In centralized district offices, the number ranged from seven or eight enumerators per crew leader in the areas considered most difficult to enumerate, up to 10 enumerators per crew leader in the easiest areas.

Arrangements for the District Offices

To develop estimates of the personnel and supplies needed for census enumeration, estimates of the number of housing units in each district office area were prepared. The number of enumerators required for each district office was estimated on the basis of 450 housing units per enumerator in conventional areas, 575 housing units per enumerator in decentralized areas, and 400 housing units per enumerator in centralized areas.

The number of crew leaders required was then based on the estimated number of enumerators. With these estimates as a base, the maximum number of clerks required in each office at peak periods for the various phases of the census, and the amounts of office space, equipment, supplies, forms, and the mileage allowances for each office were estimated.

The 12 regional directors and one temporary area office supervisor were responsible for obtaining office space, supplies, and equipment for the district offices located in their regions. The 1970 Decennial Census Training Table (see appendix C) shows the approximate number of employees trained for each job.

Space under the control of the Federal government was obtained rent free for 50 of the district offices. Space for the remaining 343 district offices, containing 1,605,341 square feet of floor space, was leased at an average cost of \$3.95 per square foot per year--ranging from \$0.37 per square foot in Atlantic, Iowa, to \$9.25 per square foot in New York City. In order to obtain satisfactory quarters, it often was necessary to rent more space than was actually needed and for a longer time period than needed. The total rental cost for district office space was approximately \$3,175,000, with another \$335,000 spent for contractual work to improve the rented space. The improvement expense added about \$0.20 per square foot to the cost.

The number of telephones installed in each district office depended upon the type of enumeration procedure employed and the number of crew leaders assigned to the office. Conventional district offices were equipped with from five to eight telephones. The telephones ranged in service from a two-line rotary to a five-line rotary. Most decentralized district offices were equipped with from seven to ten telephones, ranging in service from single-line to five-line rotary. Centralized offices were equipped with from eight to 11 rotary lines, but with a much larger number of instruments. In each centralized office, about 95 telephones were used for contacting respondents who had not returned a questionnaire or whose returned questionnaires were incomplete.

In the mail census areas, where telephone assistance service was offered to the public, five to 10 additional telephones were used for this purpose in each decentralized office handling these calls, and 10 to 15 telephones in each centralized office. (Where several district offices were in close proximity, one was selected to provide this service for the entire area.) The telephone numbers for assistance to the public were listed with the telephone companies' information operators. In the district offices without this assistance service, the district manager's number was listed for public use. The remaining telephones were used primarily for crew leader communications, and the numbers were not listed.

Staffing

Each district manager was given a form authorizing the maximum number of employees to be hired for each job. This form also specified the rate of pay for each type of employee and, in most cases, the date he was to enter on duty.

Since the entrance-on-duty date and the number of people needed depended upon the workload in the office, charts were furnished the district manager for determining the number of clerks required at any given time to get the work done on schedule.

Washington headquarters.--The Field Division staff in Washington headquarters was increased by about 20 people during the peak preparatory stages for the 1970 census. Much of the decennial census work in Field Division headquarters was accomplished by reassigning people already on the rolls.

Regional offices.--One hundred and seventy-six regional technicians were appointed on a temporary basis and assigned to the 12 regional offices and one temporary area office. Each regional technician was responsible for technical guidance and review of the work of two or three district offices (which were directly supervised by district managers). Regional technicians, in most cases, supervised only one type of district office--conventional, decentralized mail, or centralized mail.

District offices.--The figures on pages 6 through 8 show the organizational structure of the three types of district office--conventional, decentralized mail, or centralized mail.

Recruitment of Personnel

An applicant for employment as an enumerator was required to be a U.S. citizen, 18 years old or over, and to pass a written test demonstrating ability to understand printed instructions and to do simple arithmetic.

In view of the anticipated difficulty in finding enough qualified people to take the census, a great deal of effort went into developing the recruitment program for the 1970 Decennial Census.

By tradition, decennial census recruitment is carried out under a referral system, with the political party in office at the Federal executive level designating the local persons to be used as referral sources. These sources were consulted first and given the responsibility for referring suitable personnel for as many of the temporary positions as possible. (More than half the temporary positions were filled through these referral sources.) However, in the very large cities open recruiting was begun immediately, in agreement with the local referral sources. In most mail census areas recruitment centers were established during March 1970, the peak period of enumerator recruitment.

Recruitment brochures were provided to the local referral sources for distribution among interested candidates. Copies of the brochures were also provided individuals or groups upon request, and, in some areas, were available through the Federal and State employment service offices. All census offices were supplied with recruitment brochures for general distribution.¹ Additionally, many thousands of these brochures were provided to national organizations--for example, the Urban League Coalition--for their own distribution.

¹A total of 700,000 recruitment brochures were printed, as follows: 260,000 forms D-221 for use in conventional areas, 250,000 forms D-292 for use in decentralized mail areas, and 190,000 forms D-278 for use in centralized mail areas. The statements about pay rates and work requirements, which varied among the three census methods, were different in the three brochures.

Press releases announcing the opening of census district offices and appointments of the managers of those offices were mailed to the appropriate news outlets and to members of Congress. These releases included the addresses of the census offices and the territory covered.

District managers appeared on television and radio programs to discuss recruitment needs and otherwise promote and publicize the census. There was also widespread national publicity concerning the census and the need for a work force of as many as 185,000 persons.

In planning for the 1970 census, the need to encourage greater minority representation on the decennial census staff was recognized. To achieve this and other goals, an active community education campaign was initiated well in advance of the census date. Although the campaign was concentrated in the larger cities, it was given national publicity. In addition, all census reference manuals and supervisory training stressed the importance of equal employment opportunities. To encourage people to take the test for employment on the 1970 census, an example of the test was developed and distributed to minority organizations and groups in the inner cities.

Efforts were made in the district field organization throughout the country to include at all levels members of those minority groups represented in the local population. In a number of major cities, where obtaining complete counts of persons belonging to minority groups posed a serious problem, a large portion of the supervisory staff consisted of members of the minority groups involved, e.g., Negroes and Spanish-speaking persons in New York City. At the nonsupervisory level, these persons often comprised more than half the work force.

Testing Applicants

All prospective temporary district office employees, including district managers, crew leaders, and enumerators were required to take a written test. The value of using a screening test for applicants had been indicated by results of the Enumerator Variance Study conducted in connection with the 1950 censuses. It was found then that enumerators who made higher scores on the 1950 tests tended to leave fewer questions unanswered on the census questionnaires they filled than did lower-scoring enumerators. Time and cost studies of the 1960 enumeration indicated a correlation between higher test scores and enumerator efficiency. In 1970, sufficient numbers of applicants passed the selection aid test so that it was seldom necessary to hire applicants who had not made a passing score.

The multiple-choice test used in 1970 was prepared by the Bureau of the Census on the basis of previous experience in testing personnel for census field work. It was designed to determine eligibility of candidates based on (1) the abilities to read, understand, and follow instructions at a level of difficulty comparable to the instruction manuals for the field work, and (2) the capability to learn the essentials of the work in the time allotted for training.

The test included questions and problems on vocabulary, arithmetic, following directions, reading comprehension, and filling the census questionnaire. It also included some problems requiring determination of

Figure C. Organizational Structure of the Conventional District Office

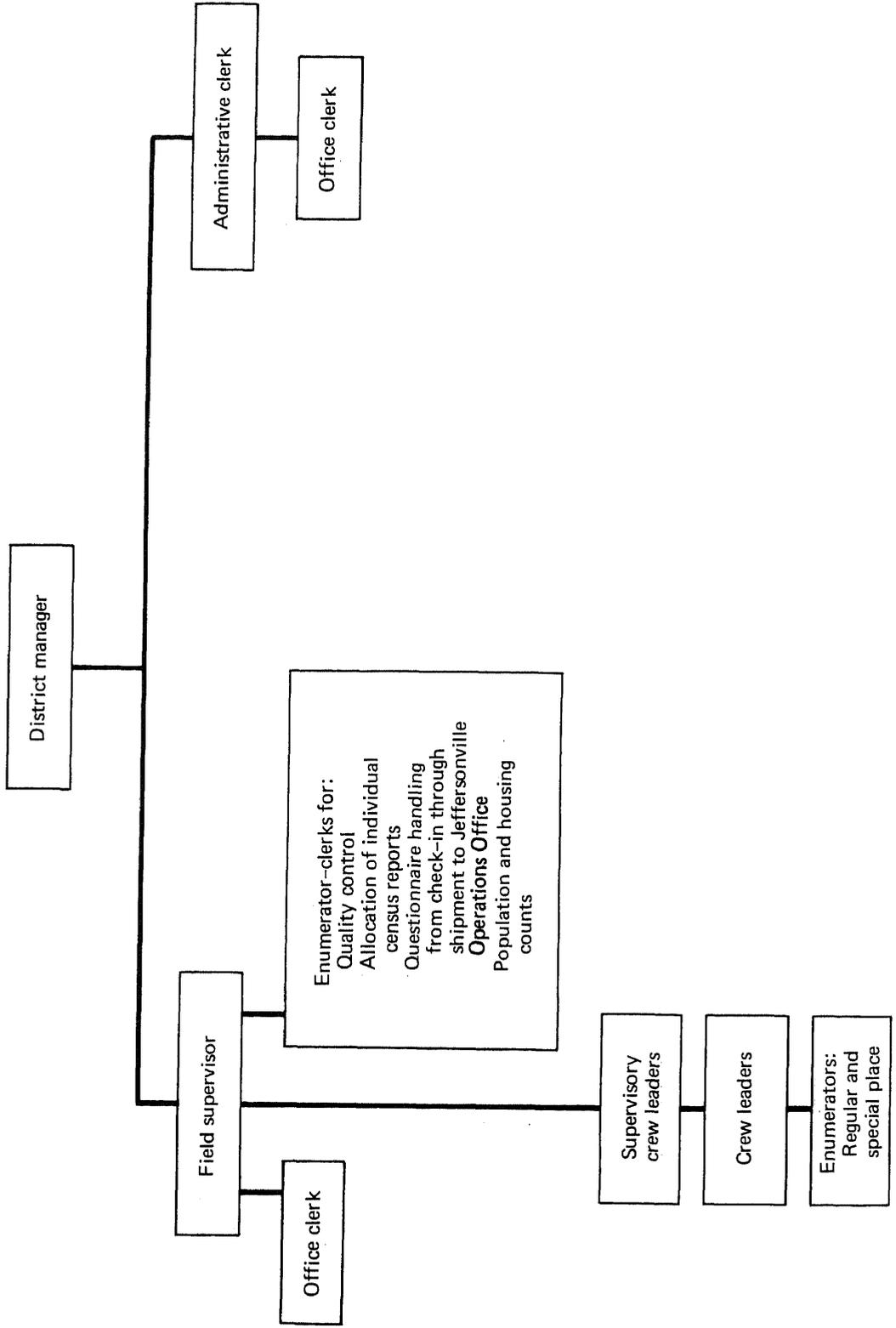


Figure D. Organizational Structure of the Decentralized District Office

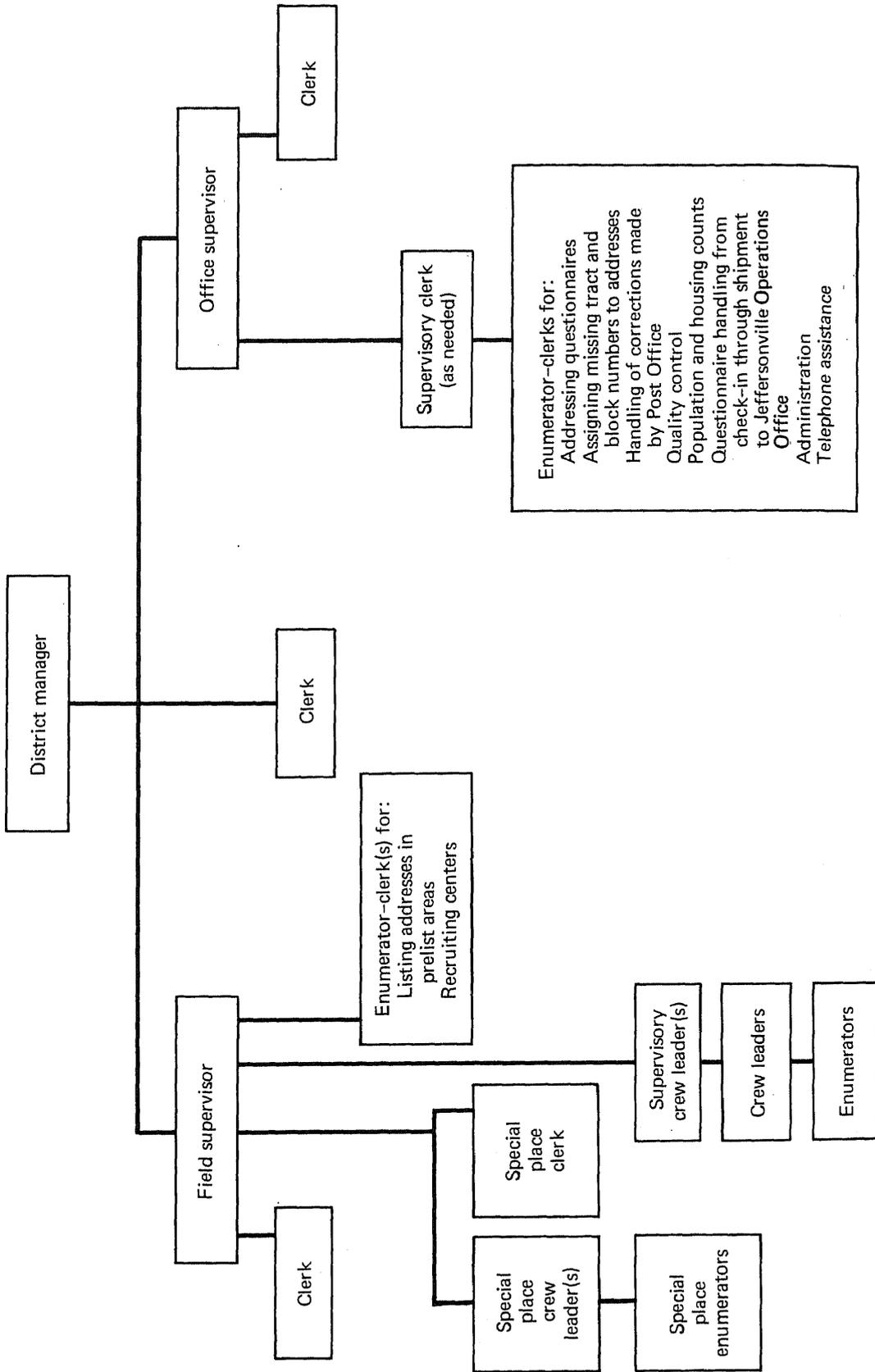
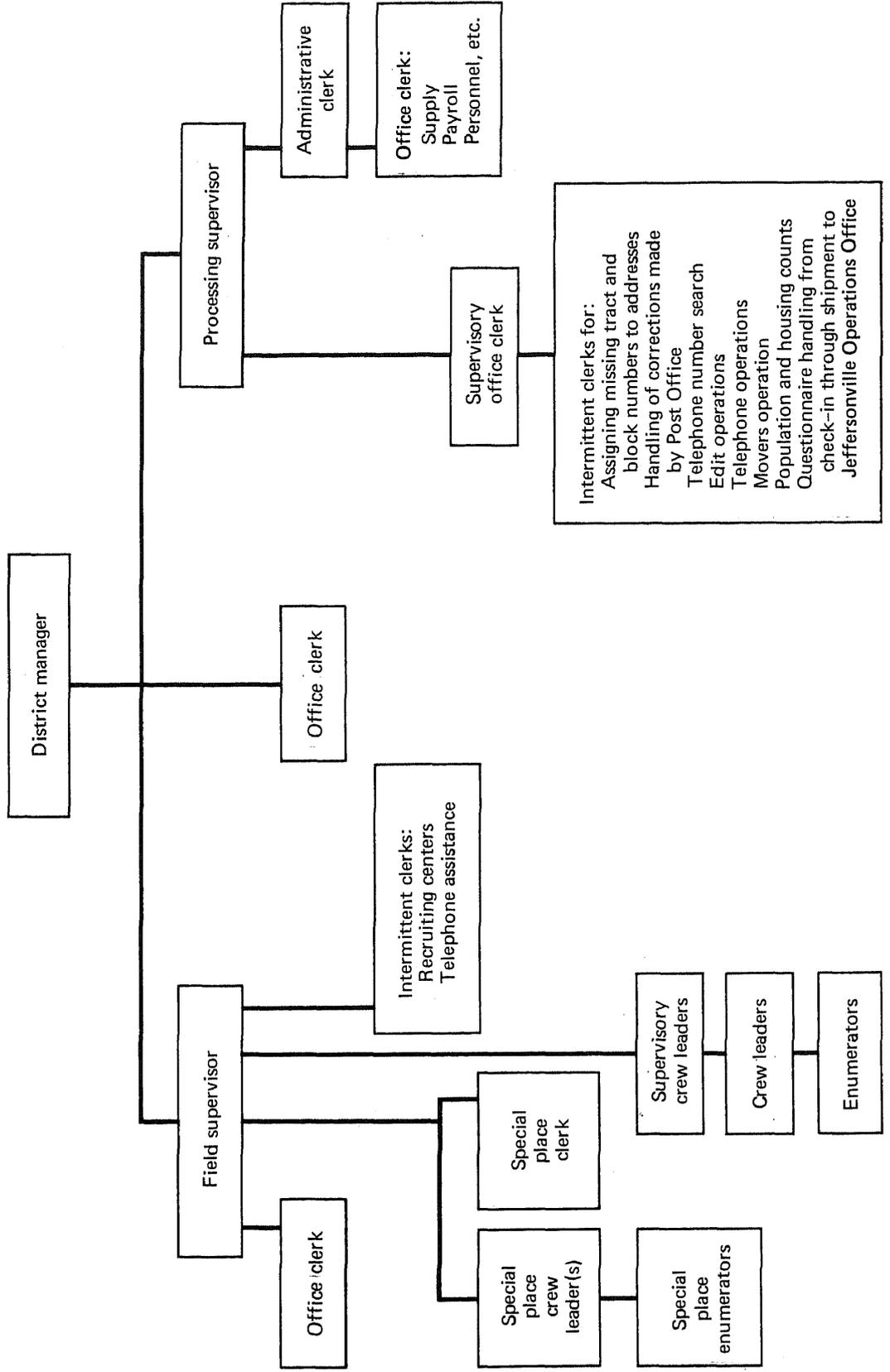


Figure E. Organizational Structure of the Centralized District Office



answers to certain census questions when the respondent was unable to give direct answers to them, for example: "Mrs. Jones can't remember the year of her birth, but she knows that she was born in the month of April. If it is now May 1970, and Mrs. Jones tells you she is 78 years old, in what year was she born?" Two different versions of the examination were used in each group of applicants tested, alternating by seat in the rooms in which the tests were given, so that each applicant was answering different questions from the persons in seats adjacent to him.

Eligibility for the different positions was determined by the respective scores received, e.g., higher percentages of correct answers were required of candidates for crew leader positions than for those for enumerator positions. As the availability of the crewleader positions became generally known, however, applicants in many cases were referred and tested specifically for the job.

Selection of Personnel

District managers in conventional and decentralized mail offices were selected by the regional staff on the basis of test scores, background, and personal interview. Because of the complexity of the centralized mail procedure and the socioeconomic characteristics of the areas where it was used, 94 full-time professional staff members were selected from all parts of the Bureau to serve as district managers and processing supervisors in the 45 centralized mail district offices.

Simultaneously with district manager recruitment, the regional staff also recruited for the positions of

field supervisor, office supervisor, administrative clerk, and supervisory crew leader. The regional staff was asked to recruit the personnel for the above key positions for two reasons: (1) The regional staff had extensive experience in recruiting people for these types of jobs, and (2) in each district office these four persons were to enter on duty within 2 or 3 days after the district manager. However, commitments on candidates for these positions were withheld until the district manager had been selected so that he could participate in the final selections for these key positions.

Because there was also little time between the dates when the crew leaders and enumerators were to enter on duty (see appendix B), the district office staff was asked to select as many of the enumerators as it could before the crew leaders entered on duty. In offices where a crew leader's staff of enumerators had not been recruited and selected for him by the time he completed his training, the crew leader was required to complete the staffing for his district.

Office clerks and enumerators were hired as "enumerator-clerks" so that a clerk in an office could be reassigned as an enumerator, or vice versa, without a great deal of administrative paperwork.

Compensation of Field Personnel

Table 1 below shows the hourly rate of pay for each type of district office employee. (See pp. 34-35 for enumerators' piece rates and allowances.)

Table 1. Hourly Salary Rates by Type of District Office

Position title	Coterminous United States				Alaska	Hawaii
	Conventional	Decentralized		Centralized		
		Centralized office characteristics ¹	All others			
District manager.....	\$5.30	\$5.30	\$5.30	² \$6.40	\$6.65	\$6.10
Assistant district manager.	-	-	-	5.30	-	-
Processing supervisor.....	-	-	-	² 4.25	-	-
Field supervisor.....	4.25	4.25	4.25	5.30	5.30	4.90
Office supervisor.....	-	4.25	3.75	-	-	-
Supervisory crew leader....	2.95	3.75	2.95	3.75	3.65	3.35
Crew leader.....	2.65	3.20	2.65	3.20	3.35	3.10
Administrative clerk.....	2.95	-	-	4.25	3.65	3.35
Supervisory office clerk...	-	2.65	2.40	2.65	-	-
Office clerk.....	2.40	2.65	2.40	2.65	3.00	2.75
Enumerator-clerk.....	2.15	2.65	2.15	2.65	2.65	2.45
Clerk.....	-	2.15	-	2.15	-	-

¹These higher rates were authorized for four decentralized office areas that were adjacent to centralized areas and that were found to be very similar in socioeconomic characteristics to the centralized office areas.

²These positions were filled almost entirely by permanent Census Bureau employees who received their regular rates of pay (at various salary levels) during this assignment.

THE TRAINING PROGRAM

Preparation of the Program

Pretests and dress rehearsals.--The training program for the 1970 census was developed concurrently with the writing of procedures and instruction manuals during the pretests and dress rehearsals of the 1970 census. During the early test censuses in Cleveland (1965) and New Haven (1967), training guides which were read verbatim by the trainer were used for crew leader and enumerator training; and training outlines were used in training for office, supervisory, and clerical jobs. The outlines proved unsatisfactory because they depended heavily on the knowledge of the trainers, most of whom were new to census work, whereas the training guides contained all the essential information to be taught and required less background knowledge on the part of the trainers. Thus, when the Task Force on Training Methods first met in 1967, it was decided that training guides to be read verbatim by trainers would be provided for every census job except for the relatively routine clerical jobs.

The Task Force on Training Methods.--The Task Force on Training Methods included members from the divisions of the Bureau that were most concerned with the training of the field staff: Field, Personnel, and Statistical Research Divisions. Although the task force considered several proposals for 1970 training, such as videotape and nationwide television, its basic decisions, based for the most part on experiences in the test censuses, dress rehearsals, and the 1960 census, were as follows:

- a. Verbatim training guides or scripts would be used for all jobs, to ensure standard training. The guides would be supplemented by visual aids, workbooks, and as many realistic exercises as necessary.
- b. Training would begin with top personnel who would in turn train those reporting to them, and so on down the line. The regional staff would be trained in Washington, D.C. Each regional staff would then train its top supervisors, the regional technicians, district managers, field supervisors and office supervisors in its region. These supervisors would in turn train the personnel directly responsible to them. In most cases, the person responsible for the performance of a group would train that group; for example, crew leaders would train their crews of enumerators.

Training Materials and Methods

The basic tool for the 1970 census was the verbatim training guide. The guide contained details of all phases of the job being taught. Questions and expected answers, training exercises, tests and answer keys, and other teaching devices were written into each guide. A training schedule which indicated the approximate amount of time to be devoted to each topic and for breaks and lunch was printed on the inside cover of each guide. The training material varied in scope and complexity, depending on the particular job being taught and the expected ability of the trainees.

As much of the training material from the dress rehearsals as possible was updated, improved, and used. However, much work remained to be done after the dress rehearsals, since procedures had been added, deleted, and refined.

Drafting of training guides for the 1970 census began in the late fall of 1968. Members of the various divisions of the Bureau reviewed each draft for procedural accuracy, explanation of technical points, and training techniques. While the first draft was being reviewed, a dry run or test was made in using the training guide, employing Bureau personnel as trainees, to establish the length of time for each training session and to test each first draft for content and presentation.

Other training devices were also utilized during the training period, e.g., edit clerks were given filled-in questionnaires to practice editing. In effect, specific census-processing steps were rehearsed as much as possible through practice exercises in the training. The training materials for each trainer and trainee were packed in kits which were distributed before the training session.

First-line supervisors, such as crew leaders, were given simple supervisory problems and asked to make judgments on what action they would take. Higher level supervisors, the regional technicians and district managers, were given a more detailed supervisory exercise called the "in-basket exercise." This included a number of memorandums and reports typifying daily census activity; the trainees were required to read these and make many judgments and decisions as they would in their actual jobs.

On-the-job training was used to a much lesser extent in 1970 than in the past. It was used for clerks who assisted administrative clerks and field supervisors, and also as an adjunct to the training-guide method in the case of enumerators. Home study was also used in the 1970 census training program, and was reinforced with review tests before the classroom training session began.

For data on training, training materials, and training aids by type of census, see appendix C.

Organization of the Training

Training sites.--Regional technicians, district managers, and other top supervisors were usually trained in the regions. Processing clerks and other office clerks were trained in the district offices, usually at their work stations. Crew leaders normally were trained in the district office. Enumerator training took place in rent-free sites such as post offices, libraries, schools, firehouses, and church halls in each crew leader district. Usually the field supervisor and district manager negotiated for and obtained this space, but sometimes the crew leader had this responsibility.

Training of regional technicians.--The regional technicians were trained in late 1969 and early 1970. Management and training techniques were taught by the Washington staff to groups of 12 to 15 technicians. In another stage, regional staff members trained technicians from their region on the background for the 1970

census. This session prepared each technician for another step of his training--home study covering the particular type of census on which he would work. Finally, a classroom session was conducted to review and complete the training which had begun in the home study. Seventy-one regional technicians were trained on the conventional census procedure, 78 on the decentralized census procedure, and 25 on the centralized census procedure.

Regional technicians had the following responsibilities: To act as liaison between the regional and district offices, to make arrangements for district office space, to assist in recruiting district office personnel and to supervise and assist in their training, and to resolve logistics and procedural problems.

Training of district managers, other supervisors, and administrative clerks.--Most district managers were trained by members of the regional staff during a 4-day classroom training session. Centralized district managers received this training in Washington, D.C., and also in their specific regions by a member of that region's staff. This training was in the form of orientation on overall census procedures, staff organization, and the basic elements of each job in the district office. Other subjects discussed included recruitment, setting up the district office, public relations, and training techniques. Several classroom exercises emphasized management problems and illustrated the use of the Progress and Cost Reporting System.

The general content and philosophy of the district manager training for all three types of censuses were essentially the same, with emphasis on management techniques and cost control. However, the discussion on the procedures and staffing arrangements for district manager training differed with each type of census procedure (conventional, decentralized, or centralized).

The regional staff also trained the other top supervisors in each district. These included: field supervisors and administrative clerks in conventional areas; fall listing technicians, field supervisors and office supervisors in decentralized offices; and field supervisors, processing supervisors, and administrative clerks in centralized offices.

Field supervisor training lasted 4 days for each type of census procedure. Normally, the first part of the field supervisors' training included discussions of their duties before Census Day, which included recruiting, preparing maps and assignments, and locating training space for their crew leaders. During the second part of their training, field supervisors learned the details of the jobs of the supervisory crew leaders, crew leaders, and enumerators. Supervisory and training techniques were also taught, but the emphasis in the training was on control and management of the enumeration.

Field supervisors trained their top aides, the supervisory crew leaders. This training was quite similar to part of the field supervisor training; the main difference in the jobs was scope: While the field supervisor was responsible for progress of the enumeration in the entire census district, the supervisory crew leader was responsible only for the progress of the crew leaders who worked under him.

In some decentralized areas, there was an additional top supervisor because of the fall listing operation (see p. 19). A member of the regional staff (usually an experienced census supervisor), called the "fall listing technician," was trained to supervise this operation. This training took place in the appropriate region in the fall of 1969, during which he learned the basic steps in the jobs of the listing enumerators and the listing crew leaders. The technician's overall responsibilities for recruiting, staffing, training, and supervising were also discussed.

The fall listing technicians trained their listing crew leaders in the fall of 1969 shortly before the listing operation began. The crew leaders were given the same one-day training that their listing enumerators would receive. This consisted of learning the principles involved in listing and an exercise simulating the listing of an ED. The listing crew leaders were then given an extra half day of training on how to train and supervise their staff of listing enumerators. The crew leaders trained their listing enumerators in the fall of 1969.

In spring listing areas, the field supervisors assumed the same roles as the fall listing technicians in the fall listing areas.

The other top supervisors were the office supervisors in decentralized areas and the processing supervisors in centralized areas. Their jobs, and thus their training, were quite similar. The major difference was that the centralized area processing supervisor managed a far more complex operation than the decentralized office supervisor. Also, the latter acted as administrative clerk, while the processing supervisor had few administrative duties.

Decentralized office supervisors were trained in two sessions. During the first, they were trained in detail on management and training techniques. The emphasis in this part of the training was on the overall management of the office operations, which included the tract and block operation (in which street addresses not identified by census tract and block numbers were assigned these numbers), the handling of address corrections submitted by the Post Office, and the addressing operations. The diversification of staff jobs from one operation to another was stressed, as well as the importance of completing operations on time. The latter point was important since the beginning of one field or office operation usually depended on the completion of an earlier one, and the point was reinforced by the use of flow charts and operations calendars.

During the second part of their training, the office supervisors learned about the census office operations which took place after followup enumeration, such as quality control and the preliminary population and housing counts. There was further discussion of management techniques and the efficient use of the best office personnel for these latter office operations.

Processing supervisors learned management and training techniques in Washington, D.C., but were trained on the job in the region. This training was similar to that received by the decentralized office supervisors, although the management of the centralized office staff was a far more complicated task. The major emphasis in the

processing supervisor's training was on the utilization of personnel, and specific guidelines were set up for moving personnel from one office operation to another. The processing supervisor learned, through the use of flowcharts, training exercises, calendars, and class discussions, the methods for managing his staff, and for staying within the time and budget limitations for his particular district office.

Administrative clerks, in both conventional and centralized areas, were trained in 3 days. A general overview of the census procedures was given, but the greater part of the training was on the administrative tasks to be performed. Training exercises included the processing of personnel papers, the review of payroll forms, completion of cost and progress reports, and the other phases of the administrative clerk's job.

Training for field operations.--Crew leader training in all three types of census was similar. First, the trainees learned about the enumerator's job and then about their preparatory duties as crew leaders. In conventional areas, home study materials were used to explain the enumerators' work.

The second part of crew leader training was devoted to methods of training and supervising enumerators.

In the conventional census areas, crew leaders trained their enumerators on March 30 and 31, two days before Census Day. Enumerators were thoroughly trained first on how to complete the census questionnaires and how to use their basic reference manuals -- the Questionnaire Reference Book and the Enumerator's Handbook. The remainder of their training consisted of the basic elements of the enumerator's job: Canvassing and listing addresses in the ED, and interviewing at each household.

Training exercises simulated the enumerator's job as nearly as possible under classroom conditions. Using illustrations, a practice map, and an address register, the trainees canvassed and listed a practice ED in class. They rehearsed interviews with respondents in the ED, with the crew leader reading the part of the respondent from the training guide. The practice interviews presented a variety of situations which an enumerator could be expected to face. After the final part of the training, which consisted of administrative details, enumerators were given their assignments.

Decentralized enumerators' training differed because of the nature of the job. Their training was broken into four separate sessions related to the four phases of the job. Each crew leader trained his enumerators initially on April 8. At this time enumerators learned how to check in the mail returns for their ED's. They were given practice exercises on check-in, using practice questionnaires and address registers. At the end of this day's training, the enumerators were given the actual mail returns and address registers for the ED's assigned to them, and they conducted their actual check-in at home.

After check-in, enumerators were trained on editing the short questionnaires (which included only the 100-percent questions) on April 10, at which time the enumerators edited the practice short questionnaires they had checked in during the previous class. Again, after

this training, enumerators went home and edited the short questionnaires in their assignments.

On April 15, enumerators were trained to review and edit the responses to the sample questions on the long questionnaires. The practice assignment begun during check-in training was carried through as the enumerators edited the actual long questionnaires. On April 20, the enumerators were trained on techniques of followup by telephone and personal visit. This included the followup of failed-edit and nonresponse cases in the enumerator's assignment. The greater part of the training consisted of practice interview situations, with the crew leader, as trainer, acting as the respondent.

Centralized area enumerator training was similar in content, except that check-in and editing were not taught (because clerks were to do these in the centralized district offices). Instead, emphasis was placed on followup procedures, and these were reinforced by review sessions.

The other major field operation was the special place operation, i.e., the enumeration of the population in institutions, hotels, etc. The special place crew leader and special place clerk were given materials on the special place enumerator's job to study at home before classroom training. During the classroom training, the clerk and crew leader learned additional steps in the enumerator's job and the duties they would perform together to prepare for the special place operation. At this point in training, the clerk was given another self-study unit covering the organization of the special place filing system. While the clerk was setting up his work station and filing system, the crew leader completed his classroom training. This dealt with the field supervision of the special place operation, which was the crew leader's direct responsibility.

The crew leader trained his special place enumerators during a 3-day session, April 25 through April 27. An exercise simulating the enumeration of a special place was used throughout the training.

Enumerators who had T-night (enumeration of hotels, motels, etc.) and M-night (enumeration of jails, missions, and other places with transient persons staying in them) assignments received additional training which dealt with the special procedures for these operations. Special-place training was the same in both centralized and decentralized areas, but was modified for conventional areas, where crew leaders sometimes acted as the special place enumerators.

Another major field operation was the prec canvass, conducted in certain centralized districts to make certain by personal visits to each address that no housing units had been overlooked when the address registers were compiled. The field supervisor trained the prec canvass field personnel. This training did not contain many exercises; rather, the stress was on methods of locating living quarters which were not already listed in address registers. The processing supervisor trained the office personnel who set up the quality control procedures and prepared and checked in assignments.

Training for office operations.--Training for most office operations in decentralized and centralized district offices was similar.

In general, the training guides for each office operation included step-by-step instructions for the trainees. Training exercises were provided which demonstrated the actual operation and materials used; for example, addressing practice questionnaires.

The tract and block and postal corrections operations contained many processing steps, and the beginning of one step depended on the completion of the previous step. In each case, the training was set up so that the trainees would learn and complete one step of the operation before going on to the next.

The office supervisor in decentralized offices and the processing supervisor in centralized offices conducted most of the training for office operations.

Due to the greater complexity of the centralized procedures, the training program under the processing supervisor was more extensive than that conducted by the office supervisor. Two supervisory clerks were trained by the processing supervisor, one in charge of the telephone operations and the other in charge of the office processing operations, and they, in turn, took over much of the processing supervisor's training responsibilities. (The office supervisor in a decentralized enumeration area had fewer functions to perform; see organization chart on p. 7.)

The largest centralized office training session was on editing. During edit training, the trainees learned about the census questionnaires in detail and the principles of editing. The bulk of the training consisted of editing practice questionnaires and recording the results on the edit report forms.

In conventional areas, the major office operation was the quality control of the completed questionnaires. Enumerators who had finished their assignments were trained by the field supervisor in the techniques of reviewing for completeness the questionnaires which had been turned in from each ED.

The following sections describe the procedures specified for carrying out the field enumeration. Once trained, all temporary field personnel were expected to follow these procedures, and to refer to their manuals or supervisors when in doubt. The Bureau's quality control system of checks on the enumerators' work was designed to ensure that the specified procedures were followed with reasonable care, but it is known that instructions were not always carried out to the letter.

CONVENTIONAL PROCEDURES²

General Preparations

Several days before Census Day (April 1), mail carriers left at every housing unit, and in every post office box for a household, an unaddressed question-

naire (Form D-14)--often referred to as the "advance census questionnaire"--identical in form and content to the short questionnaire used in mail areas, to be filled out and held for the enumerator's visit. Beginning on Census Day, each enumerator began a house-to-house canvass of his ED, listing and enumerating as he went.

Field Operations

Enumeration.--Each enumerator working in a conventional census district had a blank address register (Form D-130) for each ED, a map of the ED, and a supply of blank questionnaires, which included the following:

Form D-11, a short questionnaire identical in content with the Form D-14 questionnaire delivered by the mail carriers. The Form D-11 was used for enumeration at households where the Form D-14 had not been filled out or was not readily available at the time of the enumerator's visit.

Form D-12, a long questionnaire containing the complete count and 15-percent sample questions.

Form D-13, a long questionnaire containing the complete count and 5-percent sample questions.

Form D-20, "Individual Census Report," for use in obtaining population information for individuals in special situations (see p. 28). Forms D-11, D-12, and D-13 were identical in content with the three types of household questionnaires used in the mail areas; Form D-20 was used in both mail and conventional areas.

Rather than having a list of all the housing units, as in the mail census (see pp. 18ff.), the enumerator in the conventional census made his own list. He was given a map of an ED and was told to canvass it according to a predetermined sequence so that a proper, unbiased sample would be obtained. He canvassed, listed, and enumerated one block at a time, in sequence, in those ED's having numbered or lettered blocks; in ED's that were not laid out by census blocks each piece of the ED was covered in a clockwise direction.

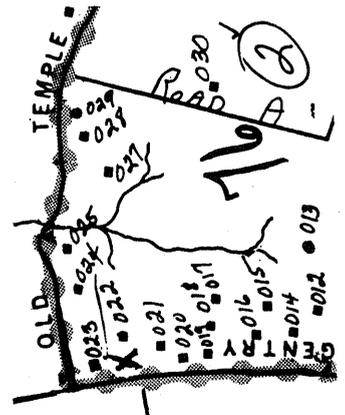
The housing units were listed by the enumerator in the order of visitation while canvassing, even if no one was at home or if the housing unit was vacant. The enumerator listed each separate housing unit on a separate line in his address register(s). For a housing unit that did not have a house number and street name, the enumerator placed a dot on his map to mark its geographic location, and entered next to the dot the serial number of the line on which he had listed this housing unit in the address register.

The use of the address register in conventional ED's is shown in figure F. Column 6 of the address register was preprinted to tell the enumerator which type of questionnaire to use at the housing unit he visited (blank for a short Form D-11, Δ for a long Form D-12, or \bullet for a long Form D-13). To achieve a random start for sampling, the lines on the first page and the first line on the second page of the address register had serial numbers already entered in column 7 by the district office staff. The enumerator started numbering with the

²For staffing and operations calendar, see appendix B.

Figure F. Examples of Listing and Map Entries for Mailing Addresses Without House Number and Street Name Found in Conventional ED's.

Block No. or letter (From map) (1)	Street or road (2)	Name of head of household OR "Vacant" (3)	Mailing address		Type of form (6)	Serial No. (Enter on map) (7)	Number of persons (8)		Remarks (Enter house number if not used as mailing address. Describe location of vacant units with no house numbers) (9)
			RFD and box No.; Lockbox No.; General Delivery; OR House No., Street, and Apt. No. (or location) (4)	Post Office name and ZIP code (5)			Short form (7)	Long form (8)	
	Old Temple Rd	John P. Kober	RFD 5	Temple 52163		024	2	House No. 1601	
		Grant Strom	Lockbox 5327			025	1	House No. 1603	
		Vacant	RFD 5			026	X	Used as person storage	
		Melba Lore	RFD 5			027	3		
		Otto Zimmerman	RFD 5		△	028	2	App ICR for women Pick up May 17	
		J. J. Klein	General Delivery			029	1		
	Road A	Vacant	Route 1, Box 317			030	VAC	2 Mi. S. Int. Old Temple Rd.	
		Ernest Schmidt	Route 1, Box 319			031	5		
		H. R. Penwell	Route 1, Box 321			032	1	Schmidt's bride new Phone 414-5327	
		Clyde Koch	Route 1, Box 325		●	033	3		
		M. Peterson	Route 1, Box 327			034	5		
		W. Walters	Route 1, Box 327			035	1		



■ Living Quarters

● ED Boundary

next available serial number when he ran out of pre-numbered lines, and he numbered the remaining units in sequence. He also entered this number on the questionnaire for the matching housing unit.

Known special places (e.g., institutions, hotels, or large rooming houses) in an ED had already been listed on the special-place pages in the back of the address register in an earlier listing process before the census began. If the enumerator found a special place that had not been listed, he added it on the next available line of the special-place listing pages. He used only one line for the place, even though many housing units may have been located there. The enumerator called his crew leader immediately to describe any special place he had added so that the crew leader could tell him how the place was to be enumerated (by the crew leader, the enumerator, or, in some cases, a special place enumerator). The columns used for listing special places are shown in figure G.

The enumerator interviewed a responsible person in each household. If the respondent had the advance census questionnaire completed, the enumerator reviewed it. He asked any necessary questions and made corrections. If the household was listed on a sample line in the address register, the enumerator asked the additional questions on the appropriate long questionnaire (D-12 or D-13) and transcribed the complete-count information to it from the advance questionnaire after he left the household. If the advance questionnaire had not been completed, the enumerator completed an appropriate questionnaire in its entirety. Overall, between 80 and 85 percent of the respondents in conventional enumeration areas had filled out all or part of their questionnaires before the enumerators called.

If a unit was vacant, the enumerator obtained the necessary housing information for the questionnaire from a rental agent, neighbor, building manager, or some other knowledgeable person.

If the enumerator found no one at home after a second visit to an occupied housing unit, he obtained last-resort information (see p. 31) from a neighbor, janitor, manager, or other respondent. This was to provide the essential data for enumeration in case subsequent callbacks were not successful. The enumerator made further callbacks to such units each time he was in or near the area.

Post-Enumeration Post Office Check (PEPOC)

A post-census Post Office coverage check, to make certain that every housing unit was enumerated, was conducted in conventional census ED's of the following States:

Alabama	Mississippi
Arkansas	North Carolina
Delaware	Oklahoma
Florida	South Carolina
Georgia	Tennessee
Kentucky	Texas
Louisiana	Virginia
Maryland	West Virginia

(Studies following the 1960 census indicated that these were the areas where such a check would be most useful.)

For each address the enumerator listed in the address register, he also entered the address on a white card, Form D-160, "Address Card for Postal Check." At the end of the census, clerks in the census district office sorted the Forms D-160 by ZIP code and forwarded the bundles of cards to the appropriate post offices. The mail carriers checked the cards against the addresses on their delivery routes, and entered on blue cards, Forms D-711, any addresses for which a Form D-160 was not received. The post offices sent the blue cards to the census operations office in Jeffersonville, Ind. for further processing.

Office Operations

(For office organization and staffing, see pp. 5-9.)

Regional office.--Between January and November 1969 the Bureau prepared and sent to the regional offices county and place maps showing ED's, and also lists showing the 1970 estimated housing count for each ED. The regional offices reviewed the maps for unidentified areas, overlapping areas, missing boundaries, and the like. They split ED's which included too many housing units because of substantial population growth or which had been changed topologically (by limited access highways, etc.) since the date of the base records used to prepare the maps. The regional offices split ED's or grouped ED's to approach the optimum number of housing units in each enumerator assignment. In Montana, Nevada, New Hampshire, North Dakota, South Dakota, Vermont, and Wyoming, rural assignments contained about 275 housing units, and urban assignments contained about 350 housing units. District offices in these States were scheduled for earliest closing (see below). In all other States, rural assignments contained about 325 housing units, and urban assignments about 400 housing units.

The regional offices then prepared lists of ED's showing enumerator assignments and method of pay (piece rates or hourly rates) and delineated crew leader districts, based on the corrected maps and district office authorizations. This material was returned to Bureau headquarters where updated crew leader district maps and ED maps were prepared and sent to district offices for their crew leaders and enumerators.

District office.--The conventional district offices made three deliveries of materials to each crew leader, as follows: Home study kits were mailed about March 6. Materials needed by crew leaders to carry out their jobs, such as enumerator assignment and progress record forms, group training report forms, recruiting materials, and crew leader district maps, were given to the crew leaders at their first training session on March 16. At their second training session, on March 26, the crew leaders received the materials, such as ED maps and address registers, for their enumerators. (The district office staff had entered identifying information on the cover of each address register.)

During the enumeration, the district office supervisors compiled progress reports, assisted the crew leaders in replacing enumerators, split oversized ED's reported by crew leaders, reviewed requests for changes in method of pay, and exercised general supervision of the enumeration.

As assignments were completed, district office personnel checked them in, arranged for completion of missing questionnaires, inspected a quality control sample of questionnaires, assigned defective questionnaires for field reenumeration, merged all questionnaires, tallied population and housing counts, and shipped the questionnaires and address registers to the census operations office in Jeffersonville, Ind.

Progress of the Enumeration

The first conventional district office to complete enumeration was Cedar Rapids, Iowa. That office and seven others closed on May 8. District offices closed almost daily thereafter; the last conventional office, Ft. Pierce, Fla., closed on June 30. Closing proceeded at the following rate:

<u>Date</u>	<u>Cumulative number of conventional district offices closed</u>
May 18	38 (21%)
May 25	73 (40%)
June 1	109 (60%)
June 8	144 (80%)
June 30	181 (100%)

The district offices in Montana, Nevada, New Hampshire, North Dakota, South Dakota, Vermont, and Wyoming were expected to close May 1, which was 1 to 2 weeks earlier than the expected closing of the first of the other district offices. The timetable for tabulating all State totals by December 1 called for a flow of work beginning the latter part of May. By making smaller enumeration assignments in these seven States, coupled with the relatively small counts and relatively simple enumeration expected in these areas, it was planned that these offices could complete work by May 1 and ship completed questionnaires for processing by mid-May. Although none of the district offices in the seven States were closed by May 1, most were closed early enough to ship questionnaires for processing as scheduled.

The procedures for preparing, clearing, and announcing the preliminary population and housing counts, and for closing the offices, were essentially the same for all census district offices. These procedures are described on page 36 below.

Quality Control

In conventional districts, the crew leader made both a formal first review and a formal final review of each enumerator's work. Even before first review, however, the crew leader identified three trainees who appeared to be the weakest. He "inducted" them into the job by accompanying them on the first day and retraining them as necessary until he was satisfied that they could do the job. He reported the results of this observation on Form D-137 (see appendix D).

The formal first review took place when the enumerator had completed at least three long questionnaires for occupied housing units. (The form for the review, Form D-153, is shown in appendix D.) The first part was review of the content of the questionnaires and the address register. If more than 20 errors were found in this part

(see Form D-153 for a list of errors), the enumerator was to be released. A lesser number of errors required retraining on the questions for which omissions or errors were detected.

The second part of the first review dealt with the plan of canvass and the order of the listed housing units. There were no formal quantitative standards for this part; release or retraining of the enumerator was left to the crew leader's judgment.

Informal intermediate reviews were scheduled for those enumerators who made errors discovered during the first review.

A final review was conducted after the enumerator had completed his assignment. (The form used for final review, Form D-154, is shown in appendix D.) There were five checks, the first of which was a check on the enumerator's coverage of his geographical area. The enumerator had been instructed to put a check mark inside each block or section on his map to indicate that he had completely covered it. In rural areas he was also to enter the serial number of each housing unit beside the housing-unit location on the map. The crew leader reviewed the map to see that there were no areas without check marks and no housing units without serial numbers. He sent the enumerator back to canvass any areas that had been left unenumerated.

The second check was a search (see section B of Form D-154) for missing questionnaires, and the tolerance was zero. The enumerator or the crew leader had to go back to the households concerned to get the missing questionnaires even if only one was missing.

The third check was a control on the number of incomplete questionnaires that an enumerator could turn in. ("Incomplete" meant that one or more applicable questions were not answered.) The enumerator could have no more than 12 incomplete short questionnaires and no more than five incomplete long questionnaires. Otherwise, he had to undertake further enumeration to fall within the acceptable number.

The fourth check on a sample of 15 questionnaires per assignment (see appendix D, section D of Form D-154) was on block number, serial number, and type of unit or quarters, all of which had to be answered to permit successful computer tabulation of census results. If these items were not coded, the computer would not know when the entries for one household ended and those for another began. Again the tolerance was zero.

In the mail areas (see below) where the addresses were listed in the address registers before the enumeration began, the sample households were selected and the appropriate sample questionnaires were mailed to them automatically. In conventional areas, the proper distribution of the sample was the enumerator's responsibility. The last check, therefore, was a review of the sampling to make sure that the long forms constituted 20 percent of all forms, within narrow limits. If the assignment failed this check, a complete review of every questionnaire was made to determine where the wrong kind of questionnaire was used. Correction was made by transcription to the right kind of questionnaire and by further interviewing, if required.

After the successful completion of a final review, the crew leader helped the enumerator complete his payroll form, and submitted it to the district office.

The check for missing questionnaires was repeated in the district office. The assignment was returned to the crew leader if three or more questionnaires were missing. If one or two were missing, questionnaires were completed for them in such a way that they could be used for later computer imputation.

The office quality control review utilized Form D-155, shown in appendix D. There were two parts to this review. In the first part, a check was made on a sample of 22 questionnaires from each ED. To pass the inspection, each questionnaire must have had seven specified housing items and three of the following four population items completed for each person: relationship to head of household, sex, race, and marital status. In addition, at least four (originally five) sample questions must have been answered for each person listed on a long questionnaire. If three or more questionnaires failed this check, every questionnaire in the entire ED was edited. Every short questionnaire with five or more errors, and every long questionnaire with 10 or more errors or with sample information completely missing for one or more persons, was returned to the field for further work (see below).

The second part of conventional office quality control involved comparison of the number of persons per housing unit in sample housing units with the number of persons per housing unit in all housing units. Within limits, these figures should have been the same. When they were not, the failure was reported to Washington. These reports were made daily. No action was taken in Washington if the failing ED's were scattered and isolated. If they clustered by district office, or by crew leader district within a district office, the resampling and reenumeration of entire ED's was ordered.

Enumeration of quality control failures was supervised by the supervisory crew leader. He selected the best enumerator (other than the original enumerator) who lived near the ED and who was available and willing to assume the additional work of cleaning up the failed questionnaires. This cleanup enumerator was instructed to complete the missing items on each defective questionnaire by telephone interview, if possible, or by personal visit when necessary. He called the district office every Monday and Thursday to report his progress. This enumerator was paid an hourly rate, claimed upon completion of his assignment and return of all materials.

Progress reporting, payment of enumerators, announcement of preliminary counts, and district office closing are discussed on pp. 32ff.

Problems

Because of late arrival of maps in some district offices, crew leaders learned of oversized ED's too late to split them and assign parts to other enumerators. Some ED maps were difficult to read, or indicated boundaries which were not clearly apparent on the ground, e.g., a boundary which followed an easement for future highway construction.

District offices were instructed to consolidate crew leader districts as the enumeration workload diminished and enumerators were released, so that only as many crew leaders would be retained as were needed to supervise the remaining enumerators. In some instances, crew leaders found themselves responsible for unfamiliar territory and, more often, for enumerators with whom they had not worked before. This situation was found to be awkward, and sometimes more costly in terms of travel and administrative expenses than retaining each crew leader until the enumeration was completed in his crew leader district.

THE MAIL SYSTEM

General Preparations

Between May 1969 and January 1970, approximately 32 million residential addresses were compiled on computer tape from a commercial mailing list of addresses which received city-type postal delivery. The Bureau provided certain geographic information for each address, e.g., block, city, county, etc., by processing the tape through an ACG (address coding guide). Each address was also identified by the census field control codes for district office, ED, and serial number within ED; and each address was designated through a random-start serialization technique to receive one of the three types of census questionnaire.³ (The compilation of the address tape and the address coding guide are described in a separate chapter.)

From this geographically identified, field-coded, and sample-designated set of addresses, the Bureau printed out early in 1970 two primary sets of materials. One was a set of individual address labels, which were affixed to the questionnaires through a window in the mailing pieces (the mailing piece contained the appropriate type of questionnaire, an instruction sheet, a letter from the Secretary of Commerce, and a return envelope). The other was a control listing (Form D-102, "Address Register") of all the addresses in a particular ED.

This process, however, did not always cover an entire metropolitan area, but only the portion which received city delivery service from the Post Office Department. To cover the balance of the metropolitan area, temporary census employees in decentralized district offices performed a special address listing operation in the fall of 1969 and the spring of 1970, before the census. This operation yielded hand-written ED address registers (Form D-101) and hand-addressed mailing pieces comparable to the computer-produced materials described above. (See "Decentralized Procedures--Listing and Addressing," p. 19 below.)

³The three types of questionnaire were as follows: (1) Form D-1, short questionnaire, which contained the 100-percent items (i.e., inquiries asked for all persons and housing units), that went to 80 percent of all households; (2) Form D-2, long questionnaire (identified by a Δ), containing the 100-percent items plus additional questions that went to 15 percent of the households; and (3) Form D-3, long questionnaire (identified by a \bullet), containing the 100-percent items, some of the sample inquiries found on the Form D-2, plus other additional questions. The Form D-3 went to 5 percent of the households.

Tract and Block Coding

Approximately 2.3 million commercial mailing list addresses could not be matched to the geographic information in the ACG's, and thus could not be assigned to ED's by computer. These addresses were printed one each on "yellow cards" (Form D-180, "Tract and Block Follow-up Cards") to be coded in the field to tract and block and, by use of the office map or Form D-225, "Tract and Block Directory," to ED.

Since the number of yellow cards was much greater than had been anticipated, regional offices conducted the tract and block coding before the district offices opened for those offices having more than 1,200-1,500 yellow cards and no spring listing operation, or 4,000 yellow cards and a spring listing operation (enumerators who had completed spring listing could move into tract and block field coding). As many addresses as possible were coded to tract and block through the use of local maps, local knowledge of the coder, consultation with letter carriers, city engineers, policemen, firemen, or by telephoning the occupant if the name was included as part of the address. If these sources could not provide the answer, the coder went to the general geographic area to search for the exact location.

Once assigned to ED's, the addresses on yellow cards were added to the appropriate address registers, and mailing pieces were prepared for them.

Postal Corrections

The Post Office received an addressed questionnaire for each household on the census mailing lists. The Post Office performed two checks on these questionnaires in order to further improve the mailing lists. The first check was a mid-March casing check in which each letter carrier filed the census questionnaire mailing pieces for his route in his sorting case. The carrier prepared a "blue card" (Form D-702, "Report of Missing Questionnaire") for each address on his route for which he did not have a census questionnaire. In those cases in which he had two questionnaires for the same address, the carrier retained the one with the lower serial number for delivery and returned the other, marked "Extra Questionnaire," to the district office, giving the ED number and serial number of the questionnaire he had retained.

The address entries for questionnaires returned by the letter carrier as "Extra" were deleted from the address register, and the line was cross-referenced to the ED number and serial number of the questionnaire to be delivered by the letter carrier.

Some questionnaires could not be delivered because they had defective addresses; they were known as "nixies." Nixies were marked, e.g., "No such number" or "No such street," were bundled by the post offices, and were sent to the Jeffersonville Census Operations Division for storage. The addresses in question continued to appear in the address registers, and were followed up as non-response cases in the field enumeration.

The mail carriers performed a second check on Saturday, March 28, when they actually delivered the questionnaires.⁴ At that time they prepared blue cards for additional missed addresses. The post offices sent any remaining nixies to Jeffersonville.

The district offices checked in receipts of blue cards against a control list of post offices serving the districts. They accepted each bundle of blue cards if the letter carrier had entered the ED number on at least half of them; if not, the bundle was returned to the post office to have ED numbers entered. Cards missing ED numbers in accepted bundles were coded to ED using Form D-223, "Block Header Record," and the district office master map, or, failing this, by checking in the field and thereafter using the Tract and Block Directory or district office map.

After all blue cards had been coded to ED they were checked against the appropriate address register. If the address was not found, it was added to the address register. Geographic identification items were noted on each card from the address register line on which the address was listed.

The district office addressed a questionnaire mailing piece of the appropriate type, using the blue card as the source of identification items and address. These were sent to the Post Office to be included in the March 28 mailout or were mailed out as soon as possible thereafter if the blue card was developed from the time-of-delivery postal check.

DECENTRALIZED PROCEDURES⁵

Listing and addressing.--In mail census districts where decentralized procedures were followed, there were suburban postal delivery areas where housing units tended to have street addresses, but for which addresses were not available from commercial city-delivery mailing lists. These suburban addresses had to be listed and have mailing pieces addressed by census employees in order to complete coverage for the mailout/mail-back census. (The areas in which this listing took place were called "prelist areas" because the listing took place before the census was taken.)

Addresses in census districts with little building growth and harsh climates (approximately 6,300,000 addresses in northern States) were listed in the fall of 1969, well before the district offices opened, as a special operation under the supervision of regional technicians. In census districts where much building growth and mild winter weather was expected (Alabama; Arizona; California; Florida; Georgia; Louisiana; Texas; Portland, Oreg.; and Seattle, Wash.), listing (approx-

⁴Some questionnaires were delivered on March 25-27 because of delivery limitations on Saturdays, and because some service disruptions were anticipated in a postal strike during this period. As the strike was confined to certain large cities, principally New York City, and because of its short duration, census operations did not suffer any serious delays.

⁵For staffing and operations calendar, see appendix B.

mately 900,000 addresses) was done in January and February 1970 under the jurisdiction of 50 district offices.

The regional technicians prepared the fall listing assignments based on 1970 estimates of the number of housing units in each ED. Adjoining ED's were grouped to make listing assignments of 1,000-1,200 housing units. Each technician specified a random listing-start line in each address register, prepared crew leader maps, recruited and tested personnel, trained crew leaders, split oversize ED's (750 housing units were the maximum per ED), and maintained progress report records. In spring prelisting, the district office supervisors and field supervisors were responsible for this operation.

Listing crew leaders trained the listing enumerators, observed the quality of work and productivity of the enumerators, and maintained progress report records.

Listing enumerators were given a Form D-167, "Address Register, Listing Areas," for each ED they were to list. Form D-167 was a wire-bound book containing:

- An ED map
- 40 white listing pages (Form D-101) for listing regular housing units
- 4 yellow listing pages (Form D-187) for listing special places
- Form D-516, "Canvassing and Listing Instructions"
- Form D-516A, "Administrative Instructions"
- Accident report forms

Form D-164, "Enumerator Check for Missing Questionnaires"

Form D-107A, "Reimbursement and Payroll Voucher"

An envelope for special-place cards

The enumerator canvassed the ED, listing the mailing address of each occupied and vacant housing unit. If the observed street address differed from the mailing address, the street address was entered in the "Remarks" column of the register. For a housing unit without a house number and street name, the enumerator marked the geographic location and listing-line number on the ED map.

Ninety-seven districts were listed in the fall. Listing began in six districts in August, 28 districts in September, 49 in October, 13 in November, and the last one in December. Listing was completed in eight districts in September, 29 districts in October, 38 in November, 21 in December, and the last one in January. Spring listing was all done in January and February.

As the fall listing operations were completed for a district, the address registers were packed and shipped to one of five addressing centers where mailing pieces were addressed by hand. A total of 5,393,950 mailing pieces were addressed for the prelist areas, at an average cost of \$0.038 per piece for addressing; a summary of the operations of addressing centers is given in tables 2 and 3. (Some registers for districts listed late were held in the regional office until the district offices opened. These registers were then shipped to the district offices to have the mailing pieces addressed.) Approximately 1.8 million questionnaires were addressed in the district offices for listings resulting from some of the fall and all of the spring prelisting operations.

Table 2. Addressing of Mailing Pieces for Prelist Areas—Workload

Location of addressing center	Addressing center		Total No. of mailing pieces addressed by piece-rate addressing clerks	Total No. of mailing pieces addressed by hourly-rate addressing clerks	Total hours worked by all hourly-rate addressing clerks only	Total hours worked by all supervisory clerks, quality control clerks, and office clerk
	Date opened	Date closed				
Total.....			2,474,686	2,919,264	41,707	18,738
Appleton, Wis.....	10-27-69	11-29-69	-	252,819	3,506	757
Columbus, Ohio.....	10-27-69	2-7-70	2,474,686	-	-	8,875
Eugene, Oreg.....	11-7-69	12-19-69	-	181,106	2,587	456
Minneapolis, Minn.....	10-20-69	1-17-70	-	1,174,343	17,207	4,968
St. Paul, Minn.....	10-20-69	1-10-70	-	1,310,996	18,407	3,682

- Represents zero.

Each center was supervised by a regional office representative, and at peak operations was staffed as follows:

Table 3. Addressing of Mailing Pieces for Prelist Areas—Staff

Position	Number of clerks by addressing center				
	Appleton, Wis.	Columbus, Ohio	Eugene, Oreg.	Minneapolis, Minn.	St. Paul, Minn.
Office clerk \$2.25 per hour	1	1	1	1	1
Supervisory clerk \$2.25 per hour	-	5	-	¹ 3	¹ 3
Quality control clerk \$2.00 per hour	1	5	1	¹ 3	¹ 3
Addressing clerk \$2.00 per hour or \$0.0325 piece-rate	24	130	14	¹ 125	¹ 125

- Represents zero.

¹Distributed over two 6-hour shifts per day.

The following materials were used by the addressing clerks to address mailing pieces:

Address registers by district office code

Census mailing pieces by district office name and ZIP code (short and long questionnaires)

Reserve supplies of mailing pieces which did not show any district office name and ZIP code (short and long questionnaires)

All mailing pieces from fall and spring prelisting in decentralized areas were on hand, along with the mailing pieces which had computer-produced address labels, when the post offices performed the mid-March casing check for households missed and the check at the time of the actual delivery to households on March 28. (The contractor who assembled and labeled the mailing pieces had forwarded them directly to the post offices to be there in early March.)

Mail Returns

Householders were asked to complete their questionnaires and on April 1 mail them back in the envelope provided. The return envelope had a window so that postal clerks could read the identifying address codes on the questionnaire and determine the ED number for the household.

The Post Office accumulated and bundled mail-return questionnaires by ED number, and on April 8--if possible--delivered the bundles to designated enumerator training sites. Where necessary, census employees expedited delivery by sorting questionnaires that were received unbundled. The district office routed later mail returns to crew leaders to be transmitted to the enumerators.

The response rates and failed-edit rates on mail returns were better than had been anticipated in planning. (See below the percentages of the questionnaires returned by mail. No adjustments have been made for vacant units and deleted listings.)

<u>Questionnaires</u>	<u>Mail Returns</u>
Total	80.7
Short (complete-count)	81.1
Long (sample)	79.0

Assistance to the Public

Telephone assistance operations were established to aid householders in completing their questionnaires. The operation was located in the district office; if a city had more than one district office, one was designated and equipped to handle calls for all. From one to five telephone lines, depending on the size of the city being served, were installed for this purpose. Telephone assistance began on March 30 and continued through April 2. The public utilized this service fully.

Walk-in assistance centers were opened in central city locations and housing projects to assist householders in completing their questionnaires. Little use was made of this service.

Preparation for Followup

Enumerator assignments in decentralized areas were of three different sizes. In rural and suburban areas and small cities ("A" areas), assignments averaged about 700 housing units. Larger cities had assignments of 575 housing units except for a few hard-to-enumerate areas ("X" areas) which had assignments of 375 housing units. Since ED's had been delineated to meet these standards to the extent possible, most assignments were one ED each. ED's which were well below the optimum number of housing units were combined to make one assignment.

Crew leader districts were prepared by grouping about 10 adjacent enumerator assignments in "X" areas, or 15 for other areas. Crew leader district boundaries were drawn on the district office master map and the districts were numbered. Each crew leader was given a map of his district, a list of assignments in the district, a group training report form, an assignment and progress control form for each enumerator, and the address register for each ED (to be given to the enumerator in training class).

Crew leaders selected enumerators for assignments for which enumerators had not already been recruited by the field supervisor at the district office. The crew leaders trained enumerators, supervised their work in the field, reported their progress, reviewed work for quality and completeness, and helped prepare enumerators' payrolls when assignments were completed. If additional enumerators were needed to handle assignments, the crew leaders selected them from the district office's roster of qualified applicants.

On the first training day, April 8, the enumerators were trained on administrative duties and on check-in of questionnaires returned by mail. They were given the bundles of returned questionnaires and the address registers for their ED's. Each enumerator then marked his address register to show, by serial number, which questionnaires had been received in the mail.

The enumerators were then trained to edit short questionnaires, after which they edited the ones for which they were responsible. The same procedure was then followed for long-questionnaire edit.

Editing consisted primarily of reviewing each questionnaire for omissions, with a three-fold purpose:

1. To make certain that no one was missed in the census. The entries for questions 9-12, about persons not listed on the questionnaire, were examined, and the number of living quarters at the address reported in question A was compared with the number shown in the census records.
2. To identify those questions which should have been answered but were not.
3. To make certain that the answers to the industry and occupation questions were sufficiently detailed to be coded.

In general, a short questionnaire failed edit if it had more than two blanks which should have been completed, and a long questionnaire failed edit if it had more than five items which required further information. Of the mail returns received in decentralized districts, 12.7 percent of the short questionnaires and 43.4 percent of the long questionnaires failed edit. This represented an overall failed-edit rate of 18.7 percent, compared with the expected 25 percent which had been budgeted when the census was planned.

Finally, the enumerators were trained on followup--the process of obtaining missing information--and then telephoned or visited the households which had returned the incomplete questionnaires (failed-edits). Enumerators did as much of the followup as they could by telephone, then made personal visits to the households

that could not or would not provide interviews by telephone, and to all households that had not returned any questionnaire at all (nonresponse).

For failed-edits the responses were entered on the edited questionnaire. For nonresponse households the enumerator used a blank questionnaire of the type indicated for that address in the address register. If one questionnaire was insufficient to enumerate all the members of one household, the enumerator used another blank questionnaire of the same type as the first and completed the enumeration on it. He marked and coded the second questionnaire "Continuation." The enumerator was instructed not to ask for the mail questionnaire when he visited the household because the respondent might waste time looking for it. However, if the respondent volunteered that he could readily locate the mailed questionnaire, it was used for the interview. If the respondent was unable to supply information about someone in the household (for example, a roomer), the enumerator left an ICR (Form D-20, "Individual Census Report"), with a D-40 envelope, for that person to complete. The enumerator later picked up the completed ICR and transcribed the data to the household questionnaire.

If the enumerator could find no one at home after a reasonable number of callbacks, he obtained as much information as possible from a neighbor, janitor, building superintendent, etc. In apartment buildings, housing questions often could be answered from the information on questionnaires from similar units in the same buildings. Enumerators referred refusal cases to the crew leader for resolution. Any questionnaires that could not be completed by the crew leader were referred to the district office. In rare cases, last-resort information was the only recourse in filling a questionnaire. (See also p. 31.)

For vacant units the enumerator used the type of questionnaire specified in the address register, and interviewed a janitor, rental agent, building manager, neighbor, or other respondent concerning the vacant unit.

For each questionnaire obtained during followup, an entry was made in the address register for the appropriate ED to indicate its receipt and to record the number of persons enumerated at the household. New housing units found during followup were added to the register (and questionnaires completed for them), and duplicate or no-longer-existing addresses were deleted. Addresses for housing units listed in the regular white pages of the address register that were found to be for special places (dormitories, rooming houses, etc.) during followup, were transferred to the "Special Place" portion of the register (yellow pages) and reported to the crew leader for disposition. (See "Special Places," pp. 28-30.)

Quality Control

Because check-in took place in 1-1/2 days, short-questionnaire edit in 2-1/2 days, and long-questionnaire edit in 2-1/2 days, the crew leader did not have time for a formal quality review of these aspects of the work of each of his 15 enumerators. He did not visit them at all during short-questionnaire edit and long-questionnaire edit. The time the crew leader had for visits was somewhat limited since he remained at home for 2 hours each day to answer enumerators' questions by telephone.

When reviewing the editing, he started with the enumerators he thought would need the most help. For short-questionnaires edit, he reviewed for each enumerator at least 10 edited questionnaires for accurate editing. Marking of the FOSDIC circles for identification items (block number, serial number, and type of quarters) was given special attention.

For long-questionnaire edit, at least five questionnaires edited by each enumerator were reviewed informally by the crew leader. Several items on each questionnaire were given special attention. If minimum standards were not met, a decision was made by the crew leader either to release the enumerator for poor work, or, if he was not released, to retrain him in the necessary areas.

Any reviews that the crew leaders made of enumerators' work during the followup period, when enumerators were making visits or telephone calls to complete questionnaires, were also informal. The crew leader reviewed completed questionnaires at random and observed the interviewing techniques of the enumerators. A checklist (see Form D-513, appendix D) was used by the crew leader to aid him in evaluating each enumerator's work.

Crew leader reaction as a result of these reviews ranged from praise for good work to release of the enumerator for poor work. Between the extremes there were varying amounts of retraining. Occasionally a subsequent review was conducted to determine the success of the retraining.

Formal statistical quality control began with the final review of each enumerator's work by his crew leader. This review had four parts, all of which the enumerator had to pass before his work was accepted and his payroll form prepared. The first check was for missing questionnaires, as in the conventional census. The second check was for completeness, the enumerator being limited to no more than 12 incomplete short questionnaires and no more than 10 incomplete long questionnaires. The third check was also one encountered in the conventional census: an inspection of the identification items on a sample of 15 questionnaires, with a zero tolerance. The final check was one to see that the number of persons for each questionnaire had been posted to the address register. This served two purposes: it was a double check on missing questionnaires, and it provided a population count needed for a preliminary announcement of population to be released to the city or county involved. (The final review form, Form D-184, is shown in appendix D.)

All subsequent checks on quality were made in the district office. The first of these was an independent check for missing questionnaires. The assignment was returned to the crew leader if three or more questionnaires were missing. If one or two were missing, questionnaires were completed for them. Data for these were imputed later by computer.

The other office check was a two-part sample inspection of each enumeration district's returns for completeness of the questionnaires. Form D-185, used for this inspection, is shown in appendix D.

The first check was made on 22 questionnaires in each ED, of which 12 were short and 10 were long questionnaires.

To pass the inspection, a questionnaire had to have seven specific housing items completed, and three of the following four population items completed for each person: relationship to head of household, sex, race, and marital status. In addition, at least four (originally five) sample questions had to be completed for each person listed on a long questionnaire.

If no more than two of the 22 questionnaires failed, the ED passed this check. If three or more failed, every questionnaire in the entire ED was re-edited. Every short questionnaire with three or more errors was returned to the field for further cleanup. Every long questionnaire with 10 or more errors, or with sample information completely missing for one or more persons, was also returned to the field for cleanup.

A sample of five long questionnaires which had been mailed in by the respondents and which the enumerator had said were complete was used for the second part of the office quality control check. Each questionnaire was re-edited completely and the errors (primarily omissions) counted. Errors on the identification items were given a double weight. The ED failed if there was a total of 21 or more errors on the five questionnaires, or if sample information was completely missing for any person on any of the five questionnaires.

If the ED failed, all long questionnaires for the ED were completely re-edited. Those with 10 or more errors, or with sample information completely missing for one or more persons, were returned to the field for followup.

Repair of quality control failures was supervised by the supervisory crew leader. He selected the best enumerator (other than the one who had turned in the assignment which failed) who lived near the ED in question and who was available and willing to take the additional work of cleaning up the failed questionnaires. This enumerator was paid the hourly rate, claimed upon completion of his assignment.

The cleanup enumerator was instructed to complete the missing items on each defective questionnaire by telephone interview if possible, or by personal visit when necessary. He called the district office twice a week to report his progress and returned all materials when the assignment was completed.

Progress of Enumeration

Mankato, Minn., the first decentralized office to complete its work, closed on May 20. The last decentralized office closed September 11. It had been anticipated that most offices would be closed around May 28 to June 12; actual closing proceeded at the following rate:

<u>By date</u>	<u>Cumulative number of offices closed</u>
June 9	33 (20%)
June 17	69 (41%)
June 23	98 (59%)
July 9	136 (81%)
August 14	153 (92%)
September 11	167 (100%)

The procedures for preparing, clearing, and announcing the preliminary population and housing counts,

and for closing the offices, were essentially the same for all census district offices. These procedures are described on p. 36.

Problems

Not all of the areas found difficult to enumerate ("X" areas) had been discovered during the advance planning; therefore the address registers for ED's in some of these areas contained larger numbers of housing units than the predesignated X-area ED's. As a result, some large assignments were produced for difficult-to-enumerate areas.

Some computer-produced address registers contained addresses far distant from the bulk of the assignment. It was decided not to reassign them but to have the original enumerator travel to these areas. This caused some confusion, loss of time, and depression of earnings.

The 20-percent turnover rate in the enumerator staff, found to be the average for all decentralized offices, delayed progress. (The crew leader turnover rate averaged 12 percent.) Many enumerators quit because they needed work providing early payment; in 1970 it took an average of 22 days between the time the enumerator signed a payroll voucher and the time the Treasury Department mailed him a check.

CENTRALIZED PROCEDURES⁶

Pre canvass in Selected Areas

To provide an additional check on census coverage in difficult-to-enumerate areas by verifying the number of housing units in multiunit buildings, pre canvass operations were conducted for selected central-city ED's in 20 large cities, beginning February 25 and ending March 13, in advance of the March 28 questionnaire mailout. Addresses were transcribed from address registers onto transcription sheets which were given to pre canvass enumerators, who were paid on an hourly basis. They visited each address and counted the housing units. If the count exceeded that on the transcription sheet, all of the units at the address were listed on the transcription sheets. These sheets were then compared with the address registers, and those addresses not already on the registers were added. Appropriate mailout questionnaires were addressed in the district office for the added units, and were sent with the general mailout on March 28.

A quality control procedure was built into the pre canvass by systematically lowering the number of housing units for certain addresses shown on the transcription sheets, before they were given to the enumerators. If the enumerator failed to find a higher number of housing units at enough of these addresses, he was first warned and then, on repetition, released.

The number of housing units added to the address registers as a result of the pre canvass operation is unknown.

Office Operations

Certain early office operations were conducted in centralized districts exactly as they were in the decentralized areas. These included tract and block coding and postal corrections. (For details, see p. 19ff. above.) The number of addresses requiring coding to tract and block for centralized areas was about 388,000 (6.0 percent of the 6.49 million total); this was accomplished between December 1969 (beginning in Jeffersonville and in some of the regional offices) and mid-March 1970.

Only two of the 45 centralized district offices, Gary, Ind., and St. Louis, Mo., had listing operations; these covered suburban areas included in their jurisdictions.

Assistance to the Public

One telephone assistance center was established in each of the 20 major cities covered by centralized district offices, and was operated from March 30 through April 2. Whenever possible, these centers were staffed with clerks who had already worked on earlier census jobs. The assistance centers generally were well patronized; calls were received from people who, for example, lost or had not received questionnaires, or who needed guidance on how to answer some of the inquiries. As in decentralized areas (see p. 21), walk-in assistance centers were opened but received very little patronage. The Bureau also made other efforts, through its public information program and through local community action agencies, to promote the field enumeration and to improve the census coverage. These are described on pp. 39-40.

Mail Returns

The questionnaires mailed back to the centralized district offices were delivered to them daily by the Post Office from April 3 through April 7 and periodically thereafter.

On April 8, clerks in the district offices began checking in the returned questionnaires. This operation consisted of counting the questionnaires, putting them in order by ED number and by questionnaire number within ED, and then noting on the appropriate lines of the address registers that they had been received.

As expected, a smaller percentage of households in centralized areas returned their questionnaires by mail than did those in decentralized areas--only 66.9 percent, as compared with 80.7 percent in decentralized areas. For short questionnaires the mail-return rate in centralized areas was 67.8 percent, and for long questionnaires it was 63.1 percent. (No adjustments have been made for vacant units and deleted listings.)

Editing and Telephone Followup

On April 13, the district office clerks, with the aid of cross-index telephone directories (arranged by address), began telephoning households for which no short questionnaire was checked in on the address registers, in an attempt to obtain the necessary information. This procedure was abandoned because the results did not justify the time and costs involved; questionnaires were completed for only 7.4 percent of all nonresponse housing

⁶For staffing and operations calendar, see appendix B.

units to which short questionnaires had been sent. Many cross-index telephone directories did not list apartment numbers, and many telephones listed were found to be disconnected.

In the latter part of April the clerks began editing the questionnaires that had been returned by mail, and telephoning to obtain missing information for those which failed edit. This procedure worked very well; of the questionnaires designated for telephone followup, 74.8 percent of the short questionnaires and 75.4 percent of the long questionnaires were completed.

Of all the questionnaires returned by mail to the centralized offices, 21.8 percent failed edit. Of the short questionnaires, 13.8 percent failed edit, and 53.1 percent of the long questionnaires failed edit. The comparable failed-edit rates for the decentralized mail areas were 18.7, 12.7, and 43.3 percent respectively. (Greater rates of failure were observed in an "Early Warning System" sample edited by permanent Census Bureau employees. (This and other evaluation projects are described in other chapters.)

Preparation for Field Followup

In centralized areas, enumerators followed up only those nonresponse and failed-edit cases which could not be resolved by clerks in the district offices.

The initial assignment for each followup enumerator was comprised of about 400 housing units less the number for which acceptable questionnaires were received by mail. For centralized areas, the computer had been programmed to print address registers for a group of blocks containing about 400 housing units (thus delineating ED's), so many assignments consisted of a single ED. The computer was also programmed to include no more than one census tract in an ED. As a result, ED's containing less than 400 housing units each were combined to make one assignment. (Several of the problems described in the section above on decentralized operations also occurred in centralized areas: The computer produced some block groups which were found to be too large for handling by one enumerator, and which had to be "split" in the district office; other computer-generated block groups contained addresses far removed from the location of the bulk of the addresses.) Each assignment was recorded by the office staff on a control form (Form D-313, "Crew Leader Report on Enumeration") which the crew leader used to record enumeration progress and to identify assignments that were behind schedule.

Seven or eight enumerator assignments were given to each crew leader in areas where the most difficulty was expected during enumeration and the lowest mail-response rate was anticipated; a crew leader had 10 to 11 enumerator assignments where the expectations were for the least difficulty during enumeration and the highest mail-response rate; in all other areas crew leaders had nine enumerator assignments.

The crew leader districts were drawn and numbered on the district office master map. Crew leader district numbers were entered on each enumerator assignment control sheet, as were the method-of-payment codes. A list of assignments and a crew leader district map were

prepared for each crew leader. Crew leader districts were combined into supervisory crew leader districts, and control forms were prepared for each supervisory crew leader.

Crew leaders were provided with recruiting kits which contained materials for testing candidates for followup enumeration. The crew leaders tested and selected enumerators for assignments not already provided for from district office recruiting.

A crew leader notebook (containing standard forms such as BC-112A, "Census Employment and Hatch Act Clarified;" D-105, "Reimbursement and Payroll Voucher;" D-260, "Enumerator Assignment and Progress Record;" D-262, "Field Quality Check--Final Review;" D-280, "Letter of Thanks to Space Donor;" D-311, "Enumerator Assignment and Progress Record;" and D-313, "Crew Leader Report on Enumeration") was made up with copies of the enumerator assignment control sheets (Forms D-310 and D-311), and Form D-135, "Group Training Report." Materials for each crew leader were assembled in Jeffersonville, Ind., in a large shipping carton: notebook, district map, recruiting materials, portfolio, training kits (trainers' and trainees'), a supply of blank questionnaires, and crew leader practice enumeration materials.

The address register and addressed short questionnaires for housing units which the district office personnel could not enumerate by telephone (nonresponse) were grouped by crew leader district and were assigned to enumerators at their training sessions. The status of each questionnaire--"no contact," "respondent moved," "wrong telephone number"--was noted on its cover. All mailed-back questionnaires which failed edit and could not be resolved by district office telephone followup, were also assigned to enumerators (see below).

A kit of blank questionnaires was mailed to each enumerator for use (a) if the enumerator discovered additional housing units, (b) at nonresponse households which had misplaced the mailed questionnaire, and (c) as continuation sheets for the original questionnaires.

In Spanish-speaking areas, enumerators were furnished with a translation of the questionnaires (Form D-350). This translation was used either for asking the questions verbatim, or for the respondents to follow while answering. (Only the English-language questionnaires could be processed.) In addition to the forms carried by the enumerators, the following items were distributed in these areas in neighborhood stores, post offices, etc.: a Spanish translation of the D-1 short questionnaire (Form D-61s), and Spanish translations of the short and long questionnaire instruction sheets (Forms D-4s and D-5s). The instruction sheets were also mailed out with the questionnaires for Spanish-speaking areas covered by 15 district offices, and were distributed elsewhere by the Regional Community Education Specialists. Similar aids were used in Chinese-speaking communities (Form D-60, translation of the questionnaires; Form D-61c, translation of the D-1 short questionnaire; Form D-5-C, translation of the long questionnaire instruction sheet), but none of them were included in the mailing pieces. Bilingual enumerators were hired for foreign-language areas whenever possible, but interpreters occasionally were employed, sworn in as Census representatives, and sent to accompany the enumerators.

Field Operations

The enumerators were instructed first to enumerate every housing unit for which there was no notation in the address register that a questionnaire had been received by mail or completed by telephone in the district office. As the better enumerators completed this nonresponse phase of the enumeration, they were assigned the mailed-back questionnaires which had failed edit and which contained problems which could not be cleared up in the district office by telephone.

On April 24 nonresponse field followup started in that half of the crew leader districts in which a lower mail-response rate was expected. One week later nonresponse field followup started in the other half of the crew leader districts. In this way the district office concentrated efforts on the heaviest field workload at the earliest date. The approximate number of replacement enumerators needed for critical crew leader districts usually was known the first week, and replacements were trained at the regular training sessions for the later-starting crew leader districts.

The crew leader accompanied each enumerator on several followup interviews at the beginning of enumeration. During the next 2 or 3 days, the crew leader reviewed each questionnaire the enumerator completed.

Crew leaders in centralized office areas supervised relatively small groups of enumerators working in small geographic areas, thus permitting close supervision. Crew leaders were required to meet with their enumerators at a central location at least every Monday, Wednesday, and Friday to determine progress and discuss problems; they were encouraged to meet every day. These group meetings lasted about 20 minutes and were used primarily to ensure that enumerators were working daily. The crew leader set the meeting time at the start of the best work hours for his district. Each day, after the group was released, the crew leader has one enumerator remain for review of completed work, discussion of specific problems, or for joint visits to households that had refused to answer the questions, etc.

Each time an enumerator completed a minimum of 40 questionnaires, the crew leader reviewed them, had the enumerator correct any poor work, helped the enumerator prepare a payroll form covering that batch of work, and submitted the completed questionnaires and the payroll form to the district office. Enumerators selected for failed-edit work were payrolled for this additional work only once, at the completion of the assignment.

Missed persons.--Census district offices worked with one or more local organizations and with civic officials to identify persons who thought they had not been counted in the census.

The Bureau provided green cards captioned "Please Make Sure I Am Counted in the Census" with spaces to enter name, address, sex, race, age, and marital status. These cards were printed in Spanish and Chinese as well as in English, and were distributed by city and community agencies.

One district office in the area was designated to receive the cards for the entire area. This office coded each card

to district office, ED, and serial number range, and distributed the coded cards to the appropriate district offices in the area.

District offices coded the cards to serial number and shipped them to Jeffersonville for comparison with the original questionnaires and addition to the census records, if warranted. Although several hundred thousand of these green cards were distributed, only 324 cards were received in Jeffersonville from the entire United States. The only sizable group--150--was from the Chicago area.

Movers Operation

Since experience had shown that a portion of the central city population in large cities is highly mobile, a "movers operation" was set up for certain designated areas in 21 major cities covered by 46 district offices to check that each person who moved during the census period was counted. The Post Office prepared a Form D-199, "Transcription of Change of Address Order," for each notification of an address change it received during the period March 1 - May 2, and forwarded the forms each Monday to the census district office. (If the city had more than one centralized mail census district office, one was designated to receive Forms D-199 for all.)

When Forms D-199 were received, they were checked in and coded to an ED. Forms for persons who moved before Census Day (April 1) were filed by the ED number of the new address; forms for persons who moved on or after Census Day were filed by the ED number of old address. The forms for centralized offices other than the receiving office were forwarded to the appropriate offices. (Forms D-199 for offices which were not centralized mail census offices were marked "void," and no further action was taken on them.) District office clerks searched the address register and questionnaires for the ED to see if the mover was enumerated in the census. Enumerators followed up persons not found during this search.

Forms D-199 were sorted to district office using Form D-303, "National Directory of ZIP Codes by District Office," and were sorted to ED using the block header record (an alphabetical and numerical listing of street names and house number ranges keyed to ED, etc.) for the district office.

Based on experience in the pretests and dress rehearsals (see U.S. Bureau of the Census: Pretests and Dress Rehearsals of the 1970 Census of Population and Housing: A Procedural History, Working Paper No. 32, Washington, D.C., 1972), the movers operation was expected to add between 0.2 and 0.5 percent to the total population of the areas affected; in the past these additions contained significant numbers of hard-to-enumerate persons, i.e., persons who are mobile and about whom other respondents would have little information.

Quality Control

Editing of mail returns was the first operation in the centralized procedure for which there was statistical quality control in the district office. The editing operation lasted about 3 weeks, and each editor processed the questionnaires for several enumeration districts. Process

control (a judgment on the work of each editor) rather than acceptance sampling (a judgment on each ED or other work unit) was used to check quality.

To achieve independence in checking (i.e., to be sure the quality control clerk was not influenced by the editor's judgment), error noting was used: Before the editor received the questionnaires for an ED, a quality control clerk selected a sample of five unedited questionnaires and noted on Form D-236, "Record of Editing Errors" (see appendix D), all the errors that he could find. If there were fewer than 10 errors on the five questionnaires, he took more questionnaires until he had 10 errors. After editing, the quality control clerk compared the edited questionnaires with his list to see how many of the errors were actually found by the editor.

A cumulative record, Form D-237, "Supervisor's Record of Edit Quality" (see appendix D), was maintained for each editor. The first time an editor failed to catch 30 percent of the errors found by the quality control clerk, he was warned. The second time, he was automatically released.

The rejection rate for editing was set as high as 30 percent because editing was a very difficult operation. The long questionnaire was complex and contained many skip patterns, and the editing rules were not simple.

Process control was also used for the telephone operation in the centralized district offices in which office clerks telephoned households which did not return short questionnaires. For each ED, the quality control clerk completely edited four short questionnaires, counted errors, and entered the results on Form D-244, "Quality Control of Nonresponse Telephone Questionnaires."

The permissible error rate started at 10 percent for the first ED and diminished to a cumulative error rate of 4 percent for the sixth and subsequent enumeration districts. The first failure was to result in release.

During the nonresponse enumeration, the crew leader limited himself to informal checking, using the same checklist as that for the decentralized census (see Form D-513, appendix D). The crew leader verified that the right questionnaires were used, that the appropriate questionnaires were marked "complete," that the identification items were completed, that the number of persons was entered in the address register, and that the census questions themselves were completely answered.

In the meantime, the enumerator held all of his incomplete questionnaires for final review by his crew leader (see Form D-262, appendix D). If there were more than seven incomplete short forms or more than five incomplete long forms on final review, the crew leader was instructed to return the assignment to the enumerator for further work. In addition, the crew leader checked to see that all questionnaires were accounted for and that the number of persons in each housing unit had been entered in the address register.

Quality control of the failed-edit operation consisted of a check to see that all questionnaires given to the enumerators were returned to the crew leader, and a rapid review was conducted to see that the enumerator had completed the required items.

Because more difficulty was expected in controlling the enumeration in the centralized areas than elsewhere, centralized areas had the most stringent office check on nonresponse questionnaires filled out by enumerators. Instead of a sample inspection, every nonresponse questionnaire in centralized areas was edited 100 percent. Short questionnaires with more than two errors and long questionnaires with more than five errors were given further followup, either by telephone in the office or by personal visit in the field.

A final quality check in the office was a review during an operation called "merge," which involved bringing together all the questionnaires for an enumeration district from the various sources (i.e., telephone clerks, enumeration and cleanup crews, special place enumerators, etc.). "Merge" was a major control device in the 1970 census; it enabled the crew leader to ascertain whether each address on his enumerators' address registers was accounted for with a questionnaire or a suitable explanation, such as a statement that the address no longer existed or no longer had a housing unit. The final office review conducted during "merge" also disclosed such problems as missing responses to items that had been marked by the editor for completion, and duplicate questionnaires for one household (the more complete questionnaire was retained).

After "merge" a "movers search" was conducted. In this the Forms D-199, "Transcription of Change of Address Order" for movers were compared with the address registers and the "merged" questionnaires. This check revealed such situations as the following: (a) the person's name was not listed on the questionnaire for the address at which he resided on Census Day, or (b) the address at which he resided on Census Day had not been listed and no questionnaire existed for it.

Unresolved cases disclosed by "merge" and the "movers search" were referred to the supervisory crew leader for cleanup. He selected his best enumerators to get the missing information and to correct the defective questionnaires for the ED's assigned. They used district office telephones for enumeration to the extent possible and made personal visits for the balance of the work. When all else failed, last-resort information was sought; failing this, the questionnaire was marked for closeout. (See "Procedures for Special Situations," p. 28.)

The supervisory crew leader received the completed questionnaires from the cleanup enumerators as each finished his individual assignment and reported to the district office to turn them in and receive a new assignment.

Progress of the Enumeration

A district office in Buffalo, N.Y. (0181), and one in Chicago, Ill. (0581), which closed on July 1, were the first two centralized offices to close. It had been anticipated that most offices would be closed around June 26. Actual closing of centralized offices proceeded at the following rate:

By date	Cumulative number of offices closed
July 15	8 (18%)
July 31	19 (42%)
August 18	27 (60%)
September 11	44 (98%)
September 25	45 (100%)

Among the major causes of delay were the following: (1) enumerator followup workloads which were heavier than expected because of the lack of success in obtaining information from nonresponse households by telephone in the district offices (see p. 27), (2) difficulties in recruiting enough enumerators, and (3) an enumerator turnover rate averaging 31 percent in centralized areas (as compared with 5 percent in conventional and 20 percent in decentralized areas.) A similar but less critical situation also existed with respect to crew leaders. The turnover rate for crew leaders in centralized areas averaged 21 percent, compared with 2 percent in conventional and 12 percent in decentralized areas.

Although piece rates were augmented in centralized areas on June 15 to pay an additional \$0.30 per person counted, and thereby spur completion of the census, by mid-July it was evident that a further speedup of enumeration was required to complete assignments in New York City, Chicago, and Washington, D.C. A two-phase procedure was instituted in these three cities whereby enumerators completed the 100-percent enumeration and then returned for the sample information. Top-quality crews received daily piece-rate assignments of short questionnaires. Information was obtained from householders, neighbors, building managers, and the like, to complete every questionnaire assigned each day. When the population and housing counts were complete for the district, the crews returned to sample addresses and completed the long questionnaires. This procedure permitted the rapid flow of population information needed to meet deadlines for processing the 100-percent data while holding in abeyance sample information not required until later dates.

Instead of waiting until he had finished his assignment, a payroll was prepared for an enumerator whenever he completed at least 40 questionnaires. This allowed more frequent payment of enumerators, an important factor in retaining staff in centralized areas. Beginning July 18, payment was accelerated by replacing computer payrolling with manual payrolling (see p.35); this reduced the average time between submission of a payroll and the receipt of a check from 22 days to 12 days.

The procedures for preparing, clearing, and announcing the preliminary population and housing counts, and for closing the offices, were essentially the same for all census district offices. These procedures are described on page 36.

PROCEDURES FOR SPECIAL SITUATIONS

Individual Census Reports

The ICR (Form D-20, "Individual Census Report") was used to enumerate transients or guests in a housing unit or hotel, motel, etc., who had no one at their home addresses to report them to a census taker; lodgers or roomers at a housing unit when the respondent could not supply the information about them; and persons in group quarters or institutions where records were not available and too many individual respondents were involved to conduct interviews.

The ICR contained all the population questions, including sample questions, which appeared on the regular

household questionnaires. The ICR was perforated so that it could be torn in such a way that only 100-percent questions appeared on the portion given to an individual who was not in a sample household or was not listed on a special-place sample line (see p. 29). (In the case of persons away from their homes, the complete ICR was used, as the enumerator would not know whether sample information was required or not.) The ICR, along with an envelope (Form D-40), was left at the unit to be filled by the individual, sealed in the envelope, and held pending the enumerator's return to collect it. The enumerator transcribed the information from the ICR to the appropriate household questionnaire. ICR's for persons with home addresses outside the census district were turned in to the district office without transcription. The district office determined the location of the district office covering the visitor's home address, using Form D-303, "Directory of ZIP Codes by District Office," and mailed the ICR to that district office. There the district office checked the completed questionnaire for the person's home address. If he had not already been enumerated, the information from the ICR was transcribed to the appropriate kind of questionnaire and the questionnaire was included with the others for that ED.

Special Places

"Special places" include hotels, hospitals, jails, mental institutions, college dormitories, and large rooming or boarding houses, etc., where large numbers of people dwell, and which require different census procedures from those used for housing units such as private homes or apartments. Over 3 percent of the national population was enumerated in special places (including self-enumerating places) in 1970.

Preparation.--The Bureau compiled names and locations for special places from lists of military installations, Indian reservations, Federal and State prisons, Veterans Administration and Public Health Service hospitals, migrant workers' camps, nursing homes, and homes for domiciliary and custodial care; from directories of colleges and universities; and from hotel and motel listings in the yellow pages of telephone directories. These compilations were augmented later by address register listings for the non-city postal delivery ED's of mail census districts (i.e., the "prelist" areas), by Post Office Department postal corrections of mail-out questionnaires, by listings added by enumerators in conventional ED's as they canvassed, and by additions made to address registers by district office personnel from their knowledge of other local special places.

For city-delivery areas, the Bureau assigned most addresses of special places to ED's, extracted the addresses from the computer mailing lists, and printed them on:

Yellow pages at the back of the address registers

Control-shuttle cards sets (Form D-142/D-143) for listing the different types of living quarters and summarizing the results of enumeration

A control list (Form D-222)

Special place form-letter/posters (Form D-22) for mailing or hand-delivery

In prelist areas of mail census districts, some addresses for special places, such as motels, were identified in Washington but were not assigned to ED's. These addresses were listed on control-shuttle card sets and on the control list, but not on the yellow pages of the address registers. The district office assigned each of these addresses to an ED. In conventional areas, the crew leader entered special-place addresses on the yellow pages of address registers before assigning an ED to an enumerator.

Self-enumerating places (see p. 30), such as Federal or State prisons military installations, etc., were visited by the census district manager or the field supervisor to make sure preparations for enumeration had been made, and that instructions were understood and could be carried out successfully.

In February or early March, the district offices made advance arrangements at colleges and universities (such as determining a specific date for enumeration, making contact with staff members, and arranging for the availability of student records) and obtained maps of the campus, lists of dormitories (including lists of students), on-campus fraternity and sorority houses, and residences. Advance arrangements were noted on the control cards for the enumerator's information.

Procedures.--In the mail census areas, special-place enumeration was done by a staff consisting of a special-place crew leader, special-place clerk, and a crew of special-place enumerators. In conventional areas, the enumeration might be done by the regular crew leader (sometimes in conjunction with a regular enumerator), a regular enumerator only, or a special-place enumerator, depending upon the number, size, and complexity of the special places to be enumerated.

Some census districts had a variety of kinds and sizes of special places; and many special places, such as large rooming houses, were not readily identifiable until follow-up by regular enumerators began. This made it difficult to determine the number of special-place enumerators needed.

In some special places, such as mental institutions, staff members of the place were sworn in as census enumerators and enumerated the place under the supervision of a crew leader.

The enumerator used the Special Place Enumerator's Handbook (Form D-528 for decentralized and centralized mail census areas; D-508 for conventional census areas); the Questionnaire Reference Book (Form D-520); Special Place Sample Selection Book (Form D-147), and Special Place Assignment Shuttle Cards (Form D-143), as well as regular household questionnaires (Forms D-1, D-2 and D-3) and ICR's.

The enumerator listed the living quarters at a special place on the Special Place Assignment Shuttle Card, listing housing units first, then group quarters (e.g., dormitories, nurses' homes, boarding houses) and finally institutional quarters (places where persons under care and custody live, e.g., children in an orphanage, patients in a mental institution, prisoners in a penitentiary), and assigned control numbers to all the living quarters in the place.

In many situations, the enumerator then listed the housing units and the names of persons in group or institutional quarters in the Form D-147, "Special Place Sample Selection Book," using a random start to determine whether to use a 100-percent questionnaire or a sample questionnaire for the particular housing unit or person. In some places, rosters were available and the sample was selected directly on the roster by drawing a triangle or circle (indicating the use of sample questionnaires D-2 or D-3) on designated lines after a random start.

Enumeration was done by personal interview (usually for housing units of staff members living in an institution), from records of the institution (usually for persons in group or institutional quarters), by leaving ICR's to be completed and picked up, or by a combination of these methods.

Each housing unit, with all of its residents, was enumerated in the normal way on a separate questionnaire. For group or institutional quarters, however, persons were asked only the 100-percent population questions (the housing questions were omitted), and were listed and enumerated one to a line on a short questionnaire (and on continuation questionnaires as necessary); population information for persons in the sample was entered in like manner on the appropriate 15-percent or 5-percent long questionnaire.

The enumerator completed the assignment shuttle card (i.e., control card) by entering the total number of persons and the number of sample persons in each housing unit and in each group quarters and institution.

In conventional enumeration areas, the crew leader verified the total population figures on the shuttle cards and entered them on the address register for the appropriate ED, to be included in the total population of that ED. In mail census offices, this was done in the district office.

T-night and M-night.--A special enumeration of transients in hotels, motels and other establishments having 50 or more rooms or units for transient guests was conducted the night of March 31, referred to as T-night. (Places with fewer than 50 rooms or units for transient guests were enumerated during the regular enumeration period.) Advance visits and telephone calls were made to the places concerned to determine that they met the T-night definition and to obtain their managers' cooperation in the census.

A supply of T-night envelopes (Form D-41), each containing two blank ICR's and a return envelope (Form D-42) addressed to the district office, was mailed or delivered to each "T-night" special place to be on hand on March 30. T-night adhesive posters (Form D-276) announcing the operation were provided for display.

An employee of the place put one T-night envelope in each transient room on March 31 for transient guests to complete and mail back to the district office (or give it to the desk clerk to mail back). Only those guests were expected to fill out the ICR's who were away from home and had no one there to furnish the census information about them. The enumerator telephoned each place on March 31 to be sure the procedure was being followed. On April 1, the unused T-night envelopes were collected and destroyed by the staff of the place.

Persons who usually lived at the transient place, or who had no usual place of residence, were included in the population count of the ED in which the place was located.

Completed ICR's for persons who had no one at their home address to report them to a census taker were forwarded to the proper district office to be sure these persons were counted there.

No further action was taken on ICR's completed by persons who did not fit either of the above categories; that is, a transient with a usual residence elsewhere and with somebody at that residence to report him in the census.

Another special enumeration conducted on April 6 covered missions, flophouses, or similar places with accommodations at \$2.00 or less a night. This M-night operation, as it was called, also included local jails, detention centers, and similar places where persons are usually kept for 30 days or less, as well as railroad stations, bus depots, and the like, which sometimes have persons staying there overnight. The occupants were enumerated as residents of group quarters on the regular questionnaires, with every fifth person being enumerated on a sample questionnaire. ICR's were left with the management for persons who were out or for newcomers who registered that night after the enumerator had left. These ICR's were picked up the next morning by an enumerator who then transferred the information from them to the questionnaire for that particular place.

Self-Enumerating Places

In certain military and institutional situations, it was administratively and practically more feasible to have the enumeration conducted by the personnel of that place than to have census enumerators come in from the outside. In these cases, the military base commanders or the directors of the institutions designated employees to work on the census. They were sworn in as special Bureau of the Census enumerators, and signed Form BC-50B appointment affidavits. At Veterans Administration hospitals, VA employees who elected to work as enumerators while on leave or off duty were paid by the Census Bureau at the hourly rate for regular enumerators in their census districts (for rates, see pp. 34-35). At other places, military and institutional personnel normally served as enumerators as part of their work assignments.

Federal and State prisons.--Each facility was provided with copies of Form D-541B, "Procedures for Self-Enumeration of Federal and State Prisons." In some cases the residents' housing units and the names of persons in group or institutional quarters were listed in the Sample Selection Book by the personnel of the place to determine which should be enumerated on sample questionnaires. In other cases the sample was selected by marking the institution's roster. The personnel doing the enumerating completed ICR's and sealed them in return envelopes; the responses on the ICR's were later transcribed to household questionnaires in the census district office. Inmates were enumerated directly on questionnaires in the same manner as at group and institutional quarters described on page 29. Where necessary, ICR's could be used for

inmates, but the information was then transcribed to regular questionnaires at the facility.

Veterans Administration hospitals.--Enumeration at VA hospitals was carried out in the same manner as that described for prisons above, following the instructions in Form D-541C, "Procedures for Self-Enumeration of Veterans Administration Hospitals."

Military installations.--In the mail census areas, addresses for housing units on military bases were removed when the address registers were prepared. At time of postal delivery of the questionnaires, letter carriers were instructed to omit military reservations from their address check. In conventional areas, postmen were instructed not to deliver advance questionnaires on military reservations.

Each military installation received enumeration instructions contained in Form D-541A, "Procedures for Self-Enumeration of Military Installations." The district manager visited each base in his district to make certain that enumeration procedures were understood by the officer responsible. (Cost Guard installations with 40 or fewer residents were not self-enumerating but were enumerated as "special places.")

Personnel on the base listed all housing units (as distinguished from barracks or other group quarters) in address registers and transcribed the addresses to the appropriate short or long questionnaires. The questionnaires were distributed by the base housing office and returned in envelopes (Form D-9) by the respondents to a designated collection point.

Data from group quarters personnel were collected through the use of Form D-21, "Report for Military and Maritime Personnel," completed by each person living in barracks. One-hundred-percent population information only for persons whose social security numbers ended in 00 through 79 was transcribed to the FOSDIC-readable short questionnaires by the base office. Population information for sample group-quarters personnel whose social security numbers ended in 80 through 99 was transcribed in the census district office to FOSDIC-readable long questionnaires (social security numbers ending 80 through 94 to long questionnaires containing the 15-percent sample questions; numbers ending in 95 through 99 to long questionnaires containing the 5-percent sample questions).

A control sheet, Reconciliation Form D-299, was used to identify significant undercounts or overcounts on any installation. When enumeration was completed, usually around April 30, the questionnaires and address registers were packaged at the base and were returned to the census district office.

Questionnaires which failed edit in the district office were returned to the responsible base official, who arranged for the necessary corrections or completions and returned the revised questionnaires to the census district office.

Military and Maritime Personnel at Sea and Overseas

The Bureau of the Census, with the cooperation of the Departments of Defense and Transportation, mailed

supplies of Form D-21, "Report for Military and Maritime Personnel," to commanders of U.S. Navy and Coast Guard vessels in harbor or at sea. Questionnaires for non-military American flag intercoastal and oceangoing vessels were shipped to the masters of these vessels through shipowners, with the cooperation of the Maritime Administration of the U.S. Department of Commerce. The D-21 questionnaires were distributed by ship commanders or masters to the officers and crews of their vessels on Census Day. The completed questionnaires were collected and returned directly to the Jeffersonville Census Operations Division. In all, 74,462 persons were enumerated in this manner. (Details on the allocation of crews to ED's are included in a separate chapter on census data processing.)

The Department of Defense provided the Census Bureau with tabulations by age, sex, race, marital status, education, and State of "home of record" for members of the Army, Air Force, and Marine Corps stationed overseas as of April 1, 1970. As a result, these persons were not required to complete census questionnaires.

Americans Abroad

Americans living abroad (other than military personnel mentioned above) were reported on a special questionnaire, Form D-23 "Overseas Census Report." In addition to the population questions asked of all persons, this questionnaire, which had enough columns for four persons, contained some of the regular sample inquiries and some special questions on education and training, knowledge of local languages, and duration of stay in the country.

The Department of Defense distributed and collected the questionnaires for members of the land-based Navy and for Coast Guard personnel, for military dependents, and for its own civilian employees overseas and their families.

The Department of State handled the enumeration of other civilian Government employees and other Americans residing abroad through the U.S. embassies and other diplomatic and consular posts. The completed questionnaires were sealed by the respondents themselves and returned to the post, which forwarded the questionnaires to the embassy. The embassy shipped questionnaires on April 15, May 1, and May 15. (Those received by the embassy after May 15 were sent in as they were received.) All were sent to the Bureau of the Census, Jeffersonville, Ind. for subsequent processing. In all, 338,985 Form D-23 questionnaires were received, representing 857,576 persons.

In addition to using the Overseas Census Report described above, the Bureau also distributed Forms D-27, "Overseas Travelers' Report," for major airlines and steamship companies to give to Americans departing from the United States during the month of March. These D-27 questionnaires were used by the travelers if there was no one at their usual residence to report them, and were mailed directly to Jeffersonville or left at U.S. consulates or embassies to be forwarded. Approximately 1,400 Forms D-27 were received and processed in Jeffersonville.

Variations in Procedures and Questionnaires in Alaska

There were some variations of basic procedures and items of information collected in Alaska.

Conventional enumeration began on April 1 in the more populated areas of the State. However, in the interior of Alaska, school teachers who had been trained by self-study began enumeration in remote villages as early as January, because melting snow and ice made travel virtually impossible in those areas in April and May. The Alaskan questionnaires (Forms D-11A, D-12A, D-13A, and D-14A) had two substitute categories in item 4, race or color: "Aleut" and "Eskimo" were substituted for "Hawaiian" and "Korean."

(Procedures and items collected in Puerto Rico and other outlying areas (e.g., Guam) are described in a separate chapter.)

Last-Resort Information

Enumerators were instructed to turn in a completed questionnaire for each housing unit. If for some reason they could not obtain an interview at a housing unit, they were instructed to obtain the following last-resort information:

1. Population questions: Name, if possible (otherwise "name unknown"), and at least three of the following four items for all the occupants: Relationship to the head of household, sex, race, marital status.
2. Housing questions: Item A (number of living quarters), H2 (access to unit), H3 (kitchen facilities), H4 (number of rooms), H6 (toilet facilities), H10a (type of structure), and H10b (farm or nonfarm) when appropriate; also item H9 (tenure) for occupied units or item C (vacancy status) for vacant units.

Many of these data could be obtained by observation or by asking neighbors. Last-resort information was recorded on the type of questionnaire specified on the address register listing page. The questionnaires were marked "Incomplete," and were counted among the 12 "incomplete" questionnaires allowable in each enumerator assignment (see Form D-184, appendix D).

The crew leader looked for missing questionnaires at final review and was instructed to send the enumerator back or go himself if there were any. If, after such a return visit, the crew leader concluded that it was impossible to obtain even last-resort information, he prepared a questionnaire by coding the two FOSDIC-readable circles for closeout (C/O) on page 3 of the questionnaire, as well as the circles for items a4 (block number), a5 (serial number), and B (occupancy status and type of housing unit or quarters).

The C/O and item B circles were a signal to the computer for imputation; item B further indicated to the computer whether the unit was occupied or vacant. In the conventional census, only the crew leader could prepare a closeout questionnaire after checking with his supervisor. In the two mail censuses the crew leader's handbook implied that only he could follow this procedure, for no more than one or two cases in each assignment.

"Were You Counted?" Forms

Toward the end of the enumeration period, many newspapers in the United States published "Were You Counted?" Forms D-26 (see figure H), which contained the questions asked of 100 percent of the population. Mats and glossy prints of the forms were prepared by the Bureau of the Census and supplied to the newspapers by the district offices. The reader was urged to fill in this form and send it to the census district office if he believed that he or members of his household had been missed in the enumeration.

Following completion of the census in a State, a supply of "Were You Counted?" forms was sent to the mayors of smaller cities in the State. The mayor was invited in a covering letter to supply these forms to persons who doubted that they had been enumerated, and he was authorized to have the form reproduced locally if more were needed. The forms were addressed to the Bureau of the Census in Jeffersonville, Ind., where they were processed together with any other "Were You Counted?" forms received after the district offices were closed. (For results of the "Were You Counted?" campaigns, see p. 36).

PROGRESS REPORTING

Enumerators reported their progress on the enumeration each time the crew leaders visited or telephoned them. The crew leaders reported progress of their crews to the district office every Monday and Thursday. Summaries of these reports were made in the district offices and information was collected on progress and costs in the office itself.

The regional offices telephoned the district offices (beginning every Tuesday afternoon) for the progress reports. On Wednesdays the regional offices telegraphed to Washington the progress of each district office. These figures were processed on the computer in Washington Wednesday night and the tabulated results were distributed on Thursday.

The cumulative reports received by the Bureau in Washington on the progress of enumeration covered the following aspects of the field workload, and the costs involved, for the three census procedures:

Conventional Census

Recruiting progress

Crew leader and hourly enumeration costs

Enumeration progress: assignments behind schedule (not assigned and assigned) and assignments completed

A sample of piece-rate assignments showing housing units completed and miles driven

Completion of questionnaires that failed the quality control check, giving the number of questionnaires assigned, the number completed by telephone, and the number com-

pleted by personal visit (including unsuccessful cases); total hours and miles driven; and number of enumerators working on these questionnaires

Progress of office operations

Cost of office operations

Decentralized Mail Census

The same items reported for the conventional census, plus:

Number of mail returns (short and long questionnaires) and number of failed-edit and nonresponse cases

Progress of the listing operation (housing units added to and deleted from the address registers in a sample of the piece-rate listing assignments)

Centralized Mail Census

Recruiting progress

Number of mail returns (short and long questionnaires) and number of failed-edit and nonresponse cases

Telephone followup of nonresponse households that received short questionnaires: number completed by telephone, and the number of short and long questionnaires remaining for personal visit

Enumeration costs for crew leaders and hourly-rate enumerators

Results of edit of mail returns

Enumeration progress: nonresponse followup only, by assignment

Sample of piece-rate assignments (nonresponse only): number of followups completed, housing units added to address register, housing units deleted from address register, and miles driven

Telephone followup of mail returns that failed edit

Results of edit of questionnaires completed by enumerators

Telephone followup of questionnaires completed by enumerators that failed edit

Followup of questionnaires which failed quality control

Progress of other office operations

Cost of office operations

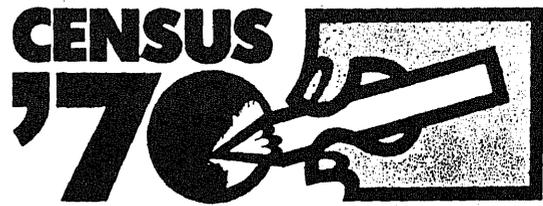
Figure H. FORM D-26. WERE YOU COUNTED?

WERE YOU COUNTED ?

The 1970 Census is now almost finished. It is very important that the census be complete and correct. If you believe that you (or anyone else in your household, including visitors) were NOT counted, please fill out the form below and mail it IMMEDIATELY to:

U.S. Census Office

(Insert address)



PLEASE PRINT OR WRITE CLEARLY

● I have checked with the members of my household, and I believe that one (or more) of us was NOT counted in the 1970 Census.

● On April 1, 1970, I lived at _____
(House number) (Street or road) (Apartment number or location)

(City) (County) (State) (ZIP code)

● This address is located between _____ and _____
(Name of street or road) (Name of street or road)

● I am listing below the name and required information for myself and each member of my household.

PLEASE INCLUDE

- All family members and other relatives living here, including babies.
- All lodgers, boarders, servants, hired hands, and other nonrelatives living here.
- All persons who usually live here but are temporarily away.
- All persons with a home elsewhere but who stay here most of the week while working or attending college.
- Anyone staying or visiting here who had no other home.

DO NOT INCLUDE

- Any college student who stays somewhere else while attending college.
- Any person away from here in the Armed Forces or in an institution such as a home for the aged or mental hospital.
- Any person who usually stays somewhere else most of the week while working there.
- Any person visiting here who has a usual home elsewhere.

NAMES OF PERSONS LIVING IN THIS HOUSEHOLD ON APRIL 1, 1970, AND THOSE STAYING OR VISITING HERE WHO HAD NO OTHER HOME.

Print names in this order {
 Head of the household
 Wife of head
 Unmarried children, oldest first
 Married children and their families
 Other relatives of the head
 Persons not related to the head

(If you list more than 6 persons, use an additional sheet)

Print relationship of each person to the head of the household.

For example:
 Wife
 Son, Daughter
 Grandson
 Mother-in-law
 Lodger
 Lodger's wife

Male or Female
 M or F

Is this person-
 White
 Negro (Black)
 American Indian
 Japanese
 Chinese
 Filipino
 Hawaiian
 Korean
 Other (print specific race)

When was this person born?

Month | Year

Is this person-

Now married
 Widowed
 Divorced
 Separated
 Single (never married)

Last name	First name	Middle initial	Relationship	Sex	Race	Month	Year	Marital Status
			HEAD					

● Name of person who filled this form:

NOTICE - Your answers are CONFIDENTIAL. The law (Title 13, United States Code) requires that you answer the questions to the best of your knowledge. Your answers will be used only for statistical purposes and cannot, by law, be disclosed to any person outside the Census Bureau for any reason whatsoever.

U.S. Dept. of Commerce
 Bureau of the Census
 Form D-26

Budget Bureau No. 41-S68107
 Approval Expires: 12-31-70

Cut along dotted line

PAYMENT OF ENUMERATORS

Enumerators were generally paid on a piece-rate basis. It was expected that diligent enumerators in conventional areas and most decentralized areas would earn about \$2.00 per hour, and in centralized areas and a few decentralized areas, about \$2.50 per hour.

Regional offices used the following guidelines for assigning a method-of-pay code to each conventional area assignment:

<u>Code</u>	<u>Method of payment</u>	<u>Characteristics of assignment area</u>
1	Piece rate	Built-up area where enumerator enumerated on foot, and with sufficient housing units to "make wages" at the piece rate. The only driving was to and from area.
2	Piece rate, time enroute and mileage	Enumerator drove between housing units. Roads were not mountainous or hard to travel. Area of the assignment appeared to be less than 100 square miles.
3	Hourly rate	Built-up area where enumerator walked. The only driving was to and from area. There were insufficient housing units (due to commercial or industrial development) for enumerator to "make wages" at the piece rate.
4	Hourly rate and mileage	Enumerator drove between housing units. The roads were mountainous or hard to travel, or assignment area appeared to be 100 square miles or more, or most of the housing units were seasonal and vacant.

The computer was programed to assign pay codes in mail census areas as follows:

If the total number of housing units for the ED was less than 100--Code 1.

If the total number of housing units for the ED was 100 or more, the accumulated number of housing units was divided by the total number of blocks assigned to the ED. If the average number of housing units per block was:

- 15 or more--Code 1
- 10 to 14.9--Code 2
- Less than 10--Code 4

The following pay rates for enumerators were established (Note: Pursuant to the Federal Employees Salary

Act of 1970, each pay period the gross earnings were computed using the rates shown, then increased by a flat 6 percent):

Conventional Census

- (1) When assignment was hourly-rate:

\$20.00 for satisfactory completion of group training
\$2.15 per hour (not earned concurrently with training fee or piece rate)

- (2) When assignment was piece-rate:

\$20.00 for satisfactory completion of enumerator group training
\$6.50 for replacement on-the-job training (not paid if \$20.00 group training fee was received)
\$0.50 per short questionnaire
\$0.65 per long questionnaire
\$0.20 per person on long questionnaire
\$0.10 per ICR
\$0.03 per D-160 Address Card for the Post-enumeration Post Office Check (in 16 Southern States only)
\$0.06 per mile of driving (when authorized)

Decentralized Census

- (1) When assignment was hourly-rate:

\$6.50 for satisfactory completion of each type of group training session or on-the-job training as follows: (a) check-in, (b) short-questionnaire edit, and (c) long-questionnaire edit
\$10.50 for satisfactory completion of group training session or on-the-job training for nonresponse and failed-edit followup
\$2.15 per hour (not earned concurrently with training fee or piece rate)
\$0.06 per mile of driving (when authorized)

- (2) When assignment was piece-rate:

\$6.50 for satisfactory completion of each type of group training session or on-the-job training as follows: (a) check-in, (b) short-questionnaire edit, and (c) long-questionnaire edit
\$10.50 for satisfactory completion of training for followup
\$0.03 per questionnaire, check-in
\$0.07 per short questionnaire, edit
\$0.20 per long questionnaire, edit
\$0.20 per short questionnaire, telephone follow-up
\$0.35 per long questionnaire, telephone follow-up
\$1.00 per short questionnaire, personal-visit followup
\$1.60 per long questionnaire, personal-visit followup
\$0.06 per mile of driving (when authorized)

Four decentralized mail census offices were authorized a pay scale closer to that of centralized mail census offices (see below) because of similar characteristics and locations:

0266 Jamaica, New York
0267 Bronx, New York
0274 Staten Island, New York
0556 Chicago, Illinois

\$2.50 per long questionnaire, nonresponse followup (occupied housing unit)
\$1.30 per long questionnaire, nonresponse followup (vacant housing unit).
\$1.00 per short questionnaire, failed-edit followup.
\$1.40 per long questionnaire, failed-edit followup.
\$0.06 per mile driving (when authorized).

The pay rates in these offices were:

(1) When assignment was hourly-rate:

\$6.50 for satisfactory completion of each type of group training session or on-the-job training, as follows: (a) check-in, (b) short-questionnaire edit, and (c) long-questionnaire edit.

\$10.50 for satisfactory completion of training for nonresponse and failed-edit followup

\$2.65 per hour (not earned concurrently with training fee or piece rate)

(2) When assignment was piece-rate:

\$6.50 for satisfactory completion of each type of group training session or on-the-job training, as follows: (a) check-in (b) short-questionnaire edit, and (c) long-questionnaire edit

\$10.50 for satisfactory completion of training for nonresponse and failed-edit followup

\$0.03 per questionnaire, check-in

\$0.09 per short questionnaire, edit

\$0.25 per long questionnaire, edit

\$0.25 per short questionnaire, telephone follow-up

\$0.45 per long questionnaire, telephone follow-up

\$1.25 per short questionnaire, nonresponse or failed-edit, personal visit followup

\$2.00 per long questionnaire, nonresponse or failed-edit, personal visit followup

\$0.06 per mile of driving (when authorized)

Centralized Census

(1) When assignment was hourly-rate:

\$45.00 for satisfactory completion of group training session (consisting of nonresponse training and nonresponse review training)

\$2.65 per hour (not earned concurrently with training fee or piece rate, but received while taking replacement on-the-job training)

(2) When assignment was piece-rate:

\$45.00 for satisfactory completion of group training session (consisting of nonresponse training and nonresponse review training)

\$15.00 replacement on-the-job training (not paid when \$45.00 group training was received)

\$1.30 per short questionnaire, nonresponse followup

Effective June 15, these centralized mail census rates were augmented to include an additional payment of \$0.30 per person counted. The per-person payment was in addition to the existing piece rate of \$1.30 per short questionnaire and \$2.50 per long questionnaire for non-response personal-visit followup.

Crew leaders were instructed that they would be paid for no more than 8 hours of work a day or 40 hours a week. They reported their hours and reimbursable expenses on Form D-105, "Reimbursements and Payroll Voucher, Crew Leader," which they turned in to the district office at the end of each 2-week pay period.

Hourly-rate enumerators were instructed that they would be paid for no more than 8 hours of work a day or 48 hours a week.

Enumerators in conventional areas and decentralized areas submitted a payroll voucher at the end of each assignment. Enumerators in centralized areas submitted a payroll voucher each time they satisfactorily completed a batch of 40 or more questionnaires for nonresponse households, or when they had completed all the failed-edit questionnaires assigned to them.

Starting July 18, computer payrolling was replaced by manual payrolling. This reduced by about 10 days the average 22-day lag between the signing of a voucher and the issuance of a paycheck by the Treasury Department. Computer payrolling operations, handled by a private contractor, were scheduled for 48-hour turnaround, but subcontracting of some of the work at other locations, attendant extra handling, and transit delays frequently extended turnaround to 7 days. In the manual payrolling procedures it also was possible to shorten the time needed to detect and resolve errors and to advise the district offices of disallowances.

Whether an enumerator would be paid on a piece-rate or an hourly-rate basis for an assignment was usually determined before he began work. Occasionally, because of conditions which became apparent after enumeration was underway (such as a population more widely scattered than anticipated), it was necessary to change the method of payment. The percentage of the total number of piece rate assignments converted to hourly rate by type of census was as follows:

<u>Procedure</u>	<u>Percentage</u>
Conventional	0.8
Decentralized	0.8
Centralized	0.7

PRELIMINARY POPULATION ANNOUNCEMENTS

Population and Housing Count Operations

When all addresses and questionnaires for an ED were accounted for, clerks in the district office counted the number of people and housing units reported and entered the totals on the cover of the address register for that ED. After verification, the preliminary counts from each address register were posted to Form D-134, "Population and Housing Count Worksheet," where ED's were listed in numerical order. This form was submitted to the district manager each day. He copied the ED counts from the Form D-134 onto Form D-132, "Transmittal Listing of ED's." The Form D-132 was used to aggregate preliminary totals by county and for incorporated places within counties, and was a confidential document seen and used only by the district manager until the totals were cleared for release by Washington.

As soon as preliminary totals of population and housing units were obtained for a county, and for any place with 50,000 or more population, the 1960 and 1970 figures were sent to the Census Bureau in Washington by telegraph. Here the population counts were checked against population estimates or recent special census figures for the area, and for conventional areas the ratio of the sample data to the total counts was checked. The figures that fell outside the established tolerance limits were reviewed and, if no explanation was apparent on the basis of information available in Washington headquarters, the district office was telephoned and asked for an explanation.

The district offices were notified of Washington clearance by wire. They were instructed to withhold announcements until the last area of the district was cleared, at which time the district manager released all of the preliminary population figures to county authorities, to officials of places with 10,000 population or more, and then to the press.

Following clearance and announcement of all the population totals for the district office areas (the number of housing units was not announced publicly at this time), the district office records were shipped to Jeffersonville for processing and the office was closed. Population counts were cleared for the first office on May 5, for the last office on September 18. Most offices closed 2 or 3 days after their counts were cleared, although some were kept open to assist in conducting "Were You Counted?" campaigns (see below).

Undercount Complaints

The Bureau received its first complaint of undercount shortly after the first conventional district office announced its preliminary population figures and closed. This complaint was prompted by the lack of an announcement: the district offices had been instructed to announce figures only for communities with 10,000 or more population, and the complaining community had dropped under the 10,000 figure since 1960.

From July to November the number of communities with complaints reached about 1,900. Many of the complaints were satisfied by an explanation of census pro-

cedures or an arithmetic check of the figures. In about 500 communities a verification of corporate boundaries was required to make certain that the Census Bureau and the community were in agreement on the exact areas covered by the enumeration results. For communities which then were not assured of the thoroughness of the enumeration, a "Were You Counted?" campaign was instituted to obtain lists of persons who believed they were missed in the census. This involved the printing and distribution through the newspapers and community organizations of forms (see figure H) designed to be completed by persons or households who thought they might not have been enumerated. Such forms received in the district office were either compared with the address registers or sent to the census operations office in Jeffersonville for processing if the registers had already been shipped. (A field liaison office was established in Jeffersonville for this purpose; this operation was closed in November 1970.) In some instances local officials were sworn as Census Bureau agents so they might inspect the address registers and ascertain the completeness of the census for the areas under their jurisdiction.

Each community was given the numerical results of the match and, where it appeared that there was indeed an indication of a poor enumeration, the regional offices conducted a field check. This was done in 187 places.

The Bureau received "Were You Counted?" forms from 73,000 housing units in over 600 communities, with about 220,000 names of persons who were supposedly missed in the census. A match to enumeration records indicated that 65,500 of these households and their occupants were already enumerated. The 25,000 names added to the census records in the 600 communities represented five additional persons for every 10,000 originally enumerated.

First-Count Data Review

Between November 1970 and April 1972 the Bureau received approximately 500 requests for review of its official population and housing figures (known as the "first count"), a few for entire States but most for places. In each case Bureau staff members checked the entire enumeration process, from the preparation of maps and ACG's (address coding guides) through the tabulation of population and housing counts from the completed address registers. The counts were adjusted wherever necessary, and field checks were conducted in 2 to 3 percent of the places.

Approximately 60 percent of the changes in the counts were attributable to errors in local coding when the ACG's were originally constructed. Analysis of a sample of the cases subjected to review indicated that an average of 1 percent of the people in a given place were involved in misallocations either inside or outside the place because of these geographic coding errors.

Another major source of error was due to the failure of certain counties to respond to the Bureau's map survey prior to the 1970 census. In these cases the Bureau used old maps.

While the total numbers of persons and housing units involved in these reviews were small, the adjustments--especially where geographic errors were involved--

usually required changes for areas adjoining the place in question, and in the county figures as well. Changes were transmitted to the Secretaries of State of the ap-

propriate States, and they were published as correction notes in the next population and housing census reports issued by the Bureau.

ENUMERATION COSTS

The following table indicates the cost of the field enumeration by kind of census procedure:

Item	Cost by kind of census procedure (thousands)		
	Conventional	Decentralized	Centralized
Total.....	<u>\$36,464</u>	<u>\$33,234</u>	<u>\$17,790</u>
Office salaries--full-time.....	2,694	3,430	1,910
Miscellaneous mileage and per diem.....	528	209	398
Communications.....	432	277	206
Rent and utilities.....	804	1,771	961
Crew leader salaries.....	4,259	4,281	2,840
Crew leader mileage.....	771	399	93
Hourly enumerator salaries.....	2,043	² 2,485	1,486
Hourly enumerator mileage.....	444	² 323	58
Piece rate salaries.....	20,513	15,734	5,257
Piece rate mileage.....	1,710	349	61
Office clerical salaries--part-time.....	¹ 701	³ 2,471	⁴ 3,734
Leave and benefits.....	1,565	1,505	786

¹Includes quality control and other clerical salaries.

²Includes spring prelisting.

³Includes postal corrections, quality control, and other clerical salaries.

⁴Includes supervisory clerks, postal corrections, processing, editing, and other part-time clerical salaries.

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APPENDIX A

Opening and Closing Dates of District Offices by Regional Office and Type of Census

Atlanta (44)¹	<u>Date opened</u>	<u>Date closed</u>	Boston (30)	<u>Date opened</u>	<u>Date closed</u>
Conventional:			Conventional:		
Albany, Ga.	1-26	5-22	Auburn, N.Y.	1-26	5-25
Anniston, Ala.	1-26	6-2	Bangor, Maine	1-26	5-15
Augusta, Ga.	1-26	6-5	Binghamton, N.Y.	1-26	6-10
Battlesburg, Miss.	1-26	6-4	Burlington, Vt.	1-26	5-11
Chattanooga, Tenn.	1-26	6-8	Concord, N.H.	1-26	5-22
Clarksdale, Miss.	1-26	6-1	Jamestown, N.Y.	1-26	5-28
Columbia, Tenn.	1-26	5-26	Newburgh, N.Y.	1-26	5-28
Columbus, Ga.	1-26	6-9	Plattsburgh, N.Y.	1-26	6-9
Daytona Beach, Fla.	1-26	6-18	Portland, Maine	1-26	5-28
Dothan, Ala.	1-26	6-17	Portsmouth, N.H.	1-26	5-21
			Poughkeepsie, N.Y.	1-26	6-5
Fort Pierce, Fla.	1-26	6-30	Decentralized:		
Gadsden, Ala.	1-26	6-12	Albany, N.Y.	2-9	6-29
Gainesville, Ga.	1-26	6-8	Andover, Mass.	2-9	6-23
Greenville, Miss.	1-26	6-10	Bridgeport, Conn.	2-9	7-9
Huntsville, Ala.	1-26	6-5	Cambridge, Mass.	2-9	6-25
Jackson, Miss.	1-26	6-23	Dedham, Mass.	2-9	6-12
Jackson, Tenn.	1-26	6-2	Hartford, Conn.	2-9	7-7
Kingsport, Tenn.	1-26	5-29	New Bedford, Mass.	2-9	6-12
Knoxville, Tenn.	1-26	6-18	New Haven, Conn.	2-9	7-7
Macon, Ga.	1-26	6-4			
Meridian, Miss.	1-26	6-2	Norwich, Conn.	2-9	6-9
Montgomery, Ala.	1-26	6-12	Providence, R.I.	2-9	7-7
Murfreesboro, Tenn.	1-26	6-11	Rochester, N.Y.	2-9	6-29
Panama City, Fla.	1-26	6-19	Syracuse, N.Y.	2-9	6-8
Rome, Ga.	1-26	5-28	Utica, N.Y.	2-9	6-17
Sarasota, Fla.	1-26	6-16	West Springfield, Mass.	2-9	6-12
Savannah, Ga.	1-26	6-12	Williamsville, N.Y.	2-9	6-3
Tuscaloosa, Ala.	1-26	6-18	Worcester, Mass.	2-9	6-24
Waycross, Ga.	1-26	6-3			
Decentralized:			Centralized:		
Atlanta, Ga.	1-19	7-15	Boston (N), Mass.	2-9	7-31
Birmingham, Ala.	1-19	6-26	Boston (S), Mass.	2-9	7-27
Decatur, Ga.	1-19	6-12	Buffalo, N.Y.	2-9	7-1
Fort Lauderdale, Fla.	1-19	6-29			
Jacksonville, Fla.	1-19	6-12	Charlotte (30)		
Memphis, Tenn.	2-9	7-2	Conventional:		
Miami, Fla. (E. Dade County)	1-19	7-10	Asheville, N.C.	1-26	5-26
Miami, Fla. (W. Dade County)	1-19	6-19	Bluefield, W. Va.	1-26	6-1
Mobile, Ala.	1-19	6-24	Bristol, Va.	1-26	5-26
Nashville, Tenn.	2-9	7-2	Charleston, S.C.	1-26	6-11
Orlando, Fla.	1-19	6-18	Charleston, W. Va.	1-26	6-19
Riviera Beach, Fla.	1-19	7-3	Clarksburg, W. Va.	1-26	5-25
St. Petersburg, Fla.	1-19	6-19	Columbia, S.C.	1-26	6-5
Tampa, Fla.	1-19	6-19	Danville, Va.	1-26	6-2
Tallahassee, Fla.	1-19	6-22			
			Elkins, W. Va.	1-26	6-5
			Fayetteville, N.C.	1-26	6-18
			Florence, S.C.	1-26	6-2

¹The number in parentheses after the name of each regional office indicates the number of district offices under its jurisdiction.

Charlotte—Continued
Conventional-Continued

	<u>Date opened</u>	<u>Date closed</u>
Fredericksburg, Va.	1-26	6-17
Goldsboro, N.C.	1-26	6-17
Greenville, N.C.	1-26	6-5
Greenville, S.C.	1-26	6-17
Greenwood, S.C.	1-26	5-20
Henderson, N.C.	1-26	6-3
Hickory, N.C.	1-26	6-4
Huntington, W. Va.	1-26	6-2
Petersburg, Va.	1-26	6-5
Roanoke, Va.	1-26	6-19
Rock Hill, S.C.	1-26	6-17
Sanford, N.C.	1-26	6-12
Staunton, Va.	1-26	6-2
Decentralized:		
Charlotte, N.C.	2-9	7-10
Newport News, Va.	2-9	6-19
Norfolk, Va.	2-9	6-22
Raleigh, N.C.	2-9	6-22
Richmond, Va.	2-9	7-8
Winston-Salem, N.C.	2-9	6-24

Dallas (35)

Conventional:	<u>Date opened</u>	<u>Date closed</u>
Amarillo, Tex.	1-26	5-15
Austin, Tex.	1-26	6-5
Baton Rouge, La.	1-26	6-10
Clinton, Okla.	1-26	5-15
Corpus Christi, Tex.	1-26	6-11
El Paso, Tex.	1-26	5-28
Enid, Okla.	1-26	5-22
Fort Smith, Ark.	1-26	5-25
Greenville, Tex.	1-26	5-28
Lafayette, La.	1-26	5-22
Lake Charles, La.	1-26	5-15
Little Rock, Ark.	1-26	6-19
Longview, Tex.	1-26	5-21
Lubbock, Tex.	1-26	5-19
Lufkin, Tex.	1-26	5-26
McAllen, Tex.	1-26	6-19
Muskogee, Okla.	1-26	5-19
Pine Bluff, Ark.	1-26	5-28
Pineville, La.	1-26	6-1
San Angelo, Tex.	1-26	6-2
Shreveport, La.	1-26	6-3
Waco, Tex.	1-26	5-21
Wichita Falls, Tex.	1-26	5-28

Chicago (31)

Conventional:

Bloomington, Ind.	1-26	5-28
Evansville, Ind.	1-26	5-26
Kokomo, Ind.	1-26	5-20
Kankakee, Ill.	1-26	6-26
Lafayette, Ind.	1-26	5-28
Marion, Ill.	1-26	5-26
Mattoon, Ill.	1-26	6-9
Quincy, Ill.	1-26	5-20
Sterling, Ill.	1-26	5-20

Decentralized:

Belleville, Ill.	2-9	6-19
Chicago, Ill.	2-9	6-25
Cicero, Ill.	2-9	7-31
Decatur, Ill.	2-9	6-19
Des Plaines, Ill.	2-9	7-27
Fort Wayne, Ind.	2-9	6-12
Indianapolis, Ind.	2-9	6-12
Joliet, Ill.	2-9	7-10
Peoria, Ill.	2-9	6-22
Richmond, Ind.	2-9	6-5
Rockford, Ill.	2-9	7-10
South Bend, Ind.	2-9	6-26
Waukegan, Ill.	2-9	6-26

Centralized:

Chicago, Ill.	2-9	7-22
Chicago, Ill.	2-9	7-1
Chicago, Ill.	2-9	8-19
Chicago, Ill.	2-9	8-24
Chicago, Ill.	2-9	8-28
Chicago, Ill.	2-9	8-21
Chicago, Ill.	2-9	8-8
Gary, Ind.	2-9	7-7
Indianapolis, Ind.	2-9	7-23

Decentralized:

Dallas (E), Tex.	1-19	6-15
Dallas (W), Tex.	1-19	6-15
Fort Worth, Tex.	1-19	6-12
Galveston, Tex.	1-19	6-11
Houston (N), Tex.	1-19	6-18
Houston (S), Tex.	1-19	6-18
Jonesboro, Ark.	2-9	6-10
Kenner, La.	1-19	6-18
New Orleans (E), La.	1-19	6-19
Oklahoma City, Okla.	2-9	5-28
San Antonio, Tex.	1-19	6-4
Tulsa, Okla.	2-9	5-28

Denver (17)

Conventional:

Albuquerque, N. Mex.	1-26	5-27
Casper, Wyo.	1-26	5-11
Colorado Springs, Colo.	1-26	5-22
Emporia, Kans.	1-26	5-22
Flagstaff, Ariz.	1-26	6-24
Garden City, Kans.	1-26	5-18
Grand Junction, Colo.	1-26	5-19
Orem, Utah	1-26	5-23
Roswell, N. Mex.	1-26	6-1
Salina, Kans.	1-26	5-26
Tucson, Ariz.	1-26	6-8

Decentralized:

Denver (City), Colo.	2-9	6-16
Denver, Colo.	2-9	6-16
Kansas City, Kans.	2-9	6-11
Phoenix, Ariz.	1-19	6-16
Salt Lake City, Utah	2-9	6-1
Wichita, Kans.	2-9	5-28

	<u>Date opened</u>	<u>Date closed</u>		<u>Date opened</u>	<u>Date closed</u>
Detroit (42)			Decentralized:		
Conventional:					
Ashland, Ky.	1-26	6-3	Anaheim, Calif.	1-19	6-10
Athens, Ohio	1-26	5-21	Burbank, Calif.	2-9	6-29
Chillicothe, Ohio	1-26	5-18	La Mesa, Calif.	1-19	7-1
Corbin, Ky.	1-26	6-4	Long Beach, Calif.	1-19	7-9
Escanaba, Mich.	1-26	5-22	Norwalk, Calif.	1-19	6-29
Lexington, Ky.	1-26	6-4	Pacific Beach, Calif.	1-19	6-5
Midland, Mich.	1-26	5-25	Pasadena, Calif.	1-19	7-15
Newark, Ohio	1-26	5-20	Riverside, Calif.	1-19	6-15
Owensboro, Ky.	1-26	6-1	San Bernardino, Calif.	1-19	6-26
Paducah, Ky.	1-26	5-25	Santa Ana, Calif.	1-19	6-10
Port Huron, Mich.	1-26	5-13	Santa Monica, Calif.	1-19	7-17
St. Joseph, Mich.	1-26	5-21	Torrance, Calif.	1-19	7-17
Sandusky, Ohio	1-26	5-18	Van Nuys, Calif.	1-19	6-10
Traverse City, Mich.	1-26	5-27	Ventura, Calif.	1-19	7-9
Van Wert, Ohio	1-26	5-28	West Covina, Calif.	1-19	6-30
Decentralized:			Centralized:		
Akron, Ohio	2-9	6-18	Compton, Calif.	2-9	7-2
Birmingham, Mich.	2-9	6-17	Los Angeles, Calif.	2-9	7-22
Canton, Ohio	2-9	6-18	Los Angeles (E), Calif.	2-9	7-15
Cincinnati, Ohio	2-9	6-18	Los Angeles (S), Calif.	2-9	8-14
Cleveland, Ohio	2-9	6-24	New York (34)²		
Columbus, Ohio	2-9	6-22	Decentralized:		
Dayton, Ohio	2-9	7-10	Atlantic City, N.J.	2-9	8-21
Dearborn, Mich.	2-9	6-23	Bronx (NE), N.Y.	2-9	9-11
Detroit, Mich.	2-9	6-24	Dumont, N.J.	2-9	8-21
Flint, Mich.	2-9	7-8	East Farmingdale, N.Y.	2-9	8-20
Grand Rapids, Mich.	2-9	6-23	Elizabeth, N.J.	2-9	8-19
Hamilton, Ohio	2-9	6-17	Hackensack, N.J.	2-9	6-23
Jackson, Mich.	2-9	6-11	Hempstead, N.Y.	2-9	8-15
Lansing, Mich.	2-9	6-17	Hicksville, N.Y.	2-9	7-31
Livonia, Mich.	2-9	6-10	Jamaica, N.Y. (CD 6)	2-9	8-21
Lorain, Ohio	2-9	6-9	Morristown, N.J.	2-9	7-8
Louisville, Ky.	2-9	7-9	New City, N.Y.	2-9	7-21
Steubenville, Ohio	2-9	6-9	Orange, N.J.	2-9	8-19
Toledo, Ohio	2-9	6-9	Parlin, N.J.	2-9	6-23
Warren, Mich.	2-9	6-10	Paterson, N.J.	2-9	9-4
West Cleveland, Ohio	2-9	6-8	Riverhead, N.Y.	2-9	8-20
Woodmere Village, Ohio	2-9	6-24	Staten Island, N.Y.	2-9	8-21
Youngstown, Ohio	2-9	6-18	Yonkers, N.Y.	2-9	8-20
Centralized:			Centralized:		
Cincinnati, Ohio	2-9	7-10	Bronx (SE), N.Y.	2-9	9-11
Cleveland, Ohio	2-9	8-7	Bronx (SC and SW), N.Y.	2-9	9-11
Detroit (E), Mich.	2-9	8-7	Bronx & Manhattan pt.(W), N.Y.	2-9	7-31
Detroit (W), Mich.	2-9	8-7	Brooklyn, N.Y.	2-9	9-11
Los Angeles (27)			Centralized:		
Conventional:					
Bakersfield, Calif.	1-26	6-12	Brooklyn (NE), N.Y.	2-9	9-4
Escondido, Calif.	1-26	6-19	Brooklyn (NW), N.Y.	2-9	9-11
Hilo, Hawaii	1-26	6-2	Brooklyn (S), N.Y.	2-9	8-5
Honolulu, Hawaii	1-26	6-2	Brooklyn (SE), N.Y.	2-9	8-15
Indio, Calif.	1-26	6-19	Jersey City, N.J.	2-9	8-19
Las Vegas, Nev.	1-26	6-16			
Santa Barbara, Calif.	1-26	6-8			
Victorville, Calif.	1-26	5-27			

²In the New York City area, eight of the district office areas were contiguous with congressional districts. These offices are identified by the CD (congressional district) numbers.

San Francisco—Continued

	<u>Date opened</u>	<u>Date closed</u>		<u>Date opened</u>	<u>Date closed</u>
Centralized:			Lacey, Wash.	1-26	5-27
			Missoula, Mont.	1-26	5-12
Alameda, Calif.	2-9	7-23	Salem, Oreg.	1-26	5-25
San Francisco, Calif.	2-9	7-27	Spokane, Wash.	1-26	5-27

Seattle (11)

Conventional:

Anchorage, Alaska	1-26	6-2
Billings, Mont.	1-26	5-13
Boise, Idaho	1-26	5-29

Decentralized:

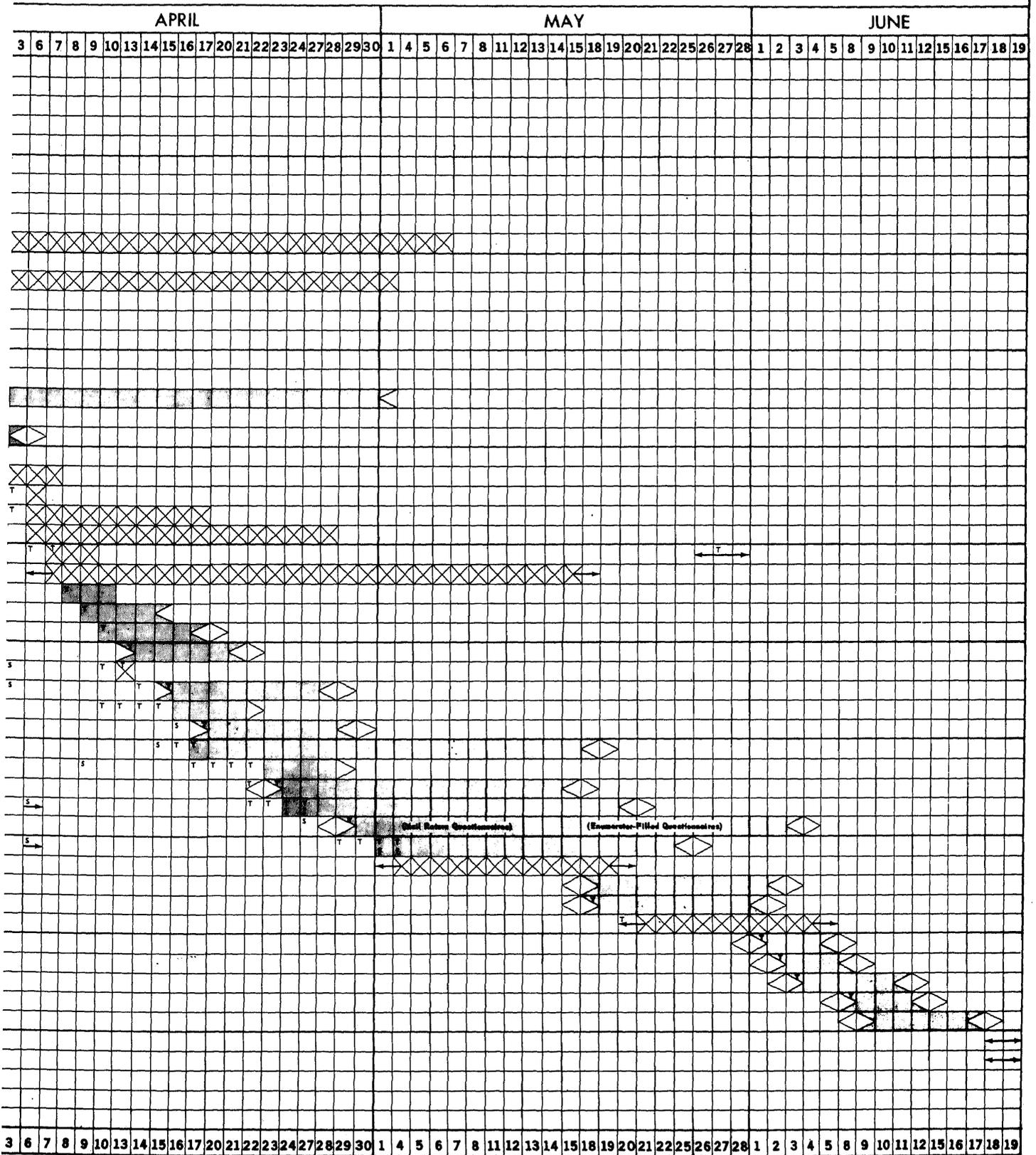
Eugene, Oreg.	2-9	6-12
Portland, Oreg.	2-9	6-19
Seattle, Wash.	2-9	6-22
Seattle, Wash.	2-9	6-22

APPENDIX B

Staffing Calendars

CALENDAR

19th Decennial Census-1970

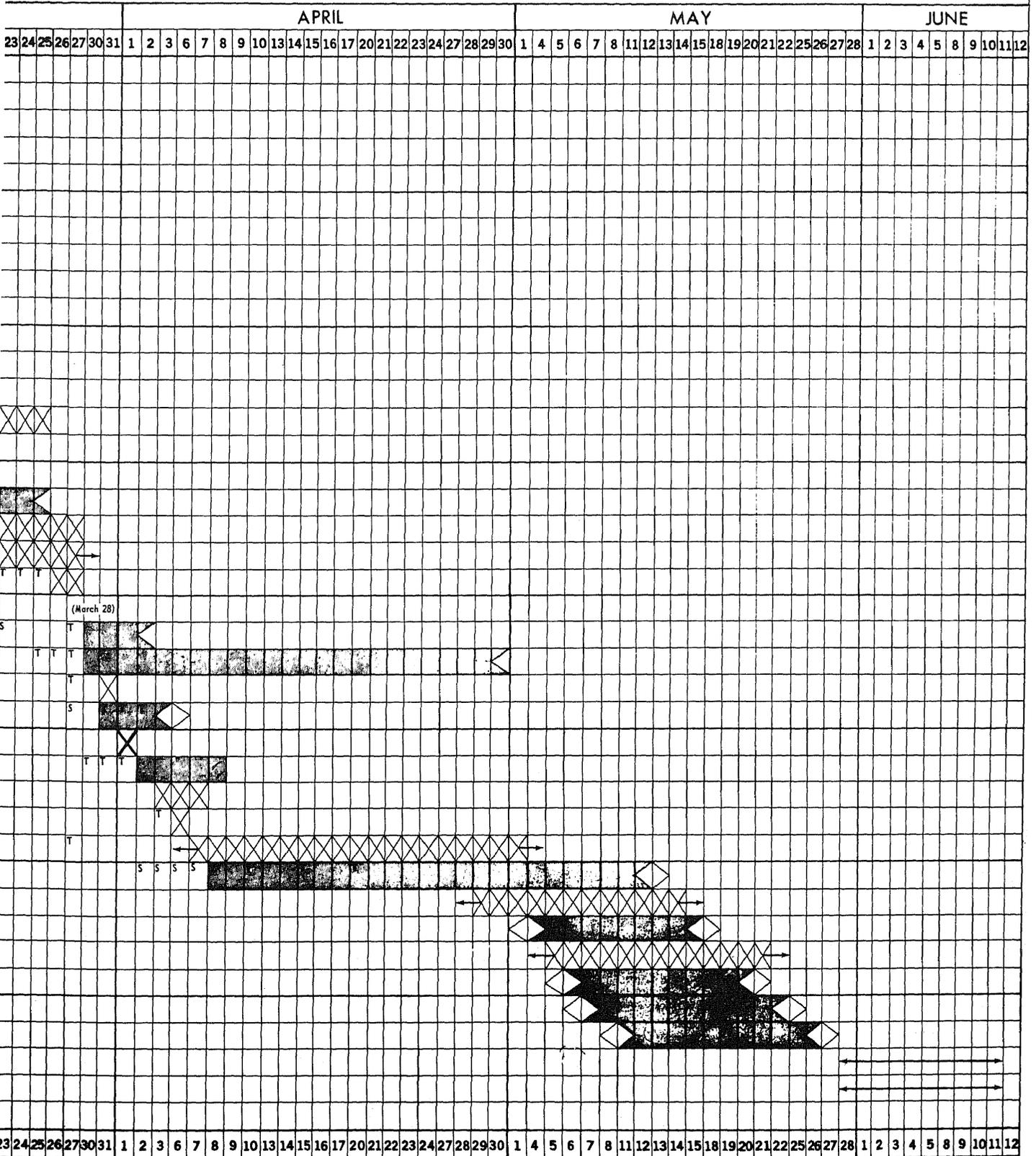


■ = operation to be performed on these days by a group of intermittent enumerators or clerks.

◀▶ = indicates that the operation may begin or end on an earlier or later date.

CALENDAR

19th Decennial Census-1970



■ = operation to be performed on these days by a group of intermittent enumerator-clerks.

◀▶ = indicates that the operation may begin or end on an earlier or later date.

APPENDIX C

Table 1. 1970 Decennial Census Training

Training guide form number and type of trainee	Dates	Total manhours spent in training	Number of trainees	Length of training (hours)	Trainer	
GRAND TOTAL.....	-	3,273,826	224,934	819-1/4	-	
CONVENTIONAL TOTAL.....	-	1,217,709	87,205	175-3/4	-	
D-601 Enumerator.....	3/30-3/31	1,054,213	76,670	13-3/4	Crew Leader	
D-605 Crew Leader.....	3/16-3/17,3/26	92,016	5,184	17-3/4	Field Supervisor ¹	
D-606 Regional Technician.....	December 1969	1,225	71	17-1/4	Regional Staff	
D-607 District Manager.....	1/20-1/23	4,480	181	24-3/4	Regional Staff	
D-609 Administrative Clerk.....	1/21-1/23	3,620	181	20	Regional Staff	
D-610 Field Supervisor (Parts I & II).....	1/20-1/27,3/04-3/05	4,434	181	24-1/2	Regional Staff	
D-625 Quality Control.....	4/21	8,800	2,200	4	Field Supervisor ²	
D-655 Special Place Enumerator.....	4/01-4/02	40,000	2,000	20	Field Supervisor ²	
D-656 Field Map Review.....	January 1969	96	24	4	Self Study	
D-657 Supervisory Crew Leader (Parts I & II).....	3/09-3/11	7,485	379	19-3/4	Field Supervisor	
D-665 Alaska Enumerators (Outlying Areas).....	December 1969	1,340	134	10	Self Study	
DECENTRALIZED TOTAL.....	-	1,467,671	95,977	330	-	
	FALL LISTING	SPRING LISTING				
*D-600 Recruiting Center Personnel.....	3/11	3/11	4,375	2,500	1-3/4	Field Supervisor
*D-602 Special Place Enumerator.....	3/25-3/27	3/25-3/27	93,830	4,265	22	Special Place Crew Leader
*D-603 Special Place Crew Leader.....	3/16-3/18	3/16-3/18	2,714	167	16-1/4	Field Supervisor
*D-604 Special Place Clerks.....	3/16-3/18	3/16-3/18	6,704	865	7-3/4	Field Supervisor
D-611 Regional Technician.....	Dec. 1969	Dec. 1969	1,755	78	22-1/2	Regional Staff
D-612 Field Supervisor (Parts I & II).....	2/17-2/20	-	3,100	155	20	Regional Staff
	-	3/1/22-1/23	3,758	167	22-1/2	Regional Staff
D-613 Enumerators.....	4/08,4/10	4/08,4/10	1,102,779	58,041	19	Crew Leader
D-614 District Manager.....	4/15,4/20	4/15,4/20	6,012	167	36	Regional Staff
D-615 Office Supervisor.....	2/02-2/06	1/12-1/16	4,384	167	26-1/4	Regional Staff
	2/04-2/06,	1/14-1/16,				
	3/06	3/06				
D-618 Tract & Block Personnel.....	2/24	2/24	6,673	1,570	4-1/4	Office Supervisor
D-618E Tract & Block Personnel.....	(4)	(4)	1,400	700	2	Office Supervisor
D-620 Addressing Personnel.....	2/18	2/19	4,888	1,150	4-1/4	Office Supervisor
D-621 Postal Corrections Personnel.....	3/16	3/17	26,720	3,340	8	Office Supervisor
D-623 Quality Control Personnel.....	5/04	5/06	14,130	3,140	4-1/2	Office Supervisor
D-624 Population & Housing Count Personnel.....	5/07	5/07	6,000	2,000	3	Office Supervisor
D-626 Listing Enumerator.....	Fall 1969	-	38,475	8,100	4-3/4	-
	-	2/09	8,431	1,775	4-3/4	Listing Crew Leader
D-627 Crew Leader.....	3/30-4/01	3/30-4/01	108,449	4,767	22-3/4	Supervisory Crew Leader
D-628 Listing Crew Leaders.....	Fall 1969	2/03-2/04	6,248	735	8-1/2	Field Supervisor
*D-646 Telephone Assistance Personnel.....	3/27	3/27	9,004	1,715	5-1/4	Office Supervisor
D-658 Supervisory Crew Leaders.....	3/23-3/25	3/23-3/25	6,327	333	19	Field Supervisor
D-660 Fall Listing Technician.....	Fall 1969	-	715	55	13	Regional Staff
*D-669 Regional Staff.....	Nov. 1969	Nov. 1969	800	25	32	Washington Staff
CENTRALIZED TOTAL.....	-	583,226	41,404	283-1/2	-	
*D-632 Regional Technician.....	December 1969		575	25	23	Regional Staff
D-633 District Manager (Parts I & II).....	1/26-2/06		1,620	45	36	Regional Staff
D-634 Processing Supervisor (Parts I & II).....	2/02-2/06		1,619	49	31	Regional Staff
D-635 Field Supervisor (Parts I & II).....	2/12-2/13,4/01-4/03		4,412	5173	25-1/2	Regional Staff
D-637 Administrative Clerk.....	2/04-2/06		720	45	16	Regional Staff
D-638 Crew Leader.....	4/10-4/13,4/15		43,308	2,038	21-1/4	Supervisory Crew Leader
D-640 Tract & Block Personnel.....	2/24		1,955	460	4-1/4	Processing Supervisor
D-641 Movers Personnel.....	6/02		405	135	3	Processing Supervisor
D-642 Postal Corrections Personnel.....	3/31-4/02		1,600	200	8	Processing Supervisor
D-643 Mail Returns Personnel.....	4/08		2,081	925	2-1/4	Supervisory Clerk
D-647 Edit Personnel.....	4/22-4/23		22,479	1,835	12-1/4	Supervisory Clerk
D-648 Enumerator.....	4/22-4/24,4/27		382,678	17,199	22-1/4	Crew Leader
D-649 Telephone Followup Personnel.....	4/14-4/15		76,388	4,850	15-3/4	Supervisory Clerk
D-650 Merge Personnel.....	6/01		4,188	1,675	2-1/2	Supervisory Clerk
D-651 Q. C. Followup Personnel.....	6/03		10,125	4,500	2-1/4	Processing Supervisor
D-652 Population & Housing Count.....	6/08		1,304	745	1-3/4	Supervisory Clerk
D-661 Telephone Number Search.....	4/06-4/07		4,400	2,200	2	Supervisory Clerk
D-662 Supervisory Clerks (Processing).....	4/06-4/07		6,670	230	29	Processing Supervisor
D-663 Supervisory Clerks (Tele. Ops.).....	4/10-4/13		9,881	465	21-1/4	Processing Supervisor
D-664 Precanvass Enumerator.....	2/18		4,918	2,810	1-3/4	Field Supervisor
D-666 Precanvass Office Personnel.....	2/20		2,000	800	2-1/2	Processing Supervisor
CONVENTIONAL, DECENTRALIZED & CENTRALIZED....	-	5,220	348	30	-	
D-667 Regional Technician (Management & Training Techniques).....	Fall 1969		3,132	174	18	Washington Staff
D-668 Regional Technician (Background).....	Fall 1969		2,088	174	12	Regional Staff

*Used in both centralized and decentralized.

¹In offices with a large number of crew leaders, and offices with large geographic areas, supervisory crew leaders trained some of the crew leaders. ²Supervisory crew leaders also assisted in this training, as necessary. ³Part II training given 3/04 - 3/05.

⁴No specific date, used for field code training only when region had done office coding. ⁵Includes 128 supervisory crew leaders in the April 1 to April 3 session. ⁶Group II crew leaders trained 4/17 - 4/20, 4/22. ⁷Group II enumerators trained 4/29 - 01, 5/04.

Table 2. 1970 Decennial Census Training Materials

Training guide form number and type of trainee	No. of pages	Number printed	Training kits							
			Total		Classroom				Self-Study	
			No.	Quantity	Instructor		Trainee		No.	Quantity
				No.	Quantity	No.	Quantity	No.	Quantity	
GRAND TOTAL.....	14,140	52,895	125	365,505	32	17,157	84	328,715	9	19,633
CONVENTIONAL TOTAL.....	3,045	15,100	24	130,307	7	7,996	14	114,036	3	8,275
D-601 Enumerator.....	343	9,300	3	104,750	1	6,500	2	98,250	-	-
D-605 Crew Leader.....	474	1,000	3	15,404	1	579	1	7,050	1	7,775
D-606 Regional Technician.....	311	500	2	460	-	-	1	160	1	300
D-607 District Manager.....	437	300	2	285	1	30	1	255	-	-
D-609 Administrative Clerk.....	260	300	2	288	1	30	1	258	-	-
D-610 Field Supervisor (Parts I & II).....	438	300	3	560	1	30	2	530	-	-
D-625 Quality Control.....	111	900	2	3,098	-	-	2	3,098	-	-
D-655 Special Place Enumerator.....	227	1,000	2	3,709	1	642	1	3,067	-	-
D-656 Field Map Review.....	26	300	1	200	-	-	-	-	1	200
D-657 Supervisory Crew Leader (Parts I & II).....	352	700	3	1,203	1	185	2	1,018	-	-
D-665 Alaska Enumerators (Outlying Areas).....	66	500	1	350	-	-	1	350	-	-
DECENTRALIZED TOTAL.....	5,643	24,795	51	166,465	15	8,487	34	150,294	2	7,684
*D-600 Recruiting Center Personnel.....	56	1,000	1	2,500	-	-	1	2,500	-	-
*D-602 Special Place Enumerator.....	351	2,000	2	5,951	1	459	1	5,492	-	-
*D-603 Special Place Crew Leader.....	303	895	3	2,161	1	225	1	905	1	1,031
*D-604 Special Place Clerk.....	143	700	1	226	1	226	-	-	-	-
D-611 Regional Technician.....	347	300	2	245	1	45	1	200	-	-
D-612 Field Supervisor (Parts I & II).....	493	300	4	395	1	15	3	380	-	-
D-613 Enumerators (Parts I & II).....	457	8,200	2	88,300	1	5,500	1	82,800	-	-
D-614 District Manager.....	497	300	2	277	1	32	1	245	-	-
D-615 Office Supervisor.....	532	500	4	558	2	64	2	494	-	-
D-618 Tract & Block Personnel.....	112	1,100	4	11,550	-	-	-	11,550	-	-
D-618E Tract & Block Personnel.....	45	500	1	2,345	-	-	1	2,345	-	-
D-620 Addressing Personnel.....	85	600	1	1,500	-	-	1	1,500	-	-
D-621 Postal Corrections Personnel.....	267	1,000	6	15,663	-	-	6	15,663	-	-
D-623 Quality Control Personnel.....	95	800	1	3,194	-	-	1	3,194	-	-
D-624 Population & Housing Count Personnel.....	55	700	2	2,357	1	176	1	2,181	-	-
D-626 Listing Enumerator.....	121	1,700	4	11,466	2	794	2	10,672	-	-
D-627 Crew Leader.....	383	1,400	3	13,269	1	825	1	6,091	1	6,653
D-628 Listing Crew Leaders.....	177	900	2	872	-	-	2	872	-	-
*D-646 Telephone Assistance Personnel.....	85	800	2	2,740	1	240	1	2,500	-	-
D-658 Supervisory Crew Leaders.....	390	700	2	719	1	186	1	533	-	-
D-660 Fall Listing Technician.....	248	400	1	127	-	-	1	127	-	-
*D-669 Regional Staff.....	401	-	1	50	-	-	1	50	-	-
CENTRALIZED TOTAL.....	5,298	12,700	49	68,703	9	644	36	64,385	4	3,674
D-632 Regional Technician.....	391	300	5	995	1	20	1	100	3	875
D-633 District Manager (Parts I & II).....	485	300	2	95	1	15	1	80	-	-
D-634 Processing Supervisor (Parts I & II).....	570	300	3	212	1	22	2	190	-	-
D-635 Field Supervisor (Parts I & II).....	624	300	2	325	-	-	2	325	-	-
D-637 Administrative Clerk.....	209	300	2	112	1	22	1	90	-	-
D-638 Crew Leader.....	375	600	3	5,504	1	185	1	2,520	1	2,799
D-640 Tract & Block Personnel.....	109	400	4	3,175	-	-	4	3,175	-	-
D-641 Movers Personnel.....	84	400	2	1,179	-	-	2	1,179	-	-
D-642 Postal Corrections Personnel.....	287	400	6	3,200	-	-	6	3,200	-	-
D-643 Mail Returns Personnel.....	59	700	1	1,250	-	-	1	1,250	-	-
D-647 Edit Personnel.....	231	600	1	2,337	-	-	1	2,337	-	-
D-648 Enumerator.....	365	3,300	1	26,732	-	-	1	26,732	-	-
D-649 Telephone Followup Personnel.....	248	900	3	7,330	-	-	3	7,330	-	-
D-650 Merge Personnel.....	63	500	1	1,846	-	-	1	1,846	-	-
D-651 Q. C. Followup Personnel.....	53	700	1	4,686	-	-	1	4,686	-	-
D-652 Population & Housing Count.....	55	400	2	1,020	1	95	1	925	-	-
D-661 Telephone Number Search.....	46	500	1	2,200	-	-	1	2,200	-	-
D-662 Supervisory Clerks (Processing).....	568	400	4	1,250	2	190	2	1,060	-	-
D-663 Supervisory Clerks (Tele. Ops.).....	365	400	2	655	1	95	1	560	-	-
D-664 Precanvass Enumerator.....	46	600	1	3,000	-	-	1	3,000	-	-
D-666 Precanvass Office Personnel.....	65	400	2	1,600	-	-	2	1,600	-	-
CONVENTIONAL, DECENTRALIZED & CENTRALIZED.....	154	300	1	30	1	30	-	-	-	-
D-667 Regional Technician (Management & Training Techniques).....	84	-	-	-	-	-	-	-	-	-
D-668 Regional Technician (Background).....	70	300	1	30	1	30	-	-	-	-

*Used in both decentralized and centralized mail censuses.

Table 2. 1970 Decennial Census Training Materials—Continued

Training guide form number and type of trainee	Training aids used											
	Total		Workbook		Address register		Questionnaire		Self-Study		Other	
	No.	Quantity	No.	Quantity	No.	Quantity	No.	Quantity	No.	Quantity	No.	Quantity
GRAND TOTAL.....	509	3,144,269	34	249,687	32	280,914	175	1,723,593	14	21,332	254	868,743
CONVENTIONAL TOTAL.....	62	637,509	8	109,893	4	106,675	12	151,751	6	8,975	32	260,215
D-601 Enumerator.....	5	523,000	1	98,250	1	98,250	1	130,000	-	-	2	196,500
D-605 Crew Leader.....	9	60,530	1	7,050	1	7,775	1	7,050	1	7,775	5	30,880
D-606 Regional Technician.....	12	2,660	1	170	1	300	-	-	1	300	9	1,890
D-607 District Manager.....	9	2,491	1	255	-	-	-	-	1	200	7	2,036
D-609 Administrative Clerk.....	2	516	1	258	-	-	-	-	-	-	1	258
D-610 Field Supervisor (Parts I & II).....	5	1,300	1	275	-	-	1	275	1	200	2	550
D-625 Quality Control.....	9	16,140	-	-	-	-	8	13,858	-	-	1	2,282
D-655 Special Place Enumerator.....	5	28,318	1	3,067	-	-	-	-	-	-	4	25,251
D-656 Field Map Review.....	1	200	-	-	-	-	-	-	1	200	-	-
D-657 Supervisory Crew Leader (Parts I & II).....	4	2,004	1	568	-	-	1	568	1	300	1	568
D-665 Alaska Enumerators (Outlying Areas).....	1	350	-	-	1	350	-	-	-	-	-	-
DECENTRALIZED TOTAL.....	178	2,117,287	13	100,957	14	131,005	38	1,362,460	3	8,588	110	514,277
*D-600 Recruiting Center Personnel.....	1	2,500	1	2,500	-	-	-	-	-	-	-	-
*D-602 Special Place Enumerator.....	5	33,443	1	5,492	-	-	-	-	-	-	4	27,951
*D-603 Special Place Crew Leader.....	6	5,807	1	905	-	-	-	-	2	1,935	3	2,967
*D-604 Special Place Clerk.....	2	3,164	1	2,260	-	-	-	-	-	-	1	904
D-611 Regional Technician.....	9	2,393	1	200	-	-	-	-	-	-	8	2,193
D-612 Field Supervisor (Parts I & II).....	9	1,725	1	285	1	95	-	-	-	-	7	1,345
D-613 Enumerators (Parts I & II).....	19	1,601,300	1	83,100	1	83,100	15	1,242,000	-	-	2	193,100
D-614 District Manager.....	8	3,535	1	245	-	-	-	-	-	-	7	3,290
D-615 Office Supervisor.....	10	2,731	2	498	3	992	-	-	-	-	5	1,241
D-618 Tract & Block Personnel.....	6	15,350	1	3,000	1	2,250	-	-	-	-	4	10,100
D-618E Tract & Block Personnel.....	1	2,345	1	2,345	-	-	-	-	-	-	-	-
D-620 Addressing Personnel.....	3	31,500	-	-	-	-	-	-	-	-	3	31,500
D-621 Postal Corrections Personnel.....	46	148,679	-	-	2	7,983	2	2,514	-	-	42	138,182
D-623 Quality Control Personnel.....	5	15,970	-	-	-	-	5	15,970	-	-	-	-
D-624 Population & Housing Count Personnel.....	3	6,122	-	-	1	2,181	1	2,181	-	-	1	1,760
D-626 Listing Enumerator.....	7	71,034	-	-	2	26,752	-	-	-	-	5	44,282
D-627 Crew Leader.....	23	157,907	-	-	1	6,653	15	99,795	1	6,653	6	44,806
D-628 Listing Crew Leaders.....	5	4,360	-	-	1	872	-	-	-	-	4	3,488
*D-646 Telephone Assistance Personnel.....	2	4,800	-	-	-	-	-	-	-	-	2	4,800
D-658 Supervisory Crew Leaders.....	2	1,860	-	-	-	-	-	-	-	-	2	1,860
D-660 Fall Listing Technician.....	6	762	1	127	1	127	-	-	-	-	4	508
*D-669 Regional Staff.....	-	-	-	-	-	-	-	-	-	-	-	-
CENTRALIZED TOTAL.....	268	388,873	13	38,837	14	43,234	125	209,382	5	3,769	111	93,651
D-632 Regional Technician.....	11	2,800	1	100	-	-	-	-	3	875	7	1,825
D-633 District Manager (Parts I & II).....	7	1,220	1	80	-	-	-	-	-	-	6	1,140
D-634 Processing Supervisor (Parts I & II).....	9	950	1	95	1	95	2	190	-	-	5	570
D-635 Field Supervisor (Parts I & II).....	5	475	-	-	-	-	-	-	1	95	4	380
D-637 Administrative Clerk.....	1	90	1	90	-	-	-	-	-	-	-	-
D-638 Crew Leader.....	7	19,682	-	-	1	2,799	-	-	1	2,799	5	14,084
D-640 Tract & Block Personnel.....	6	4,275	1	725	1	600	-	-	-	-	4	2,950
D-641 Movers Personnel.....	37	35,970	-	-	1	1,179	21	24,759	-	-	15	10,032
D-642 Postal Corrections Personnel.....	46	31,800	-	-	2	1,600	2	1,400	-	-	42	28,800
D-643 Mail Returns Personnel.....	23	28,750	-	-	-	-	22	27,500	-	-	1	1,250
D-647 Edit Personnel.....	16	37,392	-	-	-	-	15	35,055	-	-	1	2,337
D-648 Enumerator.....	3	80,196	1	26,732	1	26,732	1	26,732	-	-	-	-
D-649 Telephone Followup Personnel.....	16	41,623	2	7,045	1	4,973	12	29,320	-	-	1	285
D-650 Merge Personnel.....	28	51,688	-	-	1	1,846	26	47,996	-	-	1	1,846
D-651 Q. C. Followup Personnel.....	2	9,372	-	-	-	-	-	-	-	-	2	9,372
D-652 Population & Housing Count.....	3	2,800	-	-	1	925	1	925	-	-	1	950
D-661 Telephone Number Search.....	1	2,200	1	2,200	-	-	-	-	-	-	-	-
D-662 Supervisory Clerks (Processing).....	23	14,905	2	650	1	325	15	11,025	-	-	5	2,905
D-663 Supervisory Clerks (Tele. Ops.).....	15	8,885	2	1,120	1	560	8	4,480	-	-	4	2,725
D-664 Precanvass Enumerator.....	3	9,000	-	-	-	-	-	-	-	-	3	9,000
D-666 Precanvass Office Personnel.....	6	4,800	-	-	2	1,600	-	-	-	-	4	3,200
CONVENTIONAL, DECENTRALIZED & CENTRALIZED....	1	600	-	-	-	-	-	-	-	-	1	600
D-667 Regional Technician (Management & Training Techniques).....	-	-	-	-	-	-	-	-	-	-	-	-
D-668 Regional Technician (Background)....	1	600	-	-	-	-	-	-	-	-	1	600

*Used in both decentralized and centralized mail censuses.

Table 3. Training Aids by Type of Census

Form number and title	Number of different positions in which aid was used		
	Conven- tional census	Decen- tralized census	Cen- tralized census
600.1 Training Workbook.....	-	1	-
601.1 Address Register.....	3	-	-
601.2 Training Workbook.....	1	-	-
601.3 Questionnaire.....	4	-	-
601.4 Training Map.....	3	-	-
602.1 Workbook.....	-	1	-
602.2 Shuttle Card.....	-	1	-
602.3 Sample Selection Book.....	6	4	2
602.4 Special Place Exercise.....	1	1	-
602.5 Special Place Exercise (Answer Key).....	1	1	-
603.1 Self Study.....	-	1	1
603.2 Shuttle Card.....	-	2	1
603.3 Training Workbook.....	-	1	-
603.4 Payroll Form.....	-	1	-
604.1 Self Study.....	-	1	-
604.2 Training Workbook.....	-	1	-
604.3 Training Aid.....	-	1	-
605.1 Home Study.....	4	-	-
605.2 Training Workbook.....	3	-	-
605.3 Letter.....	1	-	-
605.4 Supplement to Crew Leader.....	1	-	-
606.1 Self Study.....	1	-	-
606.2 Shuttle Card.....	2	1	1
606.3 Training Workbook.....	1	-	-
606.4 Instructions to Trainers.....	2	-	-
606.5 Operations Calendar.....	2	-	-
606.6 Items 1, 2 & 4 (D-196).....	2	-	-
606.7 Authorization & Fiscal Control.....	2	-	-
606.8 Management Problems.....	1	-	-
607.1 Workbook.....	1	-	-
607.2 Progress and Cost Report Book.....	1	-	-
609.1 Workbook.....	1	-	-
609.2 Items 1, 2 & 4 (Progress and Cost Book).....	1	-	-
611.1 In Basket Exercise.....	2	2	2
611.2 In Basket Exercise.....	-	1	1
611.3 Staffing Calendar.....	-	2	-
611.4 Training Calendar.....	-	2	-
611.5 Authorization & Fiscal Control.....	-	2	-
611.6 Workbook.....	-	1	-
611.7 Staffing Calendar.....	-	2	-

Table 3. Training Aids by Type of Census—Continued

Form number and title	Number of different positions in which aid was used		
	Conven- tional census	Decen- tralized census	Cen- tralized census
612.1 Mapping Exercise.....	-	1	-
612.2 Training Workbook.....	-	1	-
613.1 Address Register.....	-	2	-
613.2 Training Workbook.....	-	1	-
613.3 Review Test.....	-	1	-
613.4 Answer Key.....	-	1	-
613.5 Form D-186.....	-	2	-
614.1 Training Workbook.....	-	1	-
615.1 Training Workbook.....	-	1	-
615.2 Address Register.....	-	1	-
615.3 Tract and Block Card.....	-	1	1
620.1 Facsimile of D-6.....	-	3	3
620.2 Facsimile of D-7.....	-	3	3
620.3 Facsimile of D-8.....	-	3	3
623.1 Training Questionnaire.....	-	1	-
623.2 Training Questionnaire.....	-	1	-
623.3 Training Questionnaire.....	-	1	-
623.4 Training Questionnaire.....	-	1	-
623.5 Training Questionnaire.....	-	1	-
624.1 Address Register.....	-	1	-
624.2 Pop. & Housing Count Worksheet.....	-	1	-
624.3 Training Questionnaire.....	-	1	-
625.1 Training Questionnaire.....	1	-	-
625.2 Training Questionnaire.....	1	-	-
625.3 Training Questionnaire.....	1	-	-
625.4 Training Questionnaire.....	1	-	-
625.5 Training Questionnaire.....	1	-	-
625.6 Training Exercise.....	2	-	-
625.7 Training Questionnaire.....	1	-	-
625.8 Training Questionnaire.....	1	-	-
625.9 Training Questionnaire.....	1	-	-
626.1 Training Illustrations.....	-	2	-
626.2 Listing Instruction Exercise.....	-	3	-
626.3 Training Map.....	-	4	-
626.4 Training Illustration #1.....	-	3	-
626.5 Address Register (Spring Only).....	-	4	-
626.6 Backing & Sketch Sheet.....	1	4	-
626.7 Address Register (Fall & Spring).....	-	1	-
627.1 Home Study Transmittal.....	-	1	-
627.2 Home Study.....	-	1	-

Table 3. Training Aids by Type of Census—Continued

Form number and title	Number of different positions in which aid was used			
	Conven- tional census	Decen- tralized census	Cen- tralized census	
627.3	Home Study Test.....	-	2	-
627.4	Final Review Test.....	-	1	-
627.5	Exercises from Workbook.....	-	1	-
632.1	Self Study.....	-	-	1
632.2	Self Study.....	-	-	1
632.3	Self Study.....	-	-	1
632.4	Training Workbook.....	-	-	1
632.5	Staffing Calendar.....	-	-	3
632.6	Operations Calendar.....	-	-	2
632.7	Authorization & Fiscal Control.....	-	-	2
632.8	"Public Relations".....	-	2	2
633.1	Training Workbook.....	-	-	1
634.1	Organization Charts.....	-	-	1
635.1	Master Map (Training).....	-	-	1
635.2	ED Directory.....	-	-	1
637.1	Workbook.....	-	-	1
638.1	Home Study Transmittal.....	-	-	1
638.2	Home Study.....	-	-	1
638.3	Home Study Test.....	-	-	1
638.4	Final Review Test.....	-	-	1
638.5	Mock Interview Script.....	-	-	1
638.6	Exercise #2.....	-	-	1
640.1	Workbook.....	-	3	2
640.2	Tract & Block Directory.....	-	3	3
640.3	Address Register.....	-	2	-
640.4	Address Register.....	-	-	3
641.1	Form D-211.....	-	-	1
641.2	Coding to ED.....	-	-	1
641.3	Review Test.....	-	-	1
641.4	Answer Key.....	-	-	1
641.5	Training List of Post Offices.....	-	-	1
641.6	Address Register.....	-	-	1
641.7	Change of Address Order.....	-	-	1
641.8	Facsimile (ZIP Code Directory).....	-	-	1
641.9	Change of Address Order.....	-	-	1
641.10	Change of Address Order.....	-	-	1
641.11	Change of Address Order.....	-	-	1
641.12	Change of Address Order.....	-	-	1
641.13	Change of Address Order.....	-	-	1
641.14	Change of Address Order.....	-	-	1

Table 3. Training Aids by Type of Census—Continued

Form number and title	Number of different positions in which aid was used		
	Conven- tional census	Decen- tralized census	Cen- tralized census
641.15 Training Questionnaire.....	-	-	1
641.16 Training Questionnaire.....	-	-	1
641.17 Training Questionnaire.....	-	-	1
641.18 Training Questionnaire.....	-	-	1
641.19 Training Questionnaire.....	-	-	1
641.20 Training Questionnaire.....	-	-	1
641.21 Training Questionnaire.....	-	-	1
641.22 Training Questionnaire.....	-	-	1
641.23 Training Questionnaire.....	-	-	1
641.24 Training Questionnaire.....	-	-	1
641.25 Training Questionnaire.....	-	-	1
641.26 Training Questionnaire.....	-	-	1
641.27 Training Questionnaire.....	-	-	1
641.28 Training Questionnaire.....	-	-	1
641.29 Training Questionnaire.....	-	-	1
641.30 Training Questionnaire.....	-	-	1
641.31 Training Questionnaire.....	-	-	1
641.32 Training Questionnaire.....	-	-	1
641.33 Training Questionnaire.....	-	-	1
641.34 Training Questionnaire.....	-	-	1
641.35 Training Questionnaire.....	-	-	1
641.36 Record of Q. C. Failures.....	-	-	1
641.37 Block Header Record.....	-	-	1
642.1 Postal Corrections, Check-In, & Assign- ment Record.....	-	1	1
642.2 Followup Letter (D-706).....	-	1	1
642.3 Extra Questionnaire Facsimile.....	-	1	1
642.4 Extra Questionnaire Facsimile.....	-	1	1
642.5 Extra Questionnaire Facsimile.....	-	1	1
642.6 Address Register.....	-	1	-
642.7 Block Header Record.....	-	2	2
642.8 Blue Cards.....	-	1	1
642.9 Blue Cards.....	-	1	1
642.10 Blue Cards.....	-	1	1
642.11 Blue Cards.....	-	1	1
642.12 Blue Cards.....	-	1	1
642.13 Blue Cards.....	-	1	1
642.14 Training Map.....	-	3	1
642.15 Blue Cards.....	-	1	1
642.16 Blue Cards.....	-	1	1
642.17 Blue Cards.....	-	1	1

Table 3. Training Aids by Type of Census—Continued

Form number and title	Number of different positions in which aid was used		
	Conven- tional census	Decen- tralized census	Cen- tralized census
642.18 Blue Cards.....	-	1	1
642.19 Blue Cards.....	-	1	1
642.20 Blue Cards.....	-	1	1
642.21 Tract & Block Map.....	-	1	1
642.22 Review Test.....	-	1	1
642.23 Tract & Block Map.....	-	2	1
642.24 Blue Cards.....	-	1	1
642.25 Blue Cards.....	-	1	1
642.26 Blue Cards.....	-	1	1
642.27 Blue Cards.....	-	1	1
642.28 Blue Cards.....	-	1	1
642.29 Blue Cards.....	-	1	1
642.30 Blue Cards.....	-	1	1
642.31 Blue Cards.....	-	1	1
642.32 Blue Cards.....	-	1	1
642.33 Blue Cards.....	-	1	1
642.34 Blue Cards.....	-	1	1
642.36 Address Register.....	-	2	-
642.37 Blue Cards.....	-	1	1
642.38 Blue Cards.....	-	1	1
642.39 Blue Cards.....	-	1	1
642.40 Blue Cards.....	-	1	1
642.41 Blue Cards.....	-	1	1
642.42 Blue Cards.....	-	1	1
642.43 Blue Cards.....	-	1	1
642.44 Address Register.....	-	-	1
642.45 Address Register.....	-	-	1
643.1 Address Register.....	-	-	1
646.1 Exhibit of D-103.....	-	1	-
646.2 Instructions to Prepare D-103.....	-	1	-
647.1 Short Form Questionnaire.....	-	2	3
647.2 Long Form Questionnaire.....	-	2	3
647.3 Short Form Questionnaire.....	-	2	2
647.4 Short Form Questionnaire.....	-	2	2
647.5 Short Form Questionnaire.....	-	2	2
647.6 Long Form Questionnaire.....	-	2	2
647.7 Short Form Questionnaire.....	-	2	2
647.8 Long Form Questionnaire.....	-	2	2
647.9 Short Form Questionnaire.....	-	2	2
647.10 Short Form Questionnaire.....	-	2	2

Table 3. Training Aids by Type of Census—Continued

Form number and title	Number of different positions in which aid was used		
	Conven- tional census	Decen- tralized census	Cen- tralized census
647.11 Short Form Questionnaire.....	-	2	2
647.12 Long Form Questionnaire.....	-	2	2
647.13 Short Form Questionnaire.....	-	2	2
647.14 Short Form Questionnaire.....	-	2	2
647.15 Long Form Questionnaire.....	-	2	2
647.16 Edit Illustrations & Exercises.....	-	-	2
648.1 Address Register.....	-	-	2
648.2 Training Workbook.....	-	-	1
648.3 Training Questionnaire.....	-	-	1
649.1 Training Workbook.....	-	-	2
649.2 Address Register.....	-	-	2
649.3 Telephone Followup Exercises.....	-	-	2
649.4 Workbook.....	-	-	1
649.5 Training Questionnaires.....	-	-	2
649.6 Training Questionnaires.....	-	-	2
649.7 Training Questionnaires.....	-	-	2
649.8 Training Questionnaires.....	-	-	2
649.9 Training Questionnaires.....	-	-	2
649.10 Training Questionnaires.....	-	-	2
649.11 Training Questionnaires.....	-	-	2
649.12 Training Questionnaires.....	-	-	2
649.13 Training Questionnaires.....	-	-	1
649.14 Training Questionnaires.....	-	-	1
649.15 Training Questionnaires.....	-	-	1
649.16 Training Questionnaires.....	-	-	1
650.1 Training Chart.....	-	-	1
650.2 Address Register.....	-	-	1
650.5 Training Questionnaires.....	-	-	2
650.6 Training Questionnaires.....	-	-	2
650.7 Training Questionnaires.....	-	-	2
650.8 Training Questionnaires.....	-	-	2
650.9 Training Questionnaires.....	-	-	2
650.10 Training Questionnaires.....	-	-	2
650.11 Training Questionnaires.....	-	-	1
650.12 Training Questionnaires.....	-	-	2
650.13 Training Questionnaires.....	-	-	1
650.14 Training Questionnaires.....	-	-	2
650.15 Training Questionnaires.....	-	-	2
650.16 Training Questionnaires.....	-	-	1
650.17 Training Questionnaires.....	-	-	2

Table 3. Training Aids by Type of Census—Continued

Form number and title	Number of* different positions in which aid was used		
	Conven- tional census	Decen- tralized census	Cen- tralized census
650.18 Training Questionnaires.....	-	-	2
650.19 Training Questionnaires.....	-	-	2
650.20 Training Questionnaires.....	-	-	2
650.21 Training Questionnaires.....	-	-	2
650.22 Training Questionnaires.....	-	-	2
650.23 Training Questionnaires.....	-	-	2
650.24 Training Questionnaires.....	-	-	2
650.25 Training Questionnaires.....	-	-	2
650.26 Training Questionnaires.....	-	-	2
650.27 Training Questionnaires.....	-	-	2
650.28 Training Questionnaires.....	-	-	2
650.29 Training Questionnaires.....	-	-	1
650.30 Training Questionnaires.....	-	-	2
651.1 Record of Q. C. Failures.....	-	-	1
651.2 Training Transcription (Change of Address Order).....	-	-	1
652.1 Address Register.....	-	-	1
652.2 Pop. & Housing Count Worksheet.....	-	-	2
652.3 Training Questionnaires.....	-	-	1
655.1 Workbook.....	1	-	-
655.2 Shuttle Card.....	1	-	-
656 Self Study.....	1	-	-
658.1 Final Review Test.....	-	1	-
660.1 Training Workbook.....	-	1	-
661.1 Training Workbook.....	-	-	2
662.1 Payroll Workbook.....	-	-	2
662.2 Payroll Form.....	-	-	2
662.3 Training Payroll Form.....	-	-	2
662.4 Training Payroll Form.....	-	-	2
664.1 Instruction Exercise.....	-	-	1
664.2 Training Record.....	-	-	1
664.3 Special Instructions.....	-	-	1
666.1 Address Register.....	-	-	1
666.2 Address Register.....	-	-	1
666.3 Form D-319.....	-	-	1
TOTAL.....	62	178	268

APPENDIX D

Form D-137. Crew Leader's Report on Enumeration Observation

<p>FORM D-137 (1-27-69) C</p> <p style="text-align: center;">U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS</p> <p style="text-align: center; font-weight: bold; font-size: 1.2em;">CREW LEADER'S REPORT ON ENUMERATOR OBSERVATION</p> <p style="text-align: center;">19th Decennial Census - 1970</p>	<p>a. District office name and code</p> <hr/> <p>b. Date c. ED No.</p> <hr/> <p>d. Name of Crew Leader</p> <hr/> <p>e. Name of Enumerator</p> <hr/> <p>f. Type of observation <input type="checkbox"/> Induction <input type="checkbox"/> Field review</p>				
<p><i>After you have observed several interviews, answer the questions below with respect to the enumerator's overall performance.</i></p>					
	<p>Mark an "X" in the appropriate column below</p>				
Quality check item	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">All of the time (a)</th> <th style="width: 15%;">Most of the time (b)</th> <th style="width: 15%;">Some of the time or never (c)</th> <th style="width: 15%;">Does not apply (d)</th> </tr> </thead> </table>	All of the time (a)	Most of the time (b)	Some of the time or never (c)	Does not apply (d)
All of the time (a)	Most of the time (b)	Some of the time or never (c)	Does not apply (d)		
Did the Enumerator:					
1. Have a plan for canvassing his complete assignment?					
2. Enter a sufficient address in columns (4) and (5) of the Address Register?					
3. Spot on the map the location of living quarters with no house number and street name?					
4. List each living quarters in the order in which he came to them in his canvass?					
5. Introduce himself properly and ask the respondent if he received the advance questionnaire?					
6. Review the advance questionnaire to assure that all entries were complete and correct?					
7. Use the proper long form (△ or ●) at sample households?					
8. Handle vacant households correctly?					
9. Fill the "Census Use" boxes on the questionnaire correctly?					
10. List special places on the Special Place Listing sheet in the back of the Address Register?					
11. Enter here any comments you may have about this particular enumerator; for example, what part of the work was most difficult for him to understand?					
<p>12. Based on overall performance in the field, I think the enumerator is:</p> <p><input type="checkbox"/> Satisfactory and should be retained <input type="checkbox"/> Unsatisfactory and should be replaced - Report to the field supervisor. (Use item 11 to discuss the case.)</p>					

Form D-153. Field Quality Check—First Review

FORM D-153 (2-25-69) C	U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS	1. District office name and code 2. Name of Crew Leader 3. ED Nos. 4. Name of Enumerator
FIELD QUALITY CHECK – FIRST REVIEW 19th Decennial Census – 1970		

GENERAL INSTRUCTIONS

Complete a first review on each enumerator. A first review consists of two parts; Part A, Field Quality Check and Part B, Review of Canvassing Plan and Listing Order (on reverse side of this form). Detailed instructions for these reviews are in Chapter 5 of Form D-501, Crew Leaders Handbook. After you complete the review, take the action indicated at the end of Parts A and B.

Part A – FIELD QUALITY CHECK

	Items to be reviewed <i>(Make one tally for each error unless otherwise specified)</i>	Tally of errors
LAST COMPLETE PAGE OF REGISTER	Tally once for each housing unit with incomplete address.	
	Compare each line of the register with the questionnaire actually used. Make 10 tallies each time the wrong questionnaire was used.	
FIVE OCCUPIED SHORT FORMS	Blank in questions 2–4 and 6–8.	
	Blank in housing questions when an answer is required.	
	Blanks in a5 and B and in a4 in blocked areas.	
THREE OCCUPIED △ OR ● FORMS	Blanks in housing questions on page 5 when an answer is required.	
	Missing sample pages for a person. Make 15 tallies for each such person.	
	Blanks in sample population questions when an answer is required.	
ONE VACANT △ OR ● FORM	Inspect every question listed in the box on page 3 between items B and C. Tally once for each question which is blank (except those which are to be skipped). Count H12 as blank if there is a rent entry but the circles are not marked.	
TOTAL ERRORS →		

Release the enumerator if the number of errors exceeds 20. Otherwise, retrain him on the questions for which he has omissions or errors.

RESULTS OF FIRST REVIEW

Part A – QUALITY REVIEW OF COMPLETED WORK

- | | | |
|---|--|--|
| <input type="checkbox"/> Satisfactory
(No errors, no further action) | <input type="checkbox"/> Needs improvement
(20 or less errors)
I discussed the errors and retrained him on questions he omitted or did not understand. I scheduled an intermediate review. | <input type="checkbox"/> Unsatisfactory
(More than 20 errors)
I am releasing the enumerator. |
|---|--|--|

Form D-153. Field Quality Check—First Review

Part B – REVIEW OF CANVASSING PLAN AND LISTING ORDER				
To answer questions 1 and 2, have the enumerator trace his path of travel on his ED map. To answer the remaining questions, check the path of travel on the ED map with the actual listings in the Address Register.				
Quality check item (a)	Yes (b)	No (c)	Does not apply (d)	Explanation for "No" entries (e)
1. Has the enumerator planned his travel route as outlined in the canvassing instructions?				
2. Is the route of canvass in a clockwise direction?				
3. Are all listings without a house number spotted on the ED map?				
4. Are the serial numbers for the map spots in strict numerical order as you follow the correct canvassing route, with no backtracking?				
5. Do all roads, road segments, or block sides which have been canvassed to date have listings recorded for them?				
6. In blocked ED's do the listings for one block appear consecutively in the Address Register?				
7. In blocked ED's are house numbers on one block side in either ascending or descending numerical order, all being either odd numbers or even numbers?				
8. In unblocked ED's, are the roads or road segments listed in order as you come to them when canvassing a section?				
9. In unblocked ED's, are house numbers for units on one road or road segment either in ascending or descending numerical order?				
10. Are all housing units within multi-unit buildings listed in the correct order?				
11. Describe here any deviations from the canvassing and listing instructions not covered above. Enter any general remarks you have concerning the enumerator's work.				
<i>Discuss the deviations with the enumerator. Base the evaluation below on his explanations of these deviations and how many of them were actually errors.</i>				
RESULTS OF FIRST INTERVIEW				
Part B – REVIEW OF CANVASSING PLAN AND LISTING ORDER				
<input type="checkbox"/> Satisfactory (No errors, no further action)		<input type="checkbox"/> Needs improvement – I think the enumerator now understands the canvassing and listing procedures. I discussed his errors and retrained him, and scheduled an intermediate review.		<input type="checkbox"/> Unsatisfactory – The canvassing and listing procedures were completely unsatisfactory. No apparent attempt was made to follow procedure. I am releasing the enumerator.

Form D-154. Field Quality Check—Final Review

<p>FORM D-154 (2-24-69) C</p> <p style="text-align: center;">U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS</p> <p style="text-align: center;">FIELD QUALITY CHECK – FINAL REVIEW 19th Decennial Census – 1970</p>	<p>1. District office name and code</p> <hr/> <p>2. Name of Crew Leader</p> <hr/> <p>3. ED Nos.</p> <hr/> <p>4. Name of Enumerator</p>
--	--

A. CHECK ON COVERAGE. On the enumerator's map(s), see if a check mark has been entered inside each block or section. In areas where houses are not numbered, see that serial numbers have been entered on the map(s). If check marks or serial numbers are missing, check **FAIL** and return the assignment to the enumerator to complete coverage; otherwise check **PASS**. Pass Fail

B. CHECK FOR MISSING QUESTIONNAIRES. Go through the box of questionnaires to see that there is a questionnaire for each serial number listed in the address registers. List serial numbers of missing questionnaires on the back of this form and check the reason for the missing questionnaire in the register. If all the serial numbers on your list are deleted in the register, check **PASS**; otherwise check **FAIL** and send the enumerator back for missing questionnaires, or go yourself. (See Chapter 9 of D-501 if information cannot be obtained for some missing questionnaires.) After each ED has passed Check B, sign the D-164 to certify that a questionnaire has been obtained for every serial number--that has not been deleted--in the ED. Pass Fail

C. CHECK FOR INCOMPLETE QUESTIONNAIRES. Remove the questionnaires from the box. Search the questionnaires looking for any that are marked "incomplete" or have no entry in the top margin. Examine each such questionnaire. If it has less than Last Resort information (as described in Chapter 9 of D-501), treat it as a missing questionnaire that fails Check B. List below ED and serial numbers of incompletes that contain at least Last Resort information. If more serial numbers are listed than the maximum allowed, check **FAIL**; otherwise check **PASS**. If either section fails this check, give the enumerator the incomplete questionnaires for the section(s) that fail and tell him to complete them.

SHORT FORM					LONG FORM Δ & \bullet		
ED	ED	ED	ED	ED	ED	ED	ED
Serial Nos.	Serial Nos.	Serial Nos.					

<p>(Mark one)</p> <p>Maximum allowed 12 <input type="checkbox"/> Pass <input type="checkbox"/> Fail</p>	<p>(Mark one)</p> <p>Maximum allowed 5 <input type="checkbox"/> Pass <input type="checkbox"/> Fail</p>
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D. CHECK ITEMS a4, a5, and B. Select 15 questionnaires from the assignment as follows: Take 5 questionnaires in succession from the top third of the questionnaires in the box; 5 from the middle and 5 from the bottom third. Check items a4, a5 and B on page 3 of each questionnaire. If there is one omission or more, check **FAIL**; return the entire assignment to the enumerator and have him complete these items on every questionnaire in the assignment. Otherwise check **PASS**. Pass Fail

E. CHECK ON USE OF CORRECT QUESTIONNAIRE. In the four boxes below enter totals obtained as follows:

1. Write down the last serial number assigned in each address register in the assignment. Add them together and enter the total in box (1).
2. Count the number of serial numbers deleted in ALL address registers in the assignment.
3. Enter the difference (Box 1 minus box 2) in box 3.
4. Count the number of Δ and \bullet questionnaires in the assignment. Enter the total in box (4). Open D-501 to Table 1 (Chapter 9). Find the range of numbers in column 1 in which the entry in box (3) falls. Look at the range of numbers in column 2 for this line. If the entry in box (4) is within the range of numbers in column 2, check **PASS**; otherwise check **FAIL** and follow the instructions in Chapter 9.

Total serial numbers used (1)	Number of Serial Nos. deleted (2)	Total forms (1 minus 2) (3)	Δ and \bullet forms (4)	Pass or fail
				<input type="checkbox"/> Pass <input type="checkbox"/> Fail

Form D-155. Office Quality Check

<p>FORM D-155 (3-3-69) C</p> <p style="text-align: center;">OFFICE QUALITY CHECK 19th Decennial Census - 1970</p>	<p style="text-align: center;">U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS</p> <p>1. District office name and code</p> <hr/> <p>2. ED No.</p>
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A. SCREEN QUESTIONNAIRES FOR COMPLETENESS. For each ED, open the stack of questionnaires at random - sometimes near the top, sometimes near the middle, and sometimes near the bottom. Screen 15 consecutive questionnaires, (some will be short forms, some will be long forms). Then screen 7 additional, consecutive long forms. Look for the following on each form:

1. **Page 2** - For each person listed in question 1 on page 2, entries in at least three of the following four questions: 2, 3, 4, and 8.
2. **Page 3** - Entries in questions A, H2, H3, H4, H6, H10a (and H10b when applicable) and an entry in either H9 or C.
3. **Long-form population pages** - For each person listed on page 2, an entry in any 5 or more questions on the set of long form population pages for that person.

If entries have been made in the questions mentioned above, or if the two c/o circles at the bottom of page 3 are filled, the questionnaire has passed. Otherwise it has failed. If three or more of the 22 questionnaires fail, mark "Fail" in the box to the right. Otherwise mark "Pass."

Pass
 Fail

B. MAKE SAMPLING CHECK

1. Copy from Section 12 of Address Register cover:

	Item No.	Number
Total housing units	12k	
Total population	12m	
Sample population	12n	

2. Compute the following and enter the results:

- a. Divide 12m by 12k to determine average number of persons per housing unit . . .
- b. Multiply 12n by 5
- c. Subtract to find difference between 12m and answer in step 2b
- d. From tolerance table on page 42 of D-538, find the maximum permissible difference. Do this by matching the total population entered in 12m with the average persons per housing unit determined in step 2a. The maximum permissible difference is

Results

3. Compare results for steps 2c and 2d. If the difference computed in step 2c is greater than maximum permissible difference determined in step 2d, mark "Fail." Otherwise, mark "Pass." . .

Pass
 Fail

Computations and/or notes

Form D-185. Office Quality Check

<p>FORM D-185 (3-3-69) D</p> <p style="text-align: center;">OFFICE QUALITY CHECK 19th Decennial Census - 1970</p>	<p style="text-align: center;">U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS</p>	<p>1. District office name and code</p> <hr/> <p>2. ED No.</p>
<p>A. SCREEN QUESTIONNAIRES FOR COMPLETENESS. For each ED, open the stack of questionnaires at random - sometimes near the top, sometimes near the middle, and sometimes near the bottom. Screen 15 consecutive questionnaires, (some will be short forms, some will be long forms). Then screen 7 additional, consecutive long forms. Look for the following on each form:</p> <ol style="list-style-type: none"> 1. Page 2 - For each person listed in question 1 on page 2, entries in at least three of the following four questions: 2, 3, 4, and 8. 2. Page 3 - Entries in questions A, H2, H3, H4, H6, H10a (and H10b when applicable) and an entry in either H9 or C. 3. Long-form population pages - For each person listed on page 2, an entry in any 5 or more questions on the set of long form population pages for that person. <p>If entries have been made in the questions mentioned above, or if the two c/o circles at the bottom of page 3 are filled, the questionnaire has passed. Otherwise it has failed. If three or more of the 22 questionnaires fail, mark "Fail" in the box to the right. Otherwise mark "Pass."</p> <p style="text-align: center;"><i>If the ED fails check A, skip check B.</i></p>		<p><input type="checkbox"/> Pass</p> <p><input type="checkbox"/> Fail</p>
<p>B. EDIT FIVE CONSECUTIVE LONG FORM QUESTIONNAIRES</p> <ol style="list-style-type: none"> 1. Select five consecutive long forms. In some ED's, start selecting long forms from the top of the stack; in other ED's from the middle; and in still others, from the bottom. Do not select questionnaires marked "Incomplete." 2. Edit each questionnaire selected following the editing instructions in chapter 7, section 7.C in the Office Operations Manual. 3. Mark the errors on each questionnaire in blue. 4. In the space below, enter: <ul style="list-style-type: none"> - "21" each time "POP" is entered above a person's name in question 1 on page 2. - 2 tally marks each time item a4*, a5, or B on page 3 is not filled. (*If there is no entry in item a4 of the address label, item a4 on page 3 should be blank.) - 1 tally mark for each other error. <p>If and when you reach 21 errors in the space below, mark "Fail" in the box to the right. If after editing all five questionnaires you have not tallied 21 errors, mark "Pass."</p> <div style="border: 1px solid black; width: fit-content; margin: 10px auto; padding: 2px 10px;">Tally marks</div>		<p><input type="checkbox"/> Pass</p> <p><input type="checkbox"/> Fail</p>
<p>Remarks</p> 		

Form D-513. Checklist for Observing Enumerator's Work

CHECKLIST FOR OBSERVING ENUMERATOR'S WORK

- A. Reviewing failed edit follow-up procedures
 - 1. Is the enumerator obtaining the missing information?
 - 2. Is he completing the "For Census Enumerator's Use Only" column correctly?
 - 3. Is he marking "complete" on the failed-edit questionnaires he resolves?
 - 4. Is he filling column (10) of the Address Register for questionnaires which have been completed?
- B. Reviewing completed nonresponse questionnaires
 - 1. Is he using the appropriate type questionnaire for the household?
 - 2. Is he filling items 10 through 12 and item A?
 - 3. Is he filling the "For Census Enumerator's Use Only" column?
 - 4. On long forms, is he filling all required housing questions and a set of population pages for each person listed?
 - 5. Has the front of each questionnaire been marked "complete" or "incomplete"?
- C. Observing several interviews
 - 1. Did the enumerator introduce himself properly?
 - 2. Did he use the correct type of questionnaire?
 - 3. Did he fill the address label correctly?
 - 4. Did he ask all the required questions?
 - 5. Did he ask the questions properly?
 - 6. Did he thank the respondent when he completed the interview?
 - 7. Did he complete column (10) of the Address Register for completed cases?
 - 8. Did he mark "complete" or "incomplete" on the questionnaire cover?
 - 9. Did he handle vacants properly?
 - 10. Did he plan his schedule in an efficient manner to include making callbacks?