



*National Survey of  
Professional,  
Administrative,  
Technical,  
and Clerical Pay*

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Bulletin No. 1585

UNITED STATES DEPARTMENT OF LABOR  
BUREAU OF LABOR STATISTICS

*National Survey of  
Professional,  
Administrative,  
Technical,  
and Clerical Pay*

**June 1967**



Accountants and Auditors  
Attorneys  
Personnel Management  
Buyers  
Engineers and Chemists  
Engineering Technicians  
Draftsmen  
Office Clerical

**UNITED STATES DEPARTMENT OF LABOR**

Willard Wirtz, Secretary

**BUREAU OF LABOR STATISTICS**

Arthur M. Ross, Commissioner

**Bulletin No. 1585**

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## Preface

This bulletin summarizes the results of the Bureau's annual survey of compensation for selected professional, administrative, technical, and clerical pay in private industry. The salary information, which relates to June 1967, is representative of establishments in a broad spectrum of industries throughout the United States except Alaska and Hawaii.

The survey was designed by the Bureau of Labor Statistics in cooperation with the Bureau of the Budget and the Civil Service Commission. It provides a fund of broadly based information on salary levels and distributions in private employment. As such, the results are useful as a guide for salary administration purposes and for general economic analysis. In addition, they provide information on pay in private industry in a form suitable for use in appraising the compensation of salaried employees in the Federal civil service. (See appendix D.) It should be emphasized that these surveys, like any other salary surveys, are in no sense calculated to supply mechanical answers to questions of pay policy.

The list of occupations studied represents a wide range of pay levels. Individually, the occupations selected were judged to be (a) surveyable in industry within the framework of a broad survey design, and (b) representative of occupational groups which are numerically important in industry as well as in the Federal service.

Occupational definitions prepared for use in the collection of the salary data reflect duties and responsibilities in industry; however, they are designed to be translatable to specific pay grades in the general schedule applying to Federal Classification Act employees. This necessitated limiting some occupations and work levels to employees with specific job functions that could be classified uniformly among establishments. The Bureau of Labor Statistics and the Civil Service Commission collaborated in the preparation of the definitions. (See appendix C.)

The scope of the survey, in terms of industrial, geographic, and minimum size coverage, remained the same as in the 1966 survey. The occupational coverage, however, was amended to include secretaries and to exclude the freight-rate clerk positions.

Although this study provides only nationwide data, separate data are available for the clerical and drafting occupations in each of the 85 metropolitan areas in which the Bureau conducts locality studies. (See the areas listed in the order form at the back of this bulletin.) These area reports also include information on such supplementary benefits as paid vacations, holidays, and health, insurance, and pension plans relating to nonsupervisory office workers.

The survey could not have been accomplished without the cooperation of the many firms whose salary scales provide the basis for the statistical data presented in this bulletin. The Bureau, on its own behalf and on behalf of the other Federal agencies that collaborated in planning the survey, wishes to express sincere appreciation for the splendid cooperation it has received.

This study was conducted in the Bureau's Office of Wages and Industrial Relations by the Division of Occupational Pay. The analysis was prepared by Boyd B. O'Neal. Field work for the survey was directed by the Bureau's Assistant Regional Directors, Division of Operations.



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# National Survey of Professional, Administrative, Technical, and Clerical Pay, June 1967

## Summary

June 1967 average salaries for nine-tenths of the 51 professional and administrative occupational work levels covered by this survey were from 2.9 to 8 percent higher than in March 1966, the reference date of the previous survey.<sup>1</sup> Increases for nearly one-half of these work levels, however, were within 1 percentage point of the median increase, 5.5 percent. Among the numerically more important occupations included in this group, increases averaged 5.2 percent for buyers, 5.4 percent for engineers, 5.5 percent for chemists, and 5.8 percent for accountants. For the first time in recent years, percentage increases for clerical salaries generally were higher than those for professional and administrative occupations. Increases for the 17 clerical levels from February 1966 to June 1967 were in a narrower range (4.4 to 7.7 percent) with a median increase of 6.8 percent.

Average monthly salaries for the 81 occupational work levels varied from \$284 for clerks engaged in routine filing to \$2,274 for the highest level in the attorney series. For engineers, the largest professional occupation surveyed, salaries ranged from \$699 a month for recent college graduates in trainee positions to \$1,853 for engineers VIII, whose typical responsibilities could include the direction of a highly complex and diversified engineering program consisting of many large and important projects. Monthly salaries averaged \$443 for secretaries I, \$384 for general stenographers, and \$329 for typists I, the largest clerical groups represented in the survey. Average monthly salaries of engineering technicians ranged from \$447 to \$778 among five work levels. For most of the occupations, salary levels in metropolitan areas and in large establishments were higher than in all establishments within the full scope of the survey. Salary levels in finance and retail trade industries generally were lower than in other major industry divisions represented in the survey. The lower salaries in finance industries were offset in part by a shorter average workweek.

## Characteristics of the Survey

This survey, the eighth in an annual series, provides nationwide salary levels and distributions for 81 work level categories covering 13 broad occupational groups.<sup>2</sup> It relates to establishments in all areas of the United States except Alaska and Hawaii in the following industries: Manufacturing; transportation, communication, electric, gas, and sanitary services; wholesale trade; retail trade; finance, insurance, and real estate; engineering and architectural services; and research, development, and testing laboratories operated on a

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<sup>1</sup> The previous survey reflects salaries of clerical and drafting occupations in effect February 1966 and those of professional, administrative, and engineering technician occupations in effect March 1966. The timing and the reference date of the current survey were changed to June to provide more current data for those appraising the compensation of salaried employees in the Federal civil service. See appendix B for a detailed description of changes in survey timing.

<sup>2</sup> Results of the earlier survey reports were presented under the title: National Survey of Professional, Administrative, Technical, and Clerical Pay, Winter 1959-60 (BLS Bulletin 1286, 1960); Winter 1960-61 (BLS Bulletin 1310, 1961); Winter 1961-62 (BLS Bulletin 1346, 1962); February-March 1963 (BLS Bulletin 1387, 1963); February-March 1964 (BLS Bulletin 1422, 1964); February-March 1965 (BLS Bulletin 1469, 1965); and February-March 1966 (BLS Bulletin 1535, 1966).



commerical basis.<sup>3</sup> The minimum size of establishment requirements varied by industry division roughly equalizing minimum size scope in terms of white-collar employment. These requirements ranged from 50 employees in the finance, insurance, and real estate division, which is almost entirely composed of white-collar workers, to 250 employees in the manufacturing and retail trade divisions.<sup>4</sup>

Definitions for the occupations included in this study provide for classification of employees according to appropriate work levels (or classes). Within each occupation, the work levels surveyed, usually designated by Roman numerals with class I assigned to the lowest level, are defined in terms of duties and responsibilities. Specific job factors determining classification, however, varied from occupation to occupation.

The number of work level definitions for each occupation varies from one for office boys or girls to eight each for chemists and engineers. More than one level of work was defined for survey in most of the occupations; however, some occupations were purposely defined to cover specific bands of work levels, which were not intended to represent all levels or all workers that may be found in those occupations.

The survey was designed to permit separate presentation of data for metropolitan areas. Coverage in metropolitan areas was extended to include the 227 Standard Metropolitan Statistical Areas in the United States except Alaska and Hawaii, as revised through April 1966 by the Bureau of the Budget, instead of the 221 areas represented in the previous survey. Slightly more than four-fifths of the total employment and nine-tenths of the employment in professional, administrative, technical, clerical, and related occupations within scope of this survey were accounted for by establishments located in metropolitan areas. Nine-tenths of the employees in the selected occupations studied also were employed in metropolitan areas. These proportions varied more for the professional and administrative occupations than for the clerical and drafting occupations.

The selected occupations accounted for more than 1,450,000 employees or about one-fifth of the estimated total employment in professional, administrative, technical, clerical, and related occupations in all establishments within scope of the survey. Employment in the selected occupations varied widely, reflecting actual differences in employment in the various occupations, as well as differences in the range of duties and responsibilities covered by each occupational definition. Among the professional and administrative occupations, the eight levels of engineers accounted for a total of 339,000 employees, whereas, fewer than 4,500 were employed in each of four of the occupational categories as defined for the study (chief accountants, managers of office services, job analysts, and directors of personnel). (See table 1.) Four occupations at all work levels studied (accounting clerks, secretaries, stenographers, and typists) accounted for 70 percent of the 806,000 employees in the clerical occupations studied. The selected drafting room occupations had aggregate employment of about 82,000 and the five engineering technician levels together accounted for about 89,000.

Although women accounted for approximately one-half of the total employment in the occupations studied, they were employed largely in clerical positions. The clerical occupations, in which the proportion of women amounted to more than 90 percent of the employment, were file clerks, keypunch operators, secretaries, stenographers, switchboard operators, and typists. Among tabulating-machine operators, however, women accounted for only one-third of the work force,

<sup>3</sup> February–March 1964 and earlier surveys were limited to establishments in metropolitan areas. For a full description of the scope of the 1967 survey, see appendix A.

<sup>4</sup> February–March 1965 and earlier surveys were limited to establishments having 250 employees or more.

and there were slightly fewer office girls than office boys. Women accounted for one-fifth of the draftsmen-tracers but fewer than 5 percent of the draftsmen and engineering technicians. Women employees in the professional and administrative occupations usually were reported in the first few levels; those in which women accounted for as many as 10 but less than 20 percent of the employment were: Accountants I; job analysts I and II; chemists I and II; and buyers I.

The general level of salaries for each occupation or work level is presented in this study as the arithmetic mean of all the individual salary rates. Median salaries, the amount below and above which the salaries for 50 percent of the employees are found, are also presented in tables 1, 2, and 3.

### Changes in Salary Levels

The following tabulation presents the salary increases that occurred between annual surveys since 1961 for the levels representing each of 13 occupational groups. To determine the increases for each group, all levels of the occupation were combined using employment in the most recent year as a constant employment weight in both years to eliminate the effects of changes in the proportion of employees in the various work levels. The increases were then linked together to obtain the changes that had occurred over the 6-year period since this series began. When making comparisons of change, the longer time interval between the 1966 and 1967 surveys, mentioned earlier, must be considered. Due to the change in survey timing, increases relate to a 15-month interval (March 1966 to June 1967) for the professional, administrative, and engineering technician occupations, and to a 16-month interval (February 1966 to June 1967) for the clerical and drafting occupations. The increases shown for all occupational groups in previous years relate to 12-month periods ending February-March of each year.<sup>5</sup>

Occupational group	Percent increases in average salaries						
	1966 to 1967 <sup>1</sup>	1965 to 1966	1964 to 1965	1963 to 1964	1962 to 1963	1961 to 1962	1961 to 1967
Accountants-----	5.8	3.8	3.5	2.8	3.3	2.8	24.1
Auditors-----	6.0	3.8	3.9	3.1	3.6	2.9	25.6
Chief accountants-----	6.4	3.3	3.9	4.8	2.8	2.6	26.3
Attorneys-----	4.0	4.0	4.2	3.3	4.6	3.2	25.6
Managers, office services-----	6.9	3.3	4.3	2.7	2.2	3.3	25.0
Buyers-----	5.2	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Job analysts-----	4.2	5.4	4.3	3.5	2.6	1.4	23.3
Directors of personnel-----	4.7	3.6	3.5	4.6	3.0	3.7	25.4
Chemists-----	5.5	4.8	3.9	3.3	3.8	3.9	28.0
Engineers-----	5.4	3.7	3.2	2.9	4.4	2.6	24.3
Engineering technicians-----	4.6	2.8	2.3	3.6	2.9	( <sup>3</sup> )	( <sup>3</sup> )
Drafting-----	4.6	1.5	( <sup>4</sup> )	2.6	3.6	3.8	( <sup>4</sup> )
Clerical-----	6.1	3.0	2.4	2.9	2.6	2.9	21.6

<sup>1</sup> The 1966-67 increases reflect changes over a 16-month period for clerical and drafting occupations and a 15-month period for all others.

<sup>2</sup> Buyers were not surveyed before 1966.

<sup>3</sup> Engineering technicians were not surveyed before 1962.

<sup>4</sup> Comparison over this period was not possible for draftsmen because of changes in definitions of work levels in 1965.

<sup>5</sup> The increases from 1965 to 1967 relate to establishments in metropolitan areas and nonmetropolitan counties; all others relate to metropolitan areas only. Establishments employing fewer than 250 workers were excluded before 1966.

In the 1966-67 period, increases in average salaries ranged from 4 to 6.9 percent for all 13 occupational groups studied, with increases for eight of these groups exceeding 5 percent. For most of the occupations, increases were significantly higher than had been recorded for any other period since 1961, when the Bureau began measuring occupational wage trends on a national basis. Although these increases were affected by the longer time interval between the last two surveys, a similar relationship applies when the increases are adjusted to represent a 12-month period. For example, the adjusted increases for the more heavily populated occupations would be 4.6 percent for the accountants and clerical employees, 4.4 percent for chemists, 4.3 percent for engineers, and 3.7 percent for engineering technicians. With only two exceptions, these adjusted increases were higher than any of the increases reported for the same occupations in previous years.

To examine the changes in salaries that have occurred since 1961 for different levels of work, all of the occupational classifications were grouped into the three broad categories described in the tabulation which follows. The year-to-year percent increases for each group were determined by adding average salaries for all occupations in the group for 2 consecutive years, and dividing the later sum by the earlier sum. The resultant relative, less 100, shows the percent of increase. Changes in the scope of the survey or in the occupational definitions were incorporated into the series as soon as two comparable periods were available. The 6-year trends were obtained by linking changes for the individual periods.<sup>6</sup>

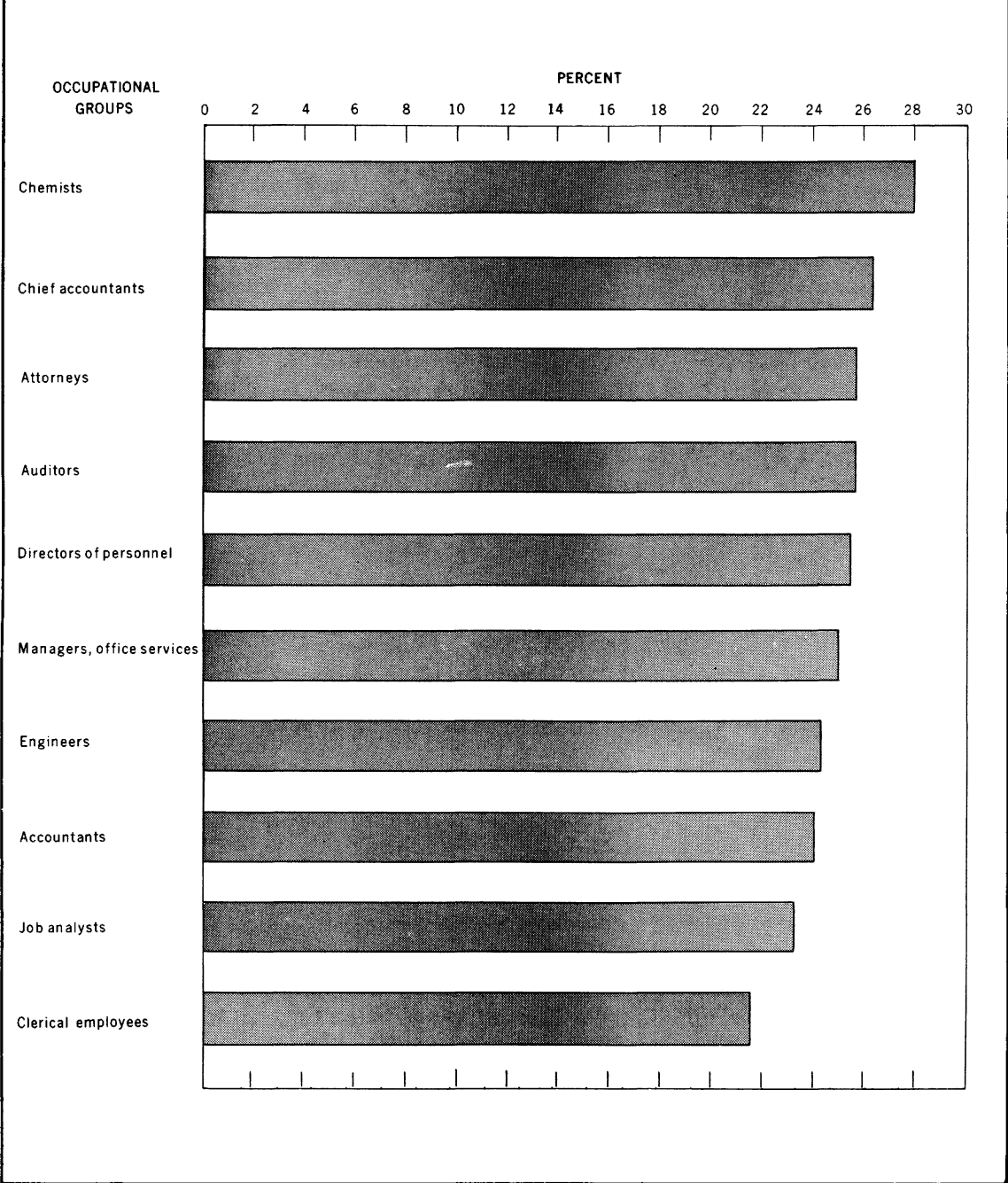
Work level categories <sup>1</sup>	Percent increase in average salaries						
	1966 to 1967 <sup>2</sup>	1965 to 1966	1964 to 1965	1963 to 1964	1962 to 1963	1961 to 1962	1961 to 1967 <sup>2</sup>
Group A:							
Clerical and beginning technician levels-----	6.0	2.9	2.2	2.7	2.7	2.8	20.9
Group B:							
Entry and development profes- sional levels, advanced technician levels, supervisors of nonprofessional levels ----	6.0	3.7	3.3	2.6	4.0	2.6	24.3
Group C:							
Fully experienced professional working levels, supervisors of professional levels, and pro- gram administrative levels ---	5.1	4.2	4.2	3.5	3.7	3.5	26.9

<sup>1</sup> Groups A, B, and C are composed of the occupation levels compared with Federal Classification Act General Schedule grades 1-4, 5-10, and 11-15, respectively, as shown in appendix D.

<sup>2</sup> Because of the change in survey timing, the 1966-67 percent changes relate to a period of more than 1 year. For all clerical and drafting levels, the period is 16 months (from February 1966 to June 1967). For all other occupations the period is 15 months (from March 1966 to June 1967). Thus, for 19 of 21 levels in group A, the period is 16 months; for 24 of 26 levels in group B, and for all 30 levels in group C, the period covered is 15 months. Other year-to-year increases in the table represent the 12-month period ending February-March of each year.

<sup>6</sup> This method of measuring group increases is different from that used in the two previous surveys. In the 1965 and 1966 reports, the group increases were measured by arraying the increases in average salaries for the occupation levels in each group, and determining the median percent increase. Using this method, the median increases from 1966 to 1967 would be 6.7 percent for group A, 6.1 percent for group B, and 5.3 percent for group C.

Chart 1. Rise in Average (Mean) Salaries for Selected Occupational Groups, 1961 to 1967



For most years since 1961, average salaries increased at a higher rate for the professional and administrative levels than for the clerical and beginning technician levels. This pattern is reflected in the combined increases from 1961 to 1967, despite the departure from this trend between 1966 and 1967. During this period, salaries for the clerical and technician levels in group A increased at a rate that exceeded the rate of increase for the fully experienced professional and administrative levels in group C. In prior years, salaries for the occupational levels in group C had shown the highest percentages of increase.

Changes in average salaries reflect not only general salary increases and merit or other increases given to individuals while in the same work level category, but they also may reflect other factors such as employee turnover, expansions or reductions in the work force, and changes in staffing patterns within establishments with different salary levels. For example, an expansion in force may increase the proportion of employees at the minimum of the salary range established for a work level, which would tend to lower the average, whereas, a reduction or a low turnover in the work force may have the opposite effect. Similarly, year-to-year promotions of employees to higher work levels of professional and administrative occupations may affect average salaries, lowering or raising the average. For example, the established salary ranges for such occupations are relatively wide, and promoted employees, who may have been paid the maximum of the salary scale for the lower level, are likely to be replaced by less experienced employees who may be paid the minimum; or vacancies may exist at the time of the resurvey. Occupations most likely to reflect such changes in the salary averages are the higher levels of professional and administrative occupations and single-incumbent positions such as chief accountant, director of personnel, and manager of office services.<sup>7</sup>

#### Average Salaries, June 1967

Average monthly salaries for the occupations included in this survey ranged from \$284 for file clerks I to \$2,274 for the top level of attorney surveyed (table 1). These extremes reflect the wide range of duties and responsibilities represented by the 81 occupational work levels surveyed. Average salaries for the occupational levels, and a brief indication of the duties and responsibilities they represent, are summarized in the following paragraphs.<sup>8</sup>

Among the five levels of **accountants** surveyed, average monthly salaries ranged from \$582 for accountants I to \$1,066 for accountants V. **Auditors** in the four levels defined for survey had average salaries ranging from \$599 a month for auditors I to \$969 for auditors IV. Level I in both the accounting and auditing series included trainees who had bachelor's degrees in accounting or the equivalent in education and experience combined. At each corresponding level, average salaries were higher for auditors than for accountants. For level III, the most heavily populated group in both series, monthly salaries averaged \$740 for accountants and \$787 for auditors. Whereas more than two-thirds of the accountants were employed in manufacturing, this industry division employed fewer than one-half of the auditors.<sup>9</sup> The other large employers of auditors were in the finance, insurance, and real estate division, which accounted for one-fourth of these workers. The proportion of employees in each major industry division within scope of the survey is shown by occupation in table 7 and presented graphically in chart 4, page 15.

<sup>7</sup> These types of occupations also may be subject to greater sampling error, as explained in the last paragraph of appendix A.

<sup>8</sup> Classification of employees in the occupations and work levels surveyed was based on factors detailed in the definitions in appendix C.

<sup>9</sup> Establishments primarily engaged in providing accounting and auditing services were excluded from the survey.

**Chief accountants** were surveyed separately from accountants and included those who develop or adapt and direct the accounting program for a company or an establishment (plant) of a company. Level classification was determined by the extent of delegated authority and responsibility; the technical complexity of the system; and, to a lesser degree, the size of the professional staff directed. Chief accountants at level I, who have authority to adapt the accounting system, established at higher levels, to meet the needs of an establishment of a company with relatively few and stable functions and work processes (directing one or two accountants), averaged \$981 a month. Chief accountants IV,<sup>10</sup> who have authority to establish and maintain the accounting program, subject to general policy guidelines, for a company with numerous and varied functions and work processes (directing as many as 40 accountants), averaged \$1,575 a month. Nearly three-fifths of the chief accountants who met the requirements of the definitions for these four levels were employed in manufacturing industries and almost one-fifth were in the finance, insurance, and real estate division.

**Attorneys** were classified into seven levels based upon the difficulty of their assignments and their responsibilities.<sup>11</sup> Attorneys I, which included new law graduates with less than a year of experience, were not found in sufficient number to permit publishing data for this level. For the next higher level, attorneys II, salaries averaged \$802 a month. Work performed at this level was still relatively uncomplicated since it usually involved problems in which facts were well established and precedents clearly applied. Attorneys in the top level surveyed, level VII, earned an average of \$2,274 a month. These attorneys dealt with legal matters of critical importance to their organizations, and were usually subordinate only to the general counsel or his immediate deputy in very large firms. Finance, insurance, and real estate industries employed almost one-half of the attorneys; manufacturing industries employed three-tenths, and a high proportion of the remainder were employed in public utilities (17 percent).

**Managers of office services** were classified into four levels based on the variety of clerical and other office services supervised and the size of the organization serviced. Those at level I were responsible for providing four or five of the nine office service functions enumerated in the survey definition for a staff of 300 to 600 employees, compared with seven or eight functions for about 1,500 to 3,000 employees at level IV. Among these levels, average monthly salaries ranged from \$713 to \$1,284. Manufacturing industries accounted for almost two-thirds of the employees in the four levels combined, and an additional fifth were employed in finance, insurance, and real estate industries.

**Buyers** averaged \$586 a month at level I, which included those who purchased "off-the-shelf" and readily available items and services from local sources. Buyers IV,<sup>12</sup> who purchased large amounts of highly complex and technical items, materials, or services were paid monthly salaries averaging \$984. Manufacturing industries accounted for 86 percent of the buyers in the four levels.

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<sup>10</sup> Although level V was surveyed, as defined in appendix C, too few employees met requirements for this level to warrant presentation of salary figures.

<sup>11</sup> Establishments primarily engaged in offering legal advice or legal services were excluded from the survey.

<sup>12</sup> Op. cit., footnote 10.

In the personnel management field, four work levels each of **job analysts** and **directors of personnel**<sup>13</sup> were studied. Job analysts I, defined to include trainees under immediate supervision, averaged \$635 compared with \$997 for job analysts IV, who analyze and evaluate a variety of the more difficult jobs under general supervision and who may participate in the development and installation of evaluation or compensation systems. Directors of personnel were limited by definition to those who had programs that included, at a minimum, responsibility for administering a formal job evaluation system, employment and placement functions, and employee relations and services functions. Those with responsibility for actual contract negotiation with labor unions as the principal company representative were excluded. Provisions were made in the definition for weighing various combinations of duties and responsibilities to determine the level classification. Among personnel directors with job functions as specified for the four levels of responsibility, average monthly salaries ranged from \$867 for level I to \$1,599 for level IV. Manufacturing industries accounted for 77 percent of the job analysts and 74 percent of the directors of personnel included in the study; the finance, insurance, and real estate industries ranked next, with 13 percent of the job analysts and 9 percent of the directors of personnel.

**Chemists and engineers** each were surveyed in eight levels. Both series started with a professional trainee level, typically requiring a B.S. degree. The highest level surveyed involved either full responsibility over a very broad and highly complex and diversified engineering or chemical program, with several subordinates each directing large and important segments of the program; or individual research and consultation in difficult problem areas where the engineer or chemist was a recognized authority and where solutions would represent a major scientific or technological advance.<sup>14</sup> Average monthly salaries ranged from \$699 for engineers I to \$1,853 for engineers VIII, and from \$633 for chemists I to \$2,056 for chemists VIII. Although, at level I, the average salaries of engineers exceeded those for chemists by 10 percent, at level IV the difference narrowed to 3 percent, and at level VIII the average salaries of chemists exceeded those for engineers by 11 percent. Level IV, the largest group in each series, included professional employees who were fully competent in all technical aspects of their assignments, worked with considerable independence, and, in some cases, supervised a few professional and technical workers. Manufacturing industries accounted for 79 percent of all engineers and 88 percent of all chemists; public utilities, 10 and less than 2 percent, respectively; and the surveyed engineering and scientific services employed virtually all of the others.

The five-level series for **engineering technicians** was limited, by definition, to employees providing semiprofessional technical support to engineers engaged in such areas as research, design, development, testing, or manufacturing process improvement, and whose work pertained to electrical, electronic, or mechanical components or equipment. Technicians engaged primarily in production or maintenance work were excluded. Engineering technicians I, who performed simple, routine tasks under close supervision, or from detailed procedures, were paid monthly salaries averaging \$447. Engineering technicians V, the highest level surveyed, averaged \$778 a month. That level included fully experienced technicians performing more complex assignments involving responsibility for planning and conducting a complete project of relatively limited scope, or a portion

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<sup>13</sup> Although level V of directors of personnel was surveyed, as defined in appendix C, too few employees met requirements for this level to warrant presentation of salary figures.

<sup>14</sup> It was recognized in the definition that top positions of some companies with unusually extensive and complex engineering or chemical programs were above that level.

of a larger and more diverse project, in accordance with objectives, requirements, and design approaches as outlined by the supervisor or a professional engineer. Averages for intermediate levels III and IV, at which a majority of the technicians surveyed were classified, were \$603 and \$693, respectively. As might be expected, nearly all of the technicians as defined were employed in manufacturing (78 percent) and in the scientific services industries studied (17 percent). Although the ratio of such technicians to engineers studied was about 1 to 4, respectively, in all manufacturing industries, higher ratios of approximately 1 to 2 were found in establishments manufacturing mechanical and electrical equipment and in research, development, and testing laboratories.

In the **drafting field**, the definitions used in the survey covered four levels of work—draftsmen-tracers, and draftsmen I, II, and III. Monthly salaries averaged \$395 for draftsmen-tracers and ranged from \$480 to \$727 among the three levels of draftsmen. Draftsmen-tracers copy plans and drawings prepared by others or prepare simple or repetitive drawings of easily visualized items. The three draftsmen levels as defined ranged from employees preparing detail drawings of single units or parts (level I) to those who, working in close support with the design originator, plan the graphic presentation of complex items having distinctive design features, and either prepare or direct the preparation of the drawings (level III). The drafting employees were distributed by industry in about the same proportion as engineers, with 80 percent in manufacturing, 8 percent in public utilities, and nearly all of the remainder in the selected engineering and scientific services industries studied.

Among the 21 **clerical jobs** included in this study, average monthly salaries ranged from \$284 for file clerks I to \$578 for secretaries IV, the top level of a new series in the current survey. The four levels of secretaries, who were classified according to the position of their supervisors, represent the most heavily populated group of clerical employees. For other large groups, average salaries of \$384 and \$449 were reported for general and senior stenographers; the two levels of typists averaged \$329 and \$390. Generally, average salaries for clerical workers were highest in public utilities and manufacturing industries and lowest in the finance, insurance, and real estate, and retail trade divisions. Employment in manufacturing exceeded that in any of the nonmanufacturing divisions within scope of the survey in 15 of the 21 clerical work levels; highest employment totals in the other six levels were in the finance, insurance, and real estate division. Women accounted for nine-tenths or more of the employees in 15 of the clerical work levels, and men accounted for half or more in four (tabulating-machine operators I, II, and III, and office boys or girls).

Median monthly salaries (the amount below and above which 50 percent of the employees were found) for most of the work levels were slightly lower than the weighted averages (means) cited above (i. e., the salaries in the upper halves of the arrays had a greater effect on the averages than did the salaries in the lower halves). The relative difference between the median and the mean was less than 2 percent for 54 of the 81 work levels and as much as 2 but less than 4 percent in 24 additional levels. The weighted average salaries exceeded the medians by 4 to 5 percent for managers of office services III, keypunch operators I, and office boys or girls.

### Salary Levels in Metropolitan Areas

In most of the occupational work levels, average salaries for employees in metropolitan areas (table 2) were either identical to or slightly higher than average salaries for employees in all establishments within full scope of the survey (table 1). Employment in the survey occupations in metropolitan areas



accounted for approximately nine-tenths of the total nationwide employment reported in these occupations. The proportions varied, however, among occupations and work levels. Nearly all of the attorneys at each level, for example, were employed in metropolitan areas, whereas the proportion of chief accountants and directors of personnel for all levels combined was approximately four-fifths with a smaller proportion at the lowest levels. In a majority of the 81 work levels studied, more than nine-tenths of the employment was in metropolitan areas. It is apparent, therefore, that although average salaries usually were lower in the nonmetropolitan counties, in those work levels in which nearly all of the employment was in metropolitan areas, nonmetropolitan counties could have little effect upon the averages for all establishments combined. Only in three of the 81 work levels studied were average salaries more than 1.5 (but not more than 2.1) percent higher in metropolitan areas than in all areas combined; in all of these cases the proportion of the total employment within nonmetropolitan counties was over 10 percent.

Increases in average salaries in metropolitan area establishments from February-March 1966 to June 1967 were within a half percentage point of increases reported for all areas studied in 65 of the 77 levels. The year-to-year increases in metropolitan areas compared with all areas were larger for 34, smaller for 36 levels, and the same for seven.

#### Salary Levels in Large Establishments

It was possible to present separate data for 72 of the 81 occupation work levels for all establishments with 2,500 employees or more (table 3). Comparisons between employments and relative salary levels in these establishments and all establishments combined also are presented. Establishments employing 2,500 or more accounted for nearly two-fifths of the total employment in professional, administrative, supervisory, and clerical occupations within scope of the survey, and approximately the same proportion of total employment in the selected occupations studied. Large establishments accounted for varying proportions of total employment in the 72 occupational work levels shown in table 3, ranging from 14 to 79 percent (directors of personnel III and job analysts IV, respectively).

The salary levels in large establishments, expressed as a percent of levels in all establishments combined, ranged from less than 100 (for the top level surveyed in each of the attorney, job analyst, and engineering technician series, and managers of office services III) to 120 for directors of personnel III. As shown in the following tabulation, salary averages for large establishments exceeded the all-establishment averages by 5 percent or more in 20 of 21 clerical jobs, but in only 15 of 51 nonclerical jobs.

Pay levels as percent of all establishment average	<u>Number of job categories</u>	
	Professional and administrative	Clerical
Total-----	51	21
90-94-----	1	-
95-100-----	5	-
101-104-----	30	1
105-109-----	12	13
110 and over-----	3	7

These relative salary levels in large establishments tended to be highest for work levels in which such establishments accounted for the smallest proportion of the total employment. Thus, the degree of employment concentration (in large establishments) ranged from 19 to 42 percent for clerical jobs; in almost half of the nonclerical jobs, more than 40 percent were in establishments with 2,500 or more employees.

### Salary Distributions

Percent distributions of employees by monthly salaries are presented for the professional and administrative occupations in table 4, and for engineering technicians in table 5; distributions by weekly salaries are shown for employees in the drafting and clerical occupations in table 6.<sup>15</sup> Within nearly all of the 81 occupation work levels, salary rates for some of the highest paid employees were twice those of the lowest paid employees. All occupations in which two levels or more of work were surveyed showed a substantial degree of overlapping of individual salaries between work levels in the same occupation. Ranges in salary rates of employees in established pay grades or work levels within salary structures of individual firms also exhibited substantial overlapping.

The middle 50 and 80 percent of the range, and the median salary for each occupation work level have been charted (charts 2 and 3) to point up occupational pay relationships as well as the typically greater degree of salary dispersion associated with the higher work levels in each occupational series.

The absolute spread between highest and lowest paid workers within given work levels tended to widen with each successive work level for most occupations in which two levels or more were surveyed. The relative spread in salary ranges varied considerably among occupations, and in most cases, the relative spread was smaller for professional and administrative work levels than for clerical levels studied. Expressing the salary range of the middle 50 percent of employees as a percent of the median salary permitted comparisons of salary ranges for the various work levels on the same basis, and also eliminated extreme low and high salaries from each comparison.

Distribution of work levels by degree of dispersion  
(salary range of middle 50 percent of employees  
expressed as a percent of median salary)

Occupational group	Total	Degree of dispersion				
		Under 15	15 and under 20	20 and under 25	25 and under 30	30 and over
All levels -----	81	8	21	37	13	2
Accountants -----	5	1	3	1		
Auditors -----	4		1	3		
Chief accountants -----	4	1	1	2		
Attorneys -----	6	1		3	1	
Managers, office services -----	4		1	2	1	
Buyers -----	4		1	3		
Job analysts -----	4		3	1		
Directors of personnel -----	4			2	2	
Chemists -----	8		6	1	1	
Engineers -----	8	3	2	3		
Engineering technicians -----	5	2	2	1		
Drafting -----	4			4		
Clerical -----	21		1	11	8	1

<sup>15</sup> Technical considerations dictated the summarization of employee distributions by weekly salaries in the case of the drafting and clerical jobs.

Chart 2. Salaries in Professional and Technical Occupations, June 1967

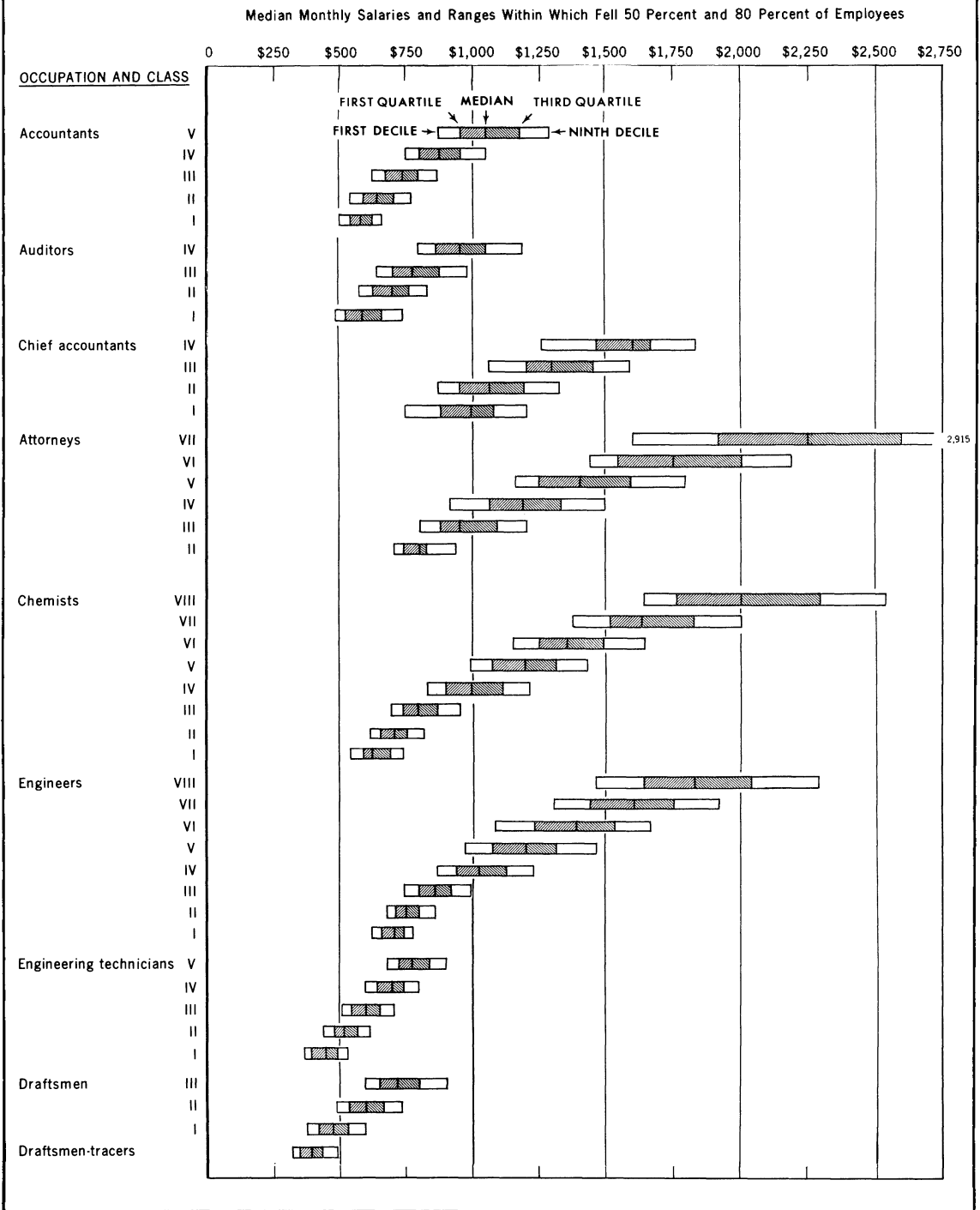
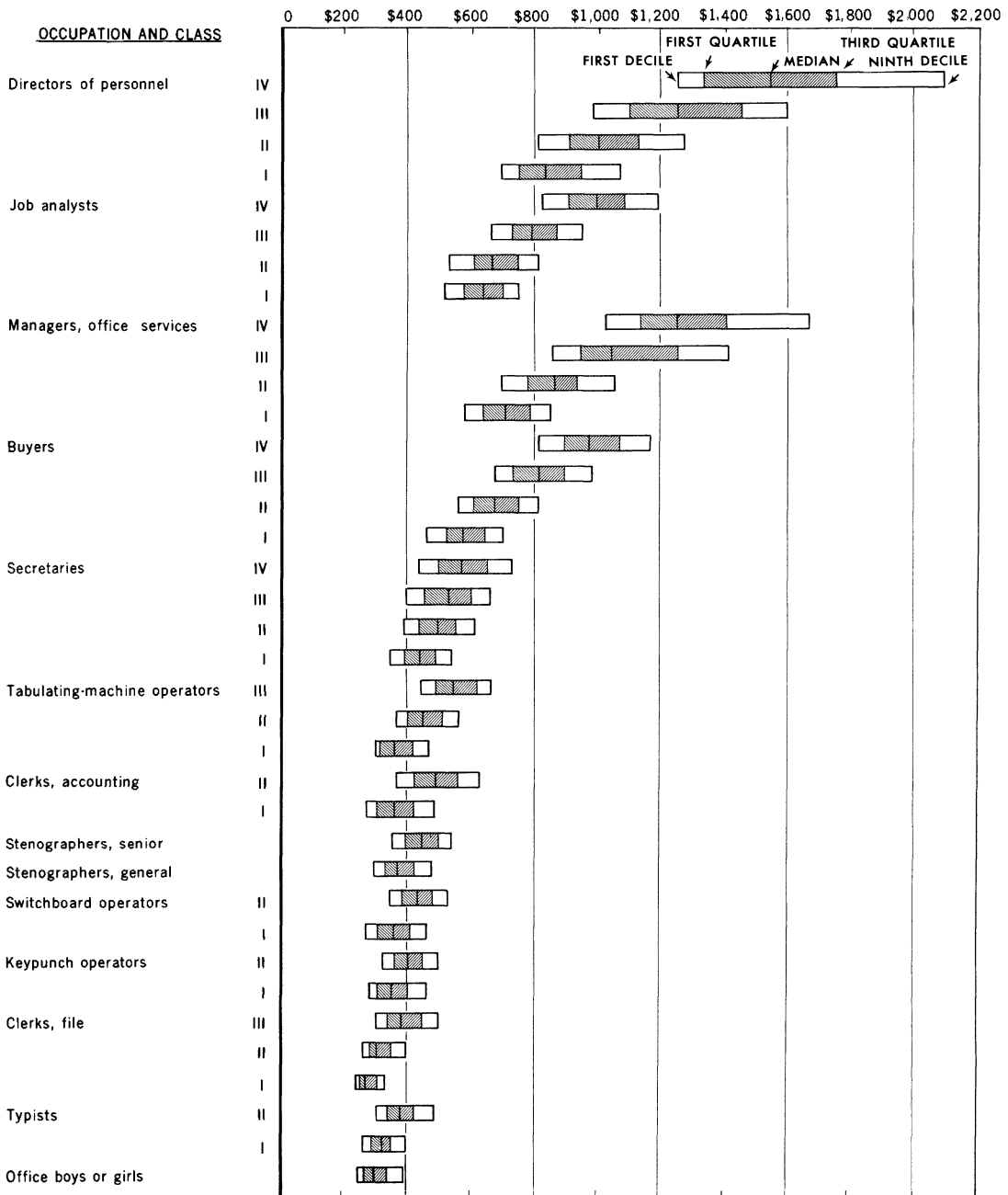


Chart 3. Salaries in Administrative and Clerical Occupations, June 1967

Median Monthly Salaries and Ranges Within Which Fell 50 Percent and 80 Percent of Employees



The wide variation in the degree of dispersion for the professional and administrative salaries is clearly illustrated in the tabulation on page 11. In contrast, salaries for the clerical levels were dispersed in a much more consistent pattern, with the middle ranges falling between 20 and 30 percent of the corresponding medians for all but one level (17 percent for file clerks I).

Differences in the range of salaries paid individuals within work levels surveyed reflect a variety of factors other than differences in the range of duties and responsibilities encompassed by the various work level definitions. Salaries of individuals in the same occupation and grade level may vary considerably within establishments. Salaries of white-collar employees are generally determined on an individual basis or under formalized pay plans which provide for a range in salary rates for each grade level within each occupation. The in-grade salary spread (i. e., the percent difference between the minimum and maximum rates for a grade) tends to be greater in the professional and administrative jobs than in the clerical jobs. For the professional and administrative occupations, the job field tends to be national in scope. Office clerical employees, on the other hand, are usually recruited locally.<sup>16</sup> As pointed out earlier (and indicated in table 7 and chart 4), employment in the various industries within the scope of the survey varies considerably from occupation to occupation. These variations in employment also are reflected in salary levels and distributions to the extent that salaries differ by industry, as explained in the following section.

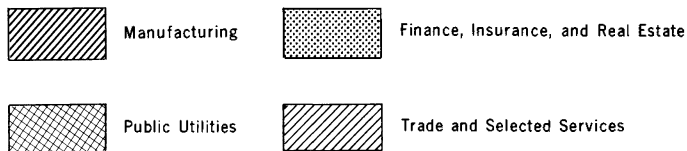
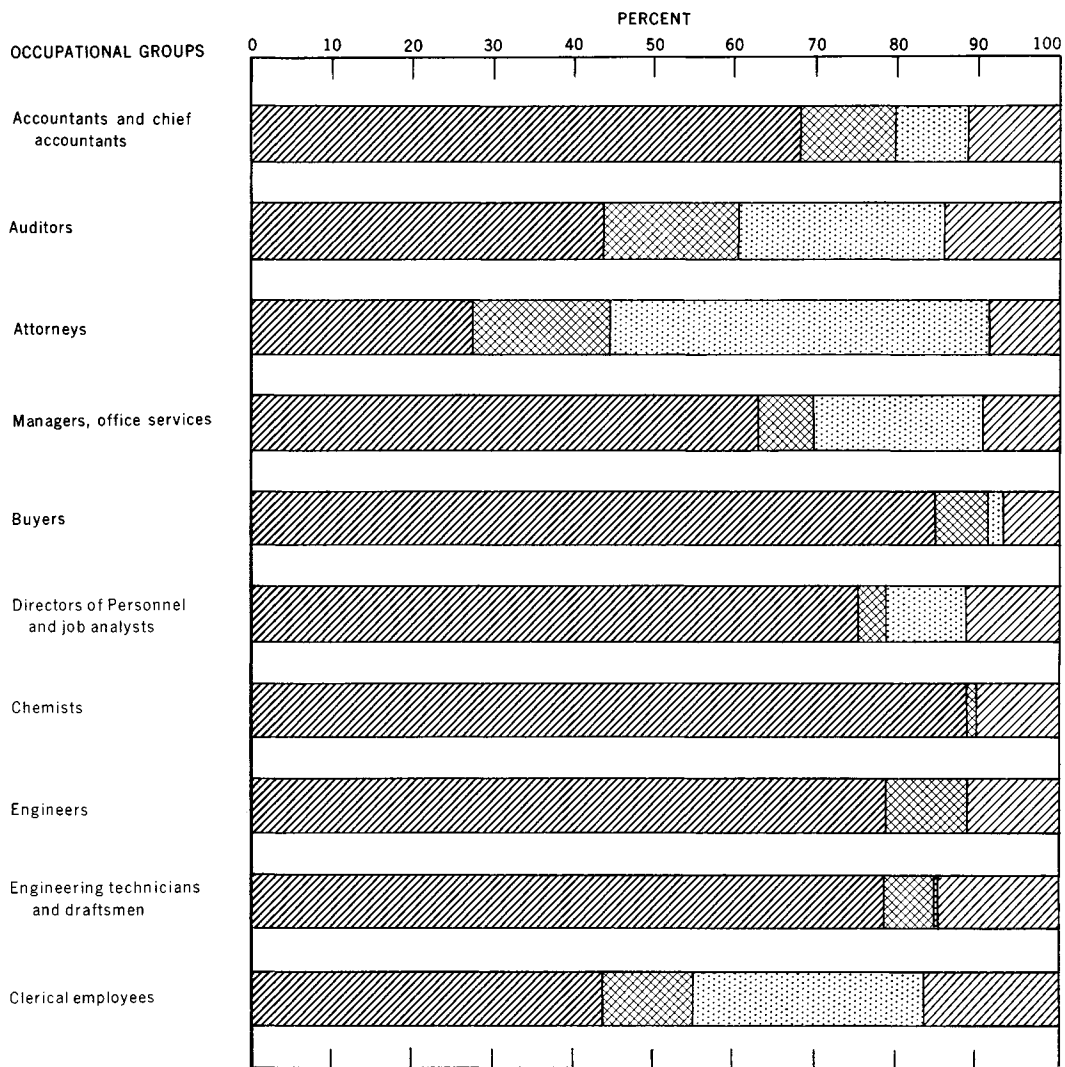
#### Pay Differences by Industry

The survey was planned to permit publication of national salary estimates by level of work for the professional and administrative occupations in all industries within scope of the survey. By combining the data for all levels of work studied in each occupation, it was possible to present comparisons between relative salary levels in major industry divisions and all industries combined (table 8). To obtain relative salary levels, aggregates for the work levels in each occupation combined were computed for all industries and for each major industry division. The all-industry employment in each work level was used as a constant employment weight in computing aggregates for the various occupations by industry to eliminate the influence of differences among industry divisions in the proportion of employment in various work levels. The aggregates for each occupation and industry division were then expressed as percentages of the corresponding groups in all industries combined.

For all of the clerical occupations studied, and for a majority of the professional and administrative occupations in which comparisons could be made, relative salary levels were lower in retail trade and in finance, insurance, and real estate than in other industry divisions. It is apparent, therefore, that in those occupations in which retail trade and the finance industries account for a substantial proportion of the total employment, the average salaries for all industries combined are lowered, and the relative levels in industries such as manufacturing and public utilities tend to be well above 100 percent of the all-industry level. For example, relative pay levels for file clerks of 108 percent in manufacturing and 122 percent in public utilities reflect the influence of lower salaries for the high proportion (53 percent) of all-industry employment accounted for by the finance industries. In finance industries, however, the relatively lower salary levels were offset to the extent that average weekly hours in that industry were lower than in the other industries surveyed, as shown in table 9.

<sup>16</sup> For an analysis of interarea pay differentials in clerical salaries, see Wages and Related Benefits: Metropolitan Areas, United States and Regional Summaries, 1965-66 (ELS Bulletin 1465-86, 1967, Pt. II).

Chart 4. Relative Employment in Selected Occupational Groups by Industry Division, June 1967



The relative salary levels for most of the professional, administrative, and technical occupations tended to be nearest to 100 percent of the all-industry levels in manufacturing industries, which accounted for a high proportion of the total employment in most of these occupations. Relative salary levels for a majority of the clerical and some of the professional and administrative occupations were slightly higher in public utilities than in manufacturing industries. For engineers, however, relative salary levels in utilities were 96 percent of the all-industry level, compared with 100 for manufacturing and 99 for the selected services.

### Average Weekly Hours

The length of the workweek, on which the regular straight-time salary was based, was obtained for individual employees in the occupations studied. The distribution of average weekly hours (rounded to the nearest half hour) is presented in table 9 for all work levels of each occupation combined in major industry divisions surveyed. Average weekly hours were lower in finance, insurance, and real estate than in the other industry divisions. Thus, in finance industries, workweeks averaged 38 hours for a majority of the occupations, compared to 39.5 hours in manufacturing and from 39 to 39.5 hours in the remaining industries surveyed.<sup>17</sup>

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<sup>17</sup> For additional information on scheduled weekly hours of office workers employed in metropolitan areas, see Wages and Related Benefits, Part I: 85 Metropolitan Areas, 1966-67 (BLS Bulletin 1530-87, 1967).

Table 1. Average Salaries: United States

(Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry, <sup>1</sup> United States except Alaska and Hawaii, June 1967, and percent increase in mean salaries since February-March 1966 <sup>2</sup>)

Occupation and class (See definitions in appendix C)	Number of employees <sup>3</sup>	Monthly salaries <sup>4</sup>				Annual salaries <sup>4</sup>				Percent increase in mean salaries <sup>2</sup>
		Mean	Median	Middle range <sup>5</sup>		Mean	Median	Middle range <sup>5</sup>		
				First quartile	Third quartile			First quartile	Third quartile	
<u>Accountants and auditors</u>										
Accountants I.....	4,657	\$582	\$578	\$540	\$625	\$6,990	\$6,936	\$6,480	\$7,500	6.3
Accountants II.....	8,969	652	645	590	701	7,820	7,740	7,080	8,412	7.0
Accountants III.....	22,933	740	735	674	793	8,879	8,820	8,088	9,516	6.6
Accountants IV.....	15,292	888	875	804	957	10,660	10,500	9,648	11,484	5.4
Accountants V.....	6,445	1,066	1,050	955	1,174	12,795	12,600	11,460	14,088	3.7
Auditors I.....	729	599	586	525	665	7,190	7,032	6,300	7,980	12.2
Auditors II.....	1,832	696	690	625	766	8,354	8,280	7,500	9,192	7.9
Auditors III.....	3,804	787	774	699	874	9,449	9,288	8,388	10,488	6.1
Auditors IV.....	2,615	969	952	866	1,050	11,633	11,424	10,392	12,600	3.9
Chief accountants I.....	716	981	990	877	1,079	11,768	11,880	10,524	12,948	9.0
Chief accountants II.....	1,359	1,086	1,066	949	1,190	13,036	12,792	11,388	14,280	6.1
Chief accountants III.....	839	1,324	1,290	1,207	1,450	15,883	15,480	14,484	17,400	4.9
Chief accountants IV.....	338	1,575	1,599	1,464	1,666	18,896	19,188	17,568	19,992	6.9
<u>Attorneys <sup>6</sup></u>										
Attorneys II.....	790	802	800	738	825	9,622	9,600	8,856	9,900	5.5
Attorneys III.....	1,083	987	950	874	1,083	11,843	11,400	10,488	12,996	7.9
Attorneys IV.....	1,586	1,202	1,182	1,061	1,332	14,419	14,184	12,732	15,984	2.6
Attorneys V.....	1,445	1,434	1,400	1,250	1,585	17,206	16,800	15,000	19,020	2.9
Attorneys VI.....	554	1,785	1,749	1,541	2,000	21,415	20,988	18,492	24,000	3.2
Attorneys VII.....	355	2,274	2,250	1,915	2,600	27,293	27,000	22,980	31,200	5.6
<u>Office services</u>										
Managers, office services I.....	295	713	708	639	785	8,562	8,496	7,668	9,420	7.6
Managers, office services II.....	675	866	864	779	930	10,397	10,368	9,348	11,160	5.0
Managers, office services III.....	353	1,084	1,041	947	1,249	13,011	12,492	11,364	14,988	9.5
Managers, office services IV.....	58	1,284	1,245	1,137	1,406	15,414	14,940	13,644	16,872	7.5
<u>Buyers</u>										
Buyers I.....	2,320	586	576	525	641	7,030	6,912	6,300	7,692	5.7
Buyers II.....	8,308	684	674	604	750	8,211	8,088	7,248	9,000	3.7
Buyers III.....	11,899	818	810	729	895	9,819	9,720	8,748	10,740	6.1
Buyers IV.....	4,312	984	970	890	1,066	11,806	11,640	10,680	12,792	4.9
<u>Personnel management</u>										
Job analysts I.....	142	635	639	580	705	7,621	7,668	6,960	8,460	7.6
Job analysts II.....	339	680	665	610	745	8,157	7,980	7,320	8,940	5.2
Job analysts III.....	696	801	795	724	875	9,618	9,540	8,688	10,500	2.0
Job analysts IV.....	539	997	995	904	1,083	11,964	11,940	10,848	12,996	5.5
Directors of personnel I.....	1,078	867	838	750	945	10,407	10,056	9,000	11,340	4.1
Directors of personnel II.....	1,653	1,033	1,000	916	1,125	12,394	12,000	10,992	13,500	4.3
Directors of personnel III.....	1,080	1,277	1,249	1,100	1,450	15,319	14,988	13,200	17,400	5.3
Directors of personnel IV.....	371	1,599	1,541	1,332	1,753	19,186	18,492	15,984	21,036	5.4
<u>Chemists and engineers</u>										
Chemists I.....	2,097	633	624	583	685	7,590	7,488	6,996	8,220	6.8
Chemists II.....	3,908	707	700	649	754	8,482	8,400	7,788	9,048	7.6
Chemists III.....	8,579	810	795	734	866	9,719	9,540	8,808	10,392	6.7
Chemists IV.....	9,677	1,004	985	890	1,115	12,044	11,820	10,680	13,380	5.2
Chemists V.....	7,881	1,200	1,195	1,075	1,313	14,405	14,340	12,900	15,756	4.8
Chemists VI.....	4,128	1,381	1,357	1,249	1,499	16,575	16,284	14,988	17,988	4.0
Chemists VII.....	1,727	1,676	1,630	1,516	1,825	20,110	19,560	18,192	21,900	6.4
Chemists VIII.....	445	2,056	2,000	1,755	2,291	24,676	24,000	21,060	27,492	5.9
Engineers I.....	10,587	699	700	660	738	8,388	8,400	7,920	8,856	8.0
Engineers II.....	28,273	757	750	708	795	9,078	9,000	8,496	9,540	6.9
Engineers III.....	77,570	861	852	794	920	10,330	10,224	9,528	11,040	5.6
Engineers IV.....	105,705	1,035	1,025	930	1,125	12,424	12,300	11,160	13,500	5.4
Engineers V.....	65,835	1,210	1,199	1,077	1,320	14,523	14,388	12,924	15,840	5.3
Engineers VI.....	35,674	1,384	1,384	1,229	1,535	16,604	16,608	14,748	18,420	4.9
Engineers VII.....	11,980	1,611	1,607	1,441	1,751	19,332	19,284	17,292	21,012	3.5
Engineers VIII.....	2,955	1,853	1,825	1,636	2,032	22,235	21,900	19,632	24,384	2.8

See footnotes at end of table.



Table 1. Average Salaries: United States—Continued

(Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry, <sup>1</sup> United States except Alaska and Hawaii, June 1967, and percent increase in mean salaries since February–March 1966<sup>2</sup>)

Occupation and class (See definitions in appendix C)	Number of employees <sup>3</sup>	Monthly salaries <sup>4</sup>				Annual salaries <sup>4</sup>				Percent increase in mean salaries <sup>2</sup>
		Mean	Median	Middle range <sup>5</sup>		Mean	Median	Middle range <sup>5</sup>		
				First quartile	Third quartile			First quartile	Third quartile	
<u>Engineering technicians</u>										
Engineering technicians I .....	5,625	\$447	\$450	\$394	\$493	\$5,366	\$5,400	\$4,728	\$5,916	5.2
Engineering technicians II .....	15,188	525	521	477	564	6,305	6,252	5,724	6,768	5.1
Engineering technicians III .....	25,375	603	599	549	651	7,235	7,188	6,588	7,812	3.6
Engineering technicians IV .....	28,272	693	688	638	740	8,318	8,256	7,656	8,880	5.2
Engineering technicians V .....	14,927	778	768	716	830	9,341	9,216	8,592	9,960	4.5
<u>Draftsmen</u>										
Draftsmen-tracers .....	6,640	395	385	348	435	4,734	4,619	4,171	5,214	7.3
Draftsmen I .....	20,695	480	475	417	532	5,762	5,699	5,005	6,382	3.8
Draftsmen II .....	30,641	602	598	537	660	7,219	7,172	6,445	7,919	3.5
Draftsmen III .....	24,245	727	710	650	792	8,720	8,522	7,799	9,507	5.6
<u>Clerical</u>										
Clerks, accounting I .....	70,910	373	361	313	420	4,471	4,328	3,754	5,039	4.4
Clerks, accounting II .....	51,632	495	489	421	561	5,935	5,866	5,058	6,730	4.4
Clerks, file I .....	30,929	284	278	256	303	3,405	3,337	3,076	3,637	6.8
Clerks, file II .....	27,420	323	313	282	350	3,877	3,754	3,389	4,199	7.4
Clerks, file III .....	8,093	398	387	338	448	4,772	4,640	4,061	5,370	5.4
Key punch operators I .....	54,997	362	348	308	401	4,344	4,171	3,702	4,818	7.7
Key punch operators II .....	34,985	413	408	365	459	4,960	4,901	4,379	5,510	5.7
Office boys or girls .....	26,701	315	301	274	342	3,777	3,616	3,285	4,108	7.2
Secretaries I .....	71,505	443	440	391	495	5,318	5,279	4,693	5,939	(7)
Secretaries II .....	69,791	502	500	440	560	6,019	5,999	5,279	6,716	(7)
Secretaries III .....	40,270	531	530	456	600	6,375	6,358	5,475	7,195	(7)
Secretaries IV .....	13,025	578	572	500	652	6,938	6,862	5,997	7,821	(7)
Stenographers, general .....	71,057	384	374	330	429	4,606	4,484	3,963	5,151	5.5
Stenographers, senior .....	54,407	449	447	395	502	5,393	5,360	4,739	6,027	6.8
Switchboard operators I .....	13,478	363	355	305	413	4,351	4,259	3,664	4,953	4.5
Switchboard operators II .....	9,486	436	435	385	487	5,234	5,214	4,619	5,840	7.3
Tabulating-machine operators I .....	7,741	373	360	318	414	4,481	4,321	3,817	4,968	6.7
Tabulating-machine operators II .....	14,518	458	450	400	510	5,494	5,399	4,799	6,119	6.1
Tabulating-machine operators III .....	7,384	558	550	491	620	6,690	6,599	5,892	7,438	6.8
Typists I .....	83,144	329	322	289	356	3,944	3,858	3,467	4,275	7.2
Typists II .....	44,425	390	380	340	426	4,684	4,559	4,079	5,110	7.0

<sup>1</sup> For scope of study, see table in appendix A.

<sup>2</sup> For drafting and clerical occupations, the percent changes relate to the period February 1966 to June 1967. For other occupations, the period is March 1966 to June 1967. The limitations of percent increase in average salaries as a measure of change in salary scales are discussed on p. 6.

<sup>3</sup> Occupational employment estimates relate to the total in all establishments within scope of the survey and not to the number actually surveyed. For further explanation, see appendix A, p. 39.

<sup>4</sup> Salaries reported relate to the standard salaries that were paid for standard work schedules; i.e., the straight-time salary corresponding to the employee's normal work schedule excluding overtime hours. Nonproduction bonuses are excluded, but cost-of-living bonuses and incentive earnings are included.

<sup>5</sup> The middle range (interquartile) used here is the central part of the array excluding the upper and lower fourths of the employee distribution.

<sup>6</sup> Insufficient data were obtained for level I to warrant presentation of average salaries.

<sup>7</sup> Not reported in 1966.

Table 2. Average Salaries: Metropolitan Areas

(Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry, metropolitan areas,<sup>1</sup> June 1967)

Occupation and class (See definitions in appendix C)	Number of employees <sup>2</sup>	Monthly salaries <sup>3</sup>				Annual salaries <sup>3</sup>			
		Mean	Median	Middle range <sup>4</sup>		Mean	Median	Middle range <sup>4</sup>	
				First quartile	Third quartile			First quartile	Third quartile
<u>Accountants and auditors</u>									
Accountants I.....	4,278	\$ 584	\$ 580	\$ 541	\$ 625	\$ 7,007	\$ 6,960	\$ 6,492	\$ 7,500
Accountants II.....	8,232	653	648	590	709	7,839	7,776	7,080	8,508
Accountants III.....	19,956	743	738	675	797	8,916	8,856	8,100	9,564
Accountants IV.....	13,604	890	875	808	957	10,685	10,500	9,696	11,484
Accountants V.....	5,705	1,068	1,050	955	1,175	12,817	12,600	11,460	14,100
Auditors I.....	711	601	590	525	667	7,207	7,080	6,300	8,004
Auditors II.....	1,729	701	695	625	773	8,407	8,340	7,500	9,276
Auditors III.....	3,561	789	775	699	875	9,473	9,300	8,388	10,500
Auditors IV.....	2,479	971	955	866	1,050	11,654	11,460	10,392	12,600
Chief accountants I.....	565	978	985	860	1,079	11,738	11,820	10,320	12,948
Chief accountants II.....	1,082	1,090	1,071	949	1,194	13,079	12,852	11,388	14,328
Chief accountants III.....	741	1,329	1,300	1,230	1,450	15,951	15,600	14,760	17,400
Chief accountants IV.....	312	1,578	1,599	1,420	1,666	18,931	19,188	17,040	19,992
<u>Attorneys<sup>5</sup></u>									
Attorneys II.....	782	802	800	738	825	9,619	9,600	8,856	9,900
Attorneys III.....	1,026	994	957	877	1,100	11,927	11,484	10,524	13,200
Attorneys IV.....	1,613	1,204	1,182	1,061	1,332	14,447	14,184	12,732	15,984
Attorneys V.....	1,401	1,431	1,399	1,250	1,575	17,174	16,788	15,000	18,900
Attorneys VI.....	541	1,786	1,749	1,541	2,000	21,435	20,988	18,492	24,000
Attorneys VII.....	339	2,305	2,290	1,957	2,623	27,659	27,480	23,484	31,476
<u>Office services</u>									
Managers, office services I.....	262	714	708	639	764	8,571	8,496	7,668	9,168
Managers, office services II.....	543	861	858	781	930	10,334	10,296	9,372	11,160
Managers, office services III.....	342	1,082	1,038	938	1,249	12,986	12,456	11,256	14,988
Managers, office services IV.....	57	1,285	1,245	1,135	1,416	15,422	14,940	13,620	16,992
<u>Buyers</u>									
Buyers I.....	2,030	590	583	525	647	7,082	6,996	6,300	7,764
Buyers II.....	6,722	692	677	610	756	8,310	8,124	7,320	9,072
Buyers III.....	9,982	820	815	733	895	9,845	9,780	8,796	10,740
Buyers IV.....	3,933	988	975	895	1,070	11,855	11,700	10,740	12,840
<u>Personnel management</u>									
Job analysts I.....	131	637	650	579	711	7,644	7,800	6,948	8,532
Job analysts II.....	329	681	665	610	745	8,172	7,980	7,320	8,940
Job analysts III.....	642	805	795	725	882	9,659	9,540	8,700	10,584
Job analysts IV.....	481	996	995	899	1,083	11,954	11,940	10,788	12,996
Directors of personnel I.....	710	885	875	760	970	10,623	10,500	9,120	11,640
Directors of personnel II.....	1,342	1,049	1,035	925	1,151	12,584	12,420	11,100	13,812
Directors of personnel III.....	867	1,282	1,249	1,100	1,499	15,384	14,988	13,200	17,988
Directors of personnel IV.....	327	1,603	1,541	1,325	1,753	19,237	18,492	15,900	21,036
<u>Chemists and engineers</u>									
Chemists I.....	1,775	638	633	589	690	7,652	7,596	7,068	8,280
Chemists II.....	3,420	708	700	650	755	8,496	8,400	7,800	9,060
Chemists III.....	7,335	815	800	738	874	9,782	9,600	8,856	10,488
Chemists IV.....	8,195	1,010	995	895	1,125	12,123	11,940	10,740	13,500
Chemists V.....	6,867	1,208	1,200	1,082	1,325	14,500	14,400	12,984	15,900
Chemists VI.....	3,616	1,386	1,370	1,249	1,507	16,636	16,440	14,988	18,084
Chemists VII.....	1,451	1,694	1,642	1,528	1,857	20,331	19,704	18,336	22,284
Chemists VIII.....	411	2,082	2,025	1,800	2,300	24,985	24,300	21,600	27,600
Engineers I.....	9,518	699	700	660	738	8,392	8,400	7,920	8,856
Engineers II.....	25,892	757	750	708	799	9,089	9,000	8,496	9,588
Engineers III.....	69,726	865	858	796	925	10,378	10,296	9,552	11,100
Engineers IV.....	96,202	1,041	1,030	934	1,130	12,492	12,360	11,208	13,560
Engineers V.....	59,830	1,218	1,206	1,083	1,330	14,615	14,472	12,996	15,960
Engineers VI.....	32,536	1,390	1,395	1,239	1,542	16,675	16,740	14,868	18,504
Engineers VII.....	10,802	1,620	1,624	1,455	1,759	19,442	19,488	17,460	21,108
Engineers VIII.....	2,672	1,863	1,833	1,650	2,042	22,354	21,996	19,800	24,504

See footnotes at end of table.

Table 2. Average Salaries: Metropolitan Areas—Continued

(Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry, metropolitan areas,<sup>1</sup> June 1967)

Occupation and class (See definitions in appendix C)	Number of employees <sup>2</sup>	Monthly salaries <sup>3</sup>				Annual salaries <sup>3</sup>			
		Mean	Median	Middle range <sup>4</sup>		Mean	Median	Middle range <sup>4</sup>	
				First quartile	Third quartile			First quartile	Third quartile
<u>Engineering technicians</u>									
Engineering technicians I -----	5,069	\$ 449	\$ 451	\$ 399	\$ 493	\$ 5,390	\$ 5,412	\$ 4,788	\$ 5,916
Engineering technicians II -----	12,867	528	524	480	570	6,339	6,288	5,760	6,840
Engineering technicians III -----	21,645	605	599	550	651	7,255	7,188	6,600	7,812
Engineering technicians IV -----	25,686	696	690	640	743	8,347	8,280	7,680	8,916
Engineering technicians V -----	13,438	780	768	716	835	9,355	9,216	8,592	10,020
<u>Draftsmen</u>									
Draftsmen-tracers -----	5,736	399	389	348	438	4,790	4,667	4,171	5,255
Draftsmen I -----	17,608	487	478	425	540	5,841	5,735	5,099	6,478
Draftsmen II -----	26,778	608	602	543	669	7,293	7,228	6,518	8,024
Draftsmen III -----	22,030	734	718	653	799	8,804	8,617	7,842	9,594
<u>Clerical</u>									
Clerks, accounting I -----	62,758	377	367	317	425	4,525	4,406	3,806	5,099
Clerks, accounting II -----	45,231	499	495	426	565	5,987	5,939	5,110	6,778
Clerks, file I -----	27,745	285	278	256	304	3,418	3,337	3,076	3,650
Clerks, file II -----	25,062	325	315	282	355	3,898	3,779	3,389	4,255
Clerks, file III -----	7,614	398	390	338	448	4,773	4,679	4,055	5,370
Keypunch operators I -----	48,424	368	355	315	408	4,418	4,255	3,779	4,901
Keypunch operators II -----	31,340	418	411	369	461	5,014	4,932	4,432	5,531
Office boys or girls -----	25,164	316	303	275	343	3,787	3,639	3,299	4,119
Secretaries I -----	66,346	446	441	391	495	5,352	5,298	4,693	5,944
Secretaries II -----	64,120	505	501	443	561	6,056	6,012	5,318	6,738
Secretaries III -----	36,936	536	535	463	600	6,430	6,418	5,555	7,198
Secretaries IV -----	11,941	585	582	508	660	7,023	6,982	6,100	7,919
Stenographers, general -----	64,431	387	375	335	435	4,643	4,499	4,015	5,214
Stenographers, senior -----	48,635	453	450	400	507	5,430	5,399	4,797	6,090
Switchboard operators I -----	12,563	364	358	310	413	4,370	4,295	3,719	4,953
Switchboard operators II -----	8,757	439	435	391	489	5,268	5,214	4,693	5,867
Tabulating-machine operators I -----	7,038	376	360	319	419	4,506	4,321	3,832	5,032
Tabulating-machine operators II -----	12,997	459	450	400	514	5,509	5,399	4,797	6,173
Tabulating-machine operators III -----	6,657	560	552	491	621	6,716	6,622	5,897	7,456
Typists I -----	74,218	331	325	291	360	3,975	3,899	3,493	4,319
Typists II -----	41,220	392	382	340	430	4,701	4,583	4,079	5,159

<sup>1</sup> For scope of study, see table in appendix A.<sup>2</sup> Occupational employment estimates relate to the total in all establishments within scope of the survey and not to the number actually surveyed. For further explanation, see appendix A, p. 39.<sup>3</sup> Salaries reported relate to the standard salaries that were paid for standard work schedules; i.e., the straight-time salary corresponding to the employee's normal work schedule excluding overtime hours. Nonproduction bonuses are excluded, but cost-of-living bonuses and incentive earnings are included.<sup>4</sup> The middle range (interquartile) used here is the central part of the array excluding the upper and lower fourths of the employee distribution.<sup>5</sup> Insufficient data were obtained for level I to warrant presentation of average salaries.

Table 3. Average Salaries: Establishments Employing 2,500 or More

(Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry<sup>1</sup> in establishments employing 2,500 workers or more,<sup>2</sup> United States except Alaska and Hawaii, June 1967, percent increase in mean salaries since February-March 1966,<sup>3</sup> and comparison with levels in all establishments combined)

Occupation and class (See definitions in appendix C)	Number of employees <sup>4</sup>	Monthly salaries <sup>5</sup>				Percent increase in mean salaries <sup>3</sup>	Levels in large establishments expressed as percent of those in all establishments combined	
		Mean	Median	Middle range <sup>6</sup>			Employment	Mean salaries
				First quartile	Third quartile			
<u>Accountants and auditors</u>								
Accountants I .....	1,986	\$ 599	\$ 599	\$ 556	\$ 632	6.2	43	103
Accountants II .....	3,967	679	665	621	730	5.3	44	104
Accountants III .....	8,162	766	760	700	823	5.7	36	104
Accountants IV .....	5,264	906	896	825	975	5.6	34	102
Accountants V .....	2,515	1,075	1,056	958	1,184	5.8	39	101
Auditors II .....	756	713	702	638	784	7.7	41	102
Auditors III .....	1,452	819	800	716	915	6.1	38	104
Auditors IV .....	1,146	977	971	874	1,072	6.2	44	101
Chief accountants III .....	195	1,457	1,433	1,301	1,617	7.3	23	110
Chief accountants IV .....	123	1,628	1,582	1,353	1,832	10.0	36	103
<u>Attorneys</u>								
Attorneys II .....	177	890	867	787	973	8.7	22	111
Attorneys III .....	377	1,070	1,060	949	1,166	7.9	35	108
Attorneys IV .....	415	1,301	1,282	1,133	1,445	5.5	25	108
Attorneys V .....	377	1,472	1,457	1,291	1,624	2.9	26	103
Attorneys VI .....	233	1,843	1,824	1,645	2,082	3.2	42	103
Attorneys VII .....	180	2,214	2,200	1,915	2,500	5.6	51	97
<u>Office services</u>								
Managers, office services III .....	138	1,019	998	900	1,108	4.0	39	94
<u>Buyers</u>								
Buyers I .....	560	640	625	568	699	4.1	24	109
Buyers II .....	2,827	718	708	639	778	3.2	34	105
Buyers III .....	5,083	837	835	749	920	4.5	43	102
Buyers IV .....	2,644	985	973	895	1,068	4.2	61	100
<u>Personnel management</u>								
Job analysts II .....	171	700	695	625	773	.7	50	103
Job analysts III .....	522	816	815	730	896	2.0	75	102
Job analysts IV .....	425	992	990	899	1,084	6.0	79	99
Directors of personnel III .....	151	1,537	1,575	1,374	1,666	6.1	14	120
Directors of personnel IV .....	111	1,683	1,640	1,445	1,882	3.8	30	105
<u>Chemists and engineers</u>								
Chemists I .....	509	677	676	638	725	8.1	24	107
Chemists II .....	1,505	742	740	682	801	5.1	39	105
Chemists III .....	2,923	860	840	765	940	7.0	34	106
Chemists IV .....	3,586	1,036	1,020	900	1,155	4.6	37	103
Chemists V .....	3,024	1,243	1,235	1,114	1,357	5.2	38	104
Chemists VI .....	1,542	1,410	1,396	1,266	1,529	4.9	37	102
Chemists VII .....	699	1,694	1,648	1,499	1,830	6.8	40	101
Chemists VIII .....	231	2,074	2,025	1,783	2,300	7.1	52	101
Engineers I .....	5,911	714	713	677	750	8.0	56	102
Engineers II .....	17,852	759	750	708	799	6.3	63	100
Engineers III .....	45,249	877	873	810	938	5.2	58	102
Engineers IV .....	67,717	1,052	1,045	949	1,140	4.9	64	102
Engineers V .....	40,345	1,224	1,225	1,100	1,338	4.7	61	101
Engineers VI .....	22,204	1,404	1,420	1,250	1,555	4.6	62	101
Engineers VII .....	6,674	1,675	1,670	1,510	1,811	5.3	56	104
Engineers VIII .....	1,737	1,892	1,850	1,668	2,083	3.0	59	102
<u>Engineering technicians</u>								
Engineering technicians I .....	3,140	459	458	411	499	7.0	56	103
Engineering technicians II .....	7,500	531	526	488	568	4.9	49	101
Engineering technicians III .....	14,073	614	612	564	661	3.5	55	102
Engineering technicians IV .....	17,830	698	695	644	747	5.1	63	101
Engineering technicians V .....	11,001	776	769	720	829	4.9	74	100

See footnotes at end of table.

Table 3. Average Salaries: Establishments Employing 2,500 or More—Continued

(Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry<sup>1</sup> in establishments employing 2,500 workers or more,<sup>2</sup> United States except Alaska and Hawaii, June 1967, percent increase in mean salaries since February–March 1966,<sup>3</sup> and comparison with levels in all establishments combined)

Occupation and class (See definitions in appendix C)	Number of employees <sup>4</sup>	Monthly salaries <sup>5</sup>				Percent increase in mean salaries <sup>3</sup>	Levels in large establishments expressed as percent of those in all establishments combined	
		Mean	Median	Middle range <sup>6</sup>			Employment	Mean salaries
				First quartile	Third quartile			
<u>Draftsmen</u>								
Draftsmen-tracers _____	3,039	\$416	\$408	\$356	\$471	6.1	46	105
Draftsmen I _____	7,919	517	512	456	568	3.6	38	108
Draftsmen II _____	12,366	630	630	569	691	4.7	40	105
Draftsmen III _____	11,695	764	745	678	850	6.6	48	105
<u>Clerical</u>								
Clerks, accounting I _____	14,725	414	409	348	479	6.4	21	111
Clerks, accounting II _____	11,590	548	549	468	621	5.0	22	111
Clerks, file I _____	5,834	309	300	274	337	2.3	19	109
Clerks, file II _____	7,110	360	354	307	410	3.4	26	111
Clerks, file III _____	2,727	431	431	370	480	.7	34	108
Keypunch operators I _____	15,830	402	391	337	461	6.3	29	111
Keypunch operators II _____	11,747	445	442	391	499	5.2	34	108
Office boys or girls _____	7,563	342	322	291	378	6.9	28	109
Secretaries I _____	19,312	471	473	425	520	(7)	27	106
Secretaries II _____	28,178	535	541	478	584	(7)	40	107
Secretaries III _____	10,731	592	585	526	647	(7)	27	111
Secretaries IV _____	3,062	642	630	574	705	(7)	24	111
Stenographers, general _____	25,153	414	408	361	465	5.3	35	108
Stenographers, senior _____	22,895	477	480	425	529	6.2	42	106
Switchboard operators I _____	3,004	390	390	330	445	2.9	22	107
Switchboard operators II _____	3,542	467	468	420	520	6.6	37	107
Tabulating-machine operators I _____	2,863	401	391	333	467	6.4	37	108
Tabulating-machine operators II _____	5,897	470	467	411	530	5.9	41	103
Tabulating-machine operators III _____	3,064	585	578	521	643	6.6	41	105
Typists I _____	20,247	361	348	310	400	5.9	24	110
Typists II _____	16,659	417	407	360	474	6.9	37	107

<sup>1</sup> For scope of study, see table in appendix A.

<sup>2</sup> Includes data for a few establishments with less than 2,500 employees of 5 of the largest companies studied that provided companywide data unidentified by size of establishment. This applies only to data for occupations other than drafting and clerical.

<sup>3</sup> For drafting and clerical occupations the percent change relates to the period February 1966 to June 1967. For other occupations the period is March 1966 to June 1967. The limitations of percent increase in average salaries as a measure of change in salary scales are discussed on p. 6.

<sup>4</sup> Occupational employment estimates relate to the total in all establishments within scope of the study and not to the number actually surveyed. For further explanation, see p. 39.

<sup>5</sup> Salaries reported relate to the standard salaries that were paid for standard work schedules; i.e., the straight-time salary corresponding to the employee's normal work schedule excluding overtime hours. Nonproduction bonuses are excluded, but cost-of-living and incentive earnings are included.

<sup>6</sup> The middle range (interquartile) used here is the central part of the array excluding the upper and lower fourths of the employee distribution.

<sup>7</sup> Not reported in 1966.

Table 4. Employment Distribution by Salary: Professional and Administrative Occupations

(Percent distribution of employees in selected professional and administrative occupations, by average monthly salaries, United States except Alaska and Hawaii, <sup>1</sup> June 1967)

Average monthly salaries	Accountants					Auditors				Chief accountants			
	I	II	III	IV	V	I	II	III	IV	I	II	III	IV
Under \$450.....	1.6	-	-	-	-	3.2	-	-	-	-	-	-	-
\$450 and under \$475.....	2.9	(0.7)	-	-	-	5.3	-	-	-	-	-	-	-
\$475 and under \$500.....	3.7	2.0	-	-	-	3.6	-	-	-	-	-	-	-
\$500 and under \$525.....	8.7	2.8	-	-	-	10.7	(0.9)	-	-	-	-	-	-
\$525 and under \$550.....	12.0	5.1	(1.6)	-	-	8.4	2.8	(1.1)	-	-	-	-	-
\$550 and under \$575.....	15.5	6.6	1.4	-	-	13.4	5.7	1.9	-	-	-	-	-
\$575 and under \$600.....	15.5	9.9	2.5	-	-	7.8	6.3	1.8	-	-	-	-	-
\$600 and under \$625.....	13.4	11.6	4.1	-	-	7.7	7.4	2.4	-	-	-	-	-
\$625 and under \$650.....	12.3	12.9	6.6	-	-	8.5	9.6	4.3	-	1.5	-	-	-
\$650 and under \$675.....	6.4	12.8	8.7	(1.4)	-	8.0	11.7	10.2	-	-	-	-	-
\$675 and under \$700.....	2.2	8.1	7.9	2.5	-	7.4	8.7	3.3	(0.9)	-	-	-	-
\$700 and under \$725.....	1.6	6.8	12.3	3.1	(0.6)	4.1	11.5	10.0	2.1	1.0	-	-	-
\$725 and under \$750.....	1.3	6.0	9.0	2.6	1.6	4.4	5.4	5.9	2.0	4.9	-	-	-
\$750 and under \$775.....	1.0	4.8	12.0	6.0	.7	1.8	6.1	9.0	2.8	7.4	-	-	-
\$775 and under \$800.....	1.1	3.1	9.4	5.6	.7	2.5	8.1	7.8	2.9	.4	-	-	-
\$800 and under \$825.....	(.7)	2.6	6.1	8.8	1.9	1.0	5.3	6.9	3.7	2.0	(1.3)	-	-
\$825 and under \$850.....	-	1.8	5.5	8.7	2.7	.3	4.0	5.5	6.2	.4	3.1	-	-
\$850 and under \$875.....	-	(2.2)	3.4	9.8	1.9	2.1	1.6	5.0	6.8	6.7	8.8	-	-
\$875 and under \$900.....	-	-	2.8	8.9	1.8	-	1.1	5.7	6.0	3.8	.3	-	-
\$900 and under \$925.....	-	-	2.2	10.2	6.6	-	1.0	3.9	9.3	8.0	6.8	-	-
\$925 and under \$950.....	-	-	1.4	4.7	4.3	-	1.2	1.8	5.0	1.5	2.9	-	-
\$950 and under \$975.....	-	-	1.0	5.9	6.3	-	(1.4)	3.2	5.9	9.4	7.1	-	-
\$975 and under \$1,000.....	-	-	.5	3.1	6.4	-	-	2.2	6.0	4.9	3.0	(1.3)	(1.2)
\$1,000 and under \$1,050.....	-	-	1.1	7.9	13.6	-	-	5.3	15.0	15.6	10.4	5.8	1.2
\$1,050 and under \$1,100.....	-	-	(.4)	4.7	10.6	-	-	1.3	6.7	13.4	11.8	6.4	-
\$1,100 and under \$1,150.....	-	-	-	2.9	10.2	-	-	(1.7)	5.6	5.3	12.7	4.3	.9
\$1,150 and under \$1,200.....	-	-	-	1.8	8.4	-	-	-	4.1	3.5	8.7	5.8	.6
\$1,200 and under \$1,250.....	-	-	-	(1.4)	6.9	-	-	-	3.2	3.9	5.7	4.1	-
\$1,250 and under \$1,300.....	-	-	-	-	6.1	-	-	-	3.3	3.5	5.5	22.8	10.1
\$1,300 and under \$1,350.....	-	-	-	-	4.2	-	-	-	1.4	.3	4.0	6.4	5.3
\$1,350 and under \$1,400.....	-	-	-	-	1.6	-	-	-	(1.4)	2.0	2.4	7.9	.6
\$1,400 and under \$1,450.....	-	-	-	-	1.2	-	-	-	-	(.7)	1.5	9.2	5.0
\$1,450 and under \$1,500.....	-	-	-	-	(1.9)	-	-	-	-	-	.5	7.7	2.4
\$1,500 and under \$1,550.....	-	-	-	-	-	-	-	-	-	-	.9	4.6	12.4
\$1,550 and under \$1,600.....	-	-	-	-	-	-	-	-	-	-	1.4	4.2	3.6
\$1,600 and under \$1,650.....	-	-	-	-	-	-	-	-	-	-	(1.2)	3.7	26.6
\$1,650 and under \$1,700.....	-	-	-	-	-	-	-	-	-	-	-	1.4	13.6
\$1,700 and under \$1,750.....	-	-	-	-	-	-	-	-	-	-	-	1.5	.3
\$1,750 and under \$1,800.....	-	-	-	-	-	-	-	-	-	-	-	1.1	4.1
\$1,800 and under \$1,850.....	-	-	-	-	-	-	-	-	-	-	-	(1.8)	4.1
\$1,850 and under \$1,900.....	-	-	-	-	-	-	-	-	-	-	-	-	1.2
\$1,900 and under \$1,950.....	-	-	-	-	-	-	-	-	-	-	-	-	.9
\$1,950 and under \$2,000.....	-	-	-	-	-	-	-	-	-	-	-	-	.9
\$2,000 and under \$2,050.....	-	-	-	-	-	-	-	-	-	-	-	-	.9
\$2,050 and under \$2,100.....	-	-	-	-	-	-	-	-	-	-	-	-	1.2
\$2,100 and over.....	-	-	-	-	-	-	-	-	-	-	-	-	3.0
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees.....	4,657	8,969	22,933	15,292	6,445	729	1,832	3,804	2,615	716	1,359	839	338
Average monthly salaries.....	\$582	\$652	\$740	\$888	\$1,066	\$599	\$696	\$787	\$969	\$981	\$1,086	\$1,324	\$1,575

See footnote at end of table.

Table 4. Employment Distribution by Salary: Professional and Administrative Occupations—Continued

(Percent distribution of employees in selected professional and administrative occupations, by average monthly salaries, United States except Alaska and Hawaii,<sup>1</sup> June 1967)

Average monthly salaries	Attorneys <sup>2</sup>					
	II	III	IV	V	VI	VII
\$ 600 and under \$ 625.....	3.5	-	-	-	-	-
\$ 625 and under \$ 650.....	1.5	-	-	-	-	-
\$ 650 and under \$ 675.....	2.4	-	-	-	-	-
\$ 675 and under \$ 700.....	2.3	(1.5)	-	-	-	-
\$ 700 and under \$ 725.....	4.7	1.8	-	-	-	-
\$ 725 and under \$ 750.....	15.4	.1	-	-	-	-
\$ 750 and under \$ 775.....	4.3	2.7	-	-	-	-
\$ 775 and under \$ 800.....	13.8	3.3	0.5	-	-	-
\$ 800 and under \$ 825.....	20.6	5.0	2.3	-	-	-
\$ 825 and under \$ 850.....	11.5	5.4	2.8	-	-	-
\$ 850 and under \$ 875.....	2.5	4.8	.2	-	-	-
\$ 875 and under \$ 900.....	3.3	5.5	3.2	-	-	-
\$ 900 and under \$ 925.....	3.5	7.8	2.2	-	-	-
\$ 925 and under \$ 950.....	1.3	7.7	2.2	-	-	-
\$ 950 and under \$ 975.....	1.9	9.7	.5	(0.9)	-	-
\$ 975 and under \$ 1,000.....	1.0	3.4	3.3	1.0	-	-
\$ 1,000 and under \$ 1,050.....	2.9	8.6	6.6	.9	-	-
\$ 1,050 and under \$ 1,100.....	1.5	8.2	5.5	.7	-	-
\$ 1,100 and under \$ 1,150.....	(2.0)	8.8	7.1	2.8	-	-
\$ 1,150 and under \$ 1,200.....	-	4.5	14.9	7.8	-	-
\$ 1,200 and under \$ 1,250.....	-	3.0	12.0	8.0	0.5	-
\$ 1,250 and under \$ 1,300.....	-	4.0	8.2	10.2	3.1	-
\$ 1,300 and under \$ 1,350.....	-	.9	5.8	11.3	1.1	-
\$ 1,350 and under \$ 1,400.....	-	.6	6.5	5.4	.9	-
\$ 1,400 and under \$ 1,450.....	-	.6	2.8	8.0	4.5	-
\$ 1,450 and under \$ 1,500.....	-	1.1	2.6	8.0	5.4	1.4
\$ 1,500 and under \$ 1,550.....	-	(.8)	3.4	7.1	10.8	3.4
\$ 1,550 and under \$ 1,600.....	-	-	2.1	3.3	3.6	5.4
\$ 1,600 and under \$ 1,650.....	-	-	.8	3.9	4.7	.6
\$ 1,650 and under \$ 1,700.....	-	-	2.6	5.6	10.5	1.1
\$ 1,700 and under \$ 1,750.....	-	-	(2.0)	3.0	4.9	2.3
\$ 1,750 and under \$ 1,800.....	-	-	-	2.8	7.8	7.3
\$ 1,800 and under \$ 1,850.....	-	-	-	1.8	8.8	1.1
\$ 1,850 and under \$ 1,900.....	-	-	-	2.0	2.0	1.1
\$ 1,900 and under \$ 1,950.....	-	-	-	.9	2.9	3.7
\$ 1,950 and under \$ 2,000.....	-	-	-	.6	2.2	3.4
\$ 2,000 and under \$ 2,050.....	-	-	-	2.8	3.8	3.1
\$ 2,050 and under \$ 2,100.....	-	-	-	(1.1)	5.4	3.1
\$ 2,100 and under \$ 2,150.....	-	-	-	-	4.3	3.4
\$ 2,150 and under \$ 2,200.....	-	-	-	-	2.9	5.6
\$ 2,200 and under \$ 2,250.....	-	-	-	-	2.5	3.9
\$ 2,250 and under \$ 2,300.....	-	-	-	-	2.2	3.4
\$ 2,300 and under \$ 2,350.....	-	-	-	-	.7	3.4
\$ 2,350 and under \$ 2,400.....	-	-	-	-	1.1	1.7
\$ 2,400 and under \$ 2,450.....	-	-	-	-	1.1	2.5
\$ 2,450 and under \$ 2,500.....	-	-	-	-	(2.3)	4.2
\$ 2,500 and under \$ 2,550.....	-	-	-	-	-	5.1
\$ 2,550 and under \$ 2,600.....	-	-	-	-	-	4.5
\$ 2,600 and under \$ 2,650.....	-	-	-	-	-	4.8
\$ 2,650 and under \$ 2,700.....	-	-	-	-	-	2.8
\$ 2,700 and under \$ 2,750.....	-	-	-	-	-	1.1
\$ 2,750 and under \$ 2,800.....	-	-	-	-	-	2.0
\$ 2,800 and under \$ 2,850.....	-	-	-	-	-	2.3
\$ 2,850 and under \$ 2,900.....	-	-	-	-	-	.8
\$ 2,900 and under \$ 2,950.....	-	-	-	-	-	3.7
\$ 2,950 and under \$ 3,000.....	-	-	-	-	-	2.5
\$ 3,000 and over.....	-	-	-	-	-	5.4
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees.....	790	1,083	1,686	1,445	554	355
Average monthly salaries.....	\$ 802	\$ 987	\$ 1,202	\$ 1,434	\$ 1,785	\$ 2,274

See footnotes at end of table.

Table 4. Employment Distribution by Salary: Professional and Administrative Occupations—Continued

(Percent distribution of employees in selected professional and administrative occupations, by average monthly salaries, United States except Alaska and Hawaii, <sup>1</sup> June 1967)

Average monthly salaries	Managers, office services				Buyers			
	I	II	III	IV	I	II	III	IV
Under \$400.....	-	-	-	-	3.0	-	-	-
\$400 and under \$425.....	-	-	-	-	2.2	-	-	-
\$425 and under \$450.....	-	-	-	-	2.7	-	-	-
\$450 and under \$475.....	-	-	-	-	3.3	(0.8)	-	-
\$475 and under \$500.....	-	-	-	-	4.7	1.2	-	-
\$500 and under \$525.....	1.0	-	-	-	8.9	2.5	-	-
\$525 and under \$550.....	4.1	-	-	-	8.9	2.8	-	-
\$550 and under \$575.....	-	-	-	-	12.2	6.8	(1.2)	-
\$575 and under \$600.....	5.8	1.9	-	-	12.7	6.4	1.2	-
\$600 and under \$625.....	4.1	.7	-	-	9.7	8.8	1.3	-
\$625 and under \$650.....	15.6	1.3	-	-	8.2	8.5	2.3	-
\$650 and under \$675.....	12.5	2.8	-	-	6.5	12.2	4.6	-
\$675 and under \$700.....	3.4	1.8	(0.8)	-	6.5	8.6	4.1	(0.9)
\$700 and under \$725.....	6.8	3.9	1.4	-	2.6	7.9	7.4	1.3
\$725 and under \$750.....	16.3	2.4	.8	-	1.5	7.3	8.1	1.2
\$750 and under \$775.....	4.4	7.9	2.5	-	1.6	7.8	8.0	2.0
\$775 and under \$800.....	5.1	3.7	1.7	-	1.7	4.2	6.7	3.1
\$800 and under \$825.....	3.7	6.8	.8	-	.6	5.1	9.3	2.4
\$825 and under \$850.....	3.4	6.7	1.7	-	1.6	2.2	8.4	4.4
\$850 and under \$875.....	6.8	14.2	4.0	-	(1.0)	1.4	6.2	6.3
\$875 and under \$900.....	3.4	8.9	2.8	-	-	1.2	6.6	4.3
\$900 and under \$925.....	1.7	11.3	5.7	-	-	1.6	7.1	9.2
\$925 and under \$950.....	-	1.8	3.4	-	-	(2.7)	3.5	8.4
\$950 and under \$975.....	-	7.4	3.7	-	-	-	3.1	7.1
\$975 and under \$1,000.....	-	2.5	5.4	3.4	-	-	2.5	6.4
\$1,000 and under \$1,050.....	-	3.6	17.0	15.5	-	-	4.3	13.6
\$1,050 and under \$1,100.....	2.0	2.5	9.9	3.4	-	-	1.9	9.1
\$1,100 and under \$1,150.....	-	5.5	4.2	5.2	-	-	(2.2)	7.3
\$1,150 and under \$1,200.....	-	1.6	2.5	19.0	-	-	-	5.1
\$1,200 and under \$1,250.....	-	(.9)	6.2	6.9	-	-	-	2.8
\$1,250 and under \$1,300.....	-	-	6.8	10.3	-	-	-	2.4
\$1,300 and under \$1,350.....	-	-	1.1	-	-	-	-	1.2
\$1,350 and under \$1,400.....	-	-	3.1	10.3	-	-	-	(1.5)
\$1,400 and under \$1,450.....	-	-	8.2	5.2	-	-	-	-
\$1,450 and under \$1,500.....	-	-	5.9	-	-	-	-	-
\$1,500 and under \$1,550.....	-	-	-	3.4	-	-	-	-
\$1,550 and under \$1,600.....	-	-	-	1.7	-	-	-	-
\$1,600 and under \$1,650.....	-	-	-	3.4	-	-	-	-
\$1,650 and under \$1,700.....	-	-	-	6.9	-	-	-	-
\$1,700 and under \$1,750.....	-	-	-	5.2	-	-	-	-
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees.....	295	675	353	58	2,320	8,308	11,899	4,312
Average monthly salaries.....	\$713	\$866	\$1,084	\$1,284	\$586	\$684	\$818	\$984

See footnote at end of table.



Table 4. Employment Distribution by Salary: Professional and Administrative Occupations—Continued

(Percent distribution of employees in selected professional and administrative occupations, by average monthly salaries, United States except Alaska and Hawaii, <sup>1</sup> June 1967)

Average monthly salaries	Job analysts				Directors of personnel			
	I	II	III	IV	I	II	III	IV
Under \$400.....	1.4	-	-	-	-	-	-	-
\$400 and under \$425.....	1.4	-	-	-	-	-	-	-
\$425 and under \$450.....	-	-	-	-	-	-	-	-
\$450 and under \$475.....	3.5	0.9	-	-	-	-	-	-
\$475 and under \$500.....	1.4	2.1	-	-	-	-	-	-
\$500 and under \$525.....	4.2	2.9	-	-	-	-	-	-
\$525 and under \$550.....	2.8	5.9	-	-	-	-	-	-
\$550 and under \$575.....	6.3	2.7	(1.9)	-	-	-	-	-
\$575 and under \$600.....	9.9	5.3	1.3	-	3.1	-	-	-
\$600 and under \$625.....	10.6	8.6	1.4	-	2.6	-	-	-
\$625 and under \$650.....	12.0	11.8	2.3	-	.2	-	-	-
\$650 and under \$675.....	13.4	12.4	6.9	-	.9	-	-	-
\$675 and under \$700.....	6.3	4.7	4.5	(1.5)	-	-	-	-
\$700 and under \$725.....	8.5	4.7	5.3	1.1	8.3	(0.7)	-	-
\$725 and under \$750.....	6.3	14.2	10.2	1.9	5.6	1.5	-	-
\$750 and under \$775.....	4.9	5.3	8.9	1.5	6.3	1.9	-	-
\$775 and under \$800.....	4.2	7.1	9.3	.6	1.4	3.0	-	-
\$800 and under \$825.....	2.1	3.8	6.8	3.7	11.2	3.9	-	-
\$825 and under \$850.....	.7	1.2	7.6	3.9	11.3	4.1	(1.7)	-
\$850 and under \$875.....	-	2.4	8.0	5.2	7.0	3.0	2.0	-
\$875 and under \$900.....	-	1.5	5.7	4.5	3.4	3.5	.8	-
\$900 and under \$925.....	-	.3	4.7	6.7	8.8	7.7	1.4	-
\$925 and under \$950.....	-	1.5	3.9	4.8	5.0	3.9	.8	-
\$950 and under \$975.....	-	.9	4.0	5.9	6.3	5.0	1.6	-
\$975 and under \$1,000.....	-	-	1.6	10.4	.4	4.7	3.2	-
\$1,000 and under \$1,050.....	-	-	4.2	12.8	3.8	14.8	11.2	-
\$1,050 and under \$1,100.....	-	-	(1.4)	14.8	7.0	7.3	1.9	0.5
\$1,100 and under \$1,150.....	-	-	-	6.3	1.0	11.2	8.1	4.3
\$1,150 and under \$1,200.....	-	-	-	5.9	3.2	8.1	8.7	1.3
\$1,200 and under \$1,250.....	-	-	-	4.1	1.3	2.0	6.1	1.6
\$1,250 and under \$1,300.....	-	-	-	1.5	.8	6.5	8.8	11.6
\$1,300 and under \$1,350.....	-	-	-	1.9	.1	2.0	7.0	12.9
\$1,350 and under \$1,400.....	-	-	-	(1.2)	1.0	2.2	4.1	2.2
\$1,400 and under \$1,450.....	-	-	-	-	-	.6	7.1	4.0
\$1,450 and under \$1,500.....	-	-	-	-	-	.5	2.5	3.0
\$1,500 and under \$1,550.....	-	-	-	-	-	1.1	8.1	10.8
\$1,550 and under \$1,600.....	-	-	-	-	-	(.8)	4.4	10.2
\$1,600 and under \$1,650.....	-	-	-	-	-	-	2.7	4.6
\$1,650 and under \$1,700.....	-	-	-	-	-	-	2.1	5.1
\$1,700 and under \$1,750.....	-	-	-	-	-	-	.3	1.1
\$1,750 and under \$1,800.....	-	-	-	-	-	-	.9	3.2
\$1,800 and under \$1,850.....	-	-	-	-	-	-	1.9	5.7
\$1,850 and under \$1,900.....	-	-	-	-	-	-	.6	1.1
\$1,900 and under \$1,950.....	-	-	-	-	-	-	1.4	1.3
\$1,950 and under \$2,000.....	-	-	-	-	-	-	(.5)	1.3
\$2,000 and under \$2,050.....	-	-	-	-	-	-	-	3.2
\$2,050 and under \$2,100.....	-	-	-	-	-	-	-	1.1
\$2,100 and under \$2,150.....	-	-	-	-	-	-	-	1.1
\$2,150 and under \$2,200.....	-	-	-	-	-	-	-	-
\$2,200 and under \$2,250.....	-	-	-	-	-	-	-	.8
\$2,250 and under \$2,300.....	-	-	-	-	-	-	-	.5
\$2,300 and under \$2,350.....	-	-	-	-	-	-	-	2.7
\$2,350 and over.....	-	-	-	-	-	-	-	4.6
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees.....	142	339	696	539	1,078	1,653	1,080	371
Average monthly salaries.....	\$635	\$680	\$801	\$997	\$867	\$1,033	\$1,277	\$1,599

See footnote at end of table.

Table 4. Employment Distribution by Salary: Professional and Administrative Occupations—Continued

(Percent distribution of employees in selected professional and administrative occupations, by average monthly salaries, United States except Alaska and Hawaii, <sup>1</sup> June 1967)

Average monthly salaries	Chemists							
	I	II	III	IV	V	VI	VII	VIII
Under \$450.....	0.7	-	-	-	-	-	-	-
\$450 and under \$475.....	1.5	-	-	-	-	-	-	-
\$475 and under \$500.....	2.7	-	-	-	-	-	-	-
\$500 and under \$525.....	2.4	-	-	-	-	-	-	-
\$525 and under \$550.....	4.4	(1.6)	-	-	-	-	-	-
\$550 and under \$575.....	4.5	1.0	-	-	-	-	-	-
\$575 and under \$600.....	12.6	4.0	(0.7)	-	-	-	-	-
\$600 and under \$625.....	18.0	7.3	1.0	-	-	-	-	-
\$625 and under \$650.....	12.7	8.1	1.7	-	-	-	-	-
\$650 and under \$675.....	12.1	13.5	5.3	-	-	-	-	-
\$675 and under \$700.....	7.5	12.2	4.0	-	-	-	-	-
\$700 and under \$725.....	8.0	15.0	6.3	(1.1)	-	-	-	-
\$725 and under \$750.....	4.7	9.1	10.9	1.1	-	-	-	-
\$750 and under \$775.....	4.2	8.3	10.5	1.7	-	-	-	-
\$775 and under \$800.....	2.1	5.5	10.0	2.1	-	-	-	-
\$800 and under \$825.....	1.4	5.0	10.3	3.5	-	-	-	-
\$825 and under \$850.....	(.6)	2.6	9.9	6.9	-	-	-	-
\$850 and under \$875.....	-	2.5	5.9	4.3	-	-	-	-
\$875 and under \$900.....	-	2.4	4.5	6.1	(2.1)	-	-	-
\$900 and under \$925.....	-	(2.0)	5.0	8.1	1.3	-	-	-
\$925 and under \$950.....	-	-	3.0	5.3	2.1	-	-	-
\$950 and under \$975.....	-	-	2.9	7.6	2.6	-	-	-
\$975 and under \$1,000.....	-	-	1.6	4.6	3.0	(0.9)	-	-
\$1,000 and under \$1,050.....	-	-	2.5	10.8	8.8	1.4	-	-
\$1,050 and under \$1,100.....	-	-	1.5	8.7	9.5	2.8	-	-
\$1,100 and under \$1,150.....	-	-	1.7	8.4	11.0	4.3	-	-
\$1,150 and under \$1,200.....	-	-	(.9)	7.0	10.2	5.5	-	-
\$1,200 and under \$1,250.....	-	-	-	5.6	11.6	8.2	(2.0)	-
\$1,250 and under \$1,300.....	-	-	-	3.5	9.9	13.6	1.4	-
\$1,300 and under \$1,350.....	-	-	-	1.9	8.5	11.0	2.4	-
\$1,350 and under \$1,400.....	-	-	-	1.1	5.5	9.2	7.5	-
\$1,400 and under \$1,450.....	-	-	-	(.6)	5.8	8.5	4.0	-
\$1,450 and under \$1,500.....	-	-	-	-	2.9	8.0	5.2	(0.7)
\$1,500 and under \$1,550.....	-	-	-	-	2.2	9.1	11.4	3.6
\$1,550 and under \$1,600.....	-	-	-	-	1.2	4.4	9.3	2.2
\$1,600 and under \$1,650.....	-	-	-	-	(1.8)	3.2	10.0	4.9
\$1,650 and under \$1,700.....	-	-	-	-	-	4.0	5.1	8.1
\$1,700 and under \$1,750.....	-	-	-	-	-	1.4	6.7	3.1
\$1,750 and under \$1,800.....	-	-	-	-	-	1.1	7.8	4.9
\$1,800 and under \$1,850.....	-	-	-	-	-	1.3	4.8	4.3
\$1,850 and under \$1,900.....	-	-	-	-	-	(1.9)	2.4	4.5
\$1,900 and under \$1,950.....	-	-	-	-	-	-	3.6	3.6
\$1,950 and under \$2,000.....	-	-	-	-	-	-	4.5	9.4
\$2,000 and under \$2,050.....	-	-	-	-	-	-	3.6	6.7
\$2,050 and under \$2,100.....	-	-	-	-	-	-	.7	4.3
\$2,100 and under \$2,150.....	-	-	-	-	-	-	2.5	3.4
\$2,150 and under \$2,200.....	-	-	-	-	-	-	1.7	5.2
\$2,200 and under \$2,250.....	-	-	-	-	-	-	1.0	3.1
\$2,250 and under \$2,300.....	-	-	-	-	-	-	(2.3)	3.6
\$2,300 and under \$2,350.....	-	-	-	-	-	-	-	1.8
\$2,350 and under \$2,400.....	-	-	-	-	-	-	-	3.8
\$2,400 and under \$2,450.....	-	-	-	-	-	-	-	2.9
\$2,450 and under \$2,500.....	-	-	-	-	-	-	-	2.0
\$2,500 and under \$2,550.....	-	-	-	-	-	-	-	3.6
\$2,550 and under \$2,600.....	-	-	-	-	-	-	-	.7
\$2,600 and under \$2,650.....	-	-	-	-	-	-	-	1.8
\$2,650 and under \$2,700.....	-	-	-	-	-	-	-	-
\$2,700 and under \$2,750.....	-	-	-	-	-	-	-	2.2
\$2,750 and over.....	-	-	-	-	-	-	-	5.4
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees.....	2,097	3,908	8,579	9,677	7,881	4,128	1,727	445
Average monthly salaries.....	\$633	\$707	\$810	\$1,004	\$1,200	\$1,381	\$1,676	\$2,056

See footnote at end of table.

Table 4. Employment Distribution by Salary: Professional and Administrative Occupations—Continued

(Percent distribution of employees in selected professional and administrative occupations, by average monthly salaries, United States except Alaska and Hawaii, <sup>1</sup> June 1967)

Average monthly salaries	Engineers							
	I	II	III	IV	V	VI	VII	VIII
Under \$450.....	-	-	-	-	-	-	-	-
\$450 and under \$475.....	-	-	-	-	-	-	-	-
\$475 and under \$500.....	-	-	-	-	-	-	-	-
\$500 and under \$525.....	(0.4)	-	-	-	-	-	-	-
\$525 and under \$550.....	1.3	-	-	-	-	-	-	-
\$550 and under \$575.....	1.8	-	-	-	-	-	-	-
\$575 and under \$600.....	2.5	(0.5)	-	-	-	-	-	-
\$600 and under \$625.....	4.1	1.0	-	-	-	-	-	-
\$625 and under \$650.....	6.3	2.0	-	-	-	-	-	-
\$650 and under \$675.....	13.7	6.2	(1.2)	-	-	-	-	-
\$675 and under \$700.....	17.7	9.9	1.7	-	-	-	-	-
\$700 and under \$725.....	17.5	12.1	3.1	-	-	-	-	-
\$725 and under \$750.....	14.1	14.0	4.6	-	-	-	-	-
\$750 and under \$775.....	10.6	17.7	7.6	(1.5)	-	-	-	-
\$775 and under \$800.....	4.7	12.0	8.0	1.2	-	-	-	-
\$800 and under \$825.....	2.9	8.5	10.3	1.8	-	-	-	-
\$825 and under \$850.....	1.3	4.9	11.0	3.1	-	-	-	-
\$850 and under \$875.....	(1.2)	4.6	10.2	3.5	-	-	-	-
\$875 and under \$900.....	-	2.8	9.1	4.7	(1.6)	-	-	-
\$900 and under \$925.....	-	1.6	9.3	7.4	3.2	-	-	-
\$925 and under \$950.....	-	(2.1)	6.0	6.1	2.6	-	-	-
\$950 and under \$975.....	-	-	5.7	6.7	2.6	(1.8)	-	-
\$975 and under \$1,000.....	-	-	3.4	5.8	2.4	2.2	-	-
\$1,000 and under \$1,050.....	-	-	5.2	14.7	7.6	4.0	-	-
\$1,050 and under \$1,100.....	-	-	2.2	12.6	8.6	3.1	(0.6)	-
\$1,100 and under \$1,150.....	-	-	(1.5)	10.2	10.2	4.0	1.0	-
\$1,150 and under \$1,200.....	-	-	-	7.4	10.8	5.4	1.4	-
\$1,200 and under \$1,250.....	-	-	-	4.9	10.5	6.3	2.3	(1.1)
\$1,250 and under \$1,300.....	-	-	-	4.0	10.3	8.2	3.3	1.1
\$1,300 and under \$1,350.....	-	-	-	1.7	8.8	8.5	5.0	2.2
\$1,350 and under \$1,400.....	-	-	-	1.3	5.4	8.4	5.2	1.2
\$1,400 and under \$1,450.....	-	-	-	(1.5)	4.4	8.9	6.8	3.4
\$1,450 and under \$1,500.....	-	-	-	-	3.2	8.1	6.1	2.5
\$1,500 and under \$1,550.....	-	-	-	-	2.2	8.0	9.8	4.7
\$1,550 and under \$1,600.....	-	-	-	-	2.0	6.4	7.1	4.7
\$1,600 and under \$1,650.....	-	-	-	-	1.4	5.3	7.6	5.0
\$1,650 and under \$1,700.....	-	-	-	-	(2.1)	3.7	10.4	6.8
\$1,700 and under \$1,750.....	-	-	-	-	-	2.7	6.4	6.6
\$1,750 and under \$1,800.....	-	-	-	-	-	1.9	6.8	7.6
\$1,800 and under \$1,850.....	-	-	-	-	-	1.2	5.7	6.5
\$1,850 and under \$1,900.....	-	-	-	-	-	(2.0)	3.1	6.3
\$1,900 and under \$1,950.....	-	-	-	-	-	-	2.8	5.9
\$1,950 and under \$2,000.....	-	-	-	-	-	-	2.0	4.3
\$2,000 and under \$2,050.....	-	-	-	-	-	-	2.1	5.8
\$2,050 and under \$2,100.....	-	-	-	-	-	-	1.3	4.5
\$2,100 and under \$2,150.....	-	-	-	-	-	-	(3.3)	2.9
\$2,150 and under \$2,200.....	-	-	-	-	-	-	-	3.7
\$2,200 and under \$2,250.....	-	-	-	-	-	-	-	1.7
\$2,250 and under \$2,300.....	-	-	-	-	-	-	-	2.1
\$2,300 and under \$2,350.....	-	-	-	-	-	-	-	1.8
\$2,350 and under \$2,400.....	-	-	-	-	-	-	-	1.0
\$2,400 and under \$2,450.....	-	-	-	-	-	-	-	.7
\$2,450 and under \$2,500.....	-	-	-	-	-	-	-	.8
\$2,500 and under \$2,550.....	-	-	-	-	-	-	-	1.9
\$2,550 and under \$2,600.....	-	-	-	-	-	-	-	.2
\$2,600 and under \$2,650.....	-	-	-	-	-	-	-	.7
\$2,650 and under \$2,700.....	-	-	-	-	-	-	-	1.0
\$2,700 and under \$2,750.....	-	-	-	-	-	-	-	(1.4)
\$2,750 and over.....	-	-	-	-	-	-	-	-
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees.....	10,587	28,273	77,570	105,705	65,835	35,674	11,980	2,955
Average monthly salaries.....	\$699	\$757	\$861	\$1,035	\$1,210	\$1,384	\$1,611	\$1,853

<sup>1</sup> For scope of study, see table in appendix A. To avoid showing small proportions of employees scattered at or near the extremes of the distribution for some occupations, the percentages of employees in these intervals have been accumulated and are shown in the interval above or below the extreme interval containing at least 1 percent. The percentages representing these employees are shown in parentheses.

<sup>2</sup> Insufficient data were obtained for level I to warrant presentation of salary distributions.

NOTE: Because of rounding, sums of individual items may not equal 100.

Table 5. Employment Distribution by Salary: Engineering Technicians

(Percent distribution of engineering technicians, by average monthly salaries, United States except Alaska and Hawaii, <sup>1</sup> June 1967)

Average monthly salaries	Engineering technicians				
	I	II	III	IV	V
Under \$300.....	1.4				
\$300 and under \$325.....	1.4	-			
\$325 and under \$350.....	4.1	(0.3)			
\$350 and under \$375.....	8.7	1.1			
\$375 and under \$400.....	10.5	2.3	-		
\$400 and under \$425.....	10.4	4.0	-		
\$425 and under \$450.....	12.5	5.6	(1.3)		
\$450 and under \$475.....	14.9	8.9	2.5	-	
\$475 and under \$500.....	13.4	10.7	3.9	-	
\$500 and under \$525.....	10.6	18.0	7.1	(1.4)	-
\$525 and under \$550.....	5.5	15.7	10.2	1.6	-
\$550 and under \$575.....	3.5	11.8	12.4	3.3	(1.2)
\$575 and under \$600.....	2.3	8.1	12.2	5.0	1.1
\$600 and under \$625.....	(.7)	4.9	12.1	8.5	1.0
\$625 and under \$650.....	-	3.2	11.6	9.2	2.2
\$650 and under \$675.....	-	1.8	8.9	13.2	4.1
\$675 and under \$700.....	-	1.6	7.1	13.2	6.2
\$700 and under \$725.....	-	(2.1)	3.7	12.4	11.8
\$725 and under \$750.....	-	-	3.4	10.3	11.7
\$750 and under \$775.....	-	-	2.4	6.8	13.3
\$775 and under \$800.....	-	-	(1.3)	6.8	9.2
\$800 and under \$825.....	-	-	-	2.9	9.1
\$825 and under \$850.....	-	-	-	1.8	9.2
\$850 and under \$875.....	-	-	-	.6	6.1
\$875 and under \$900.....	-	-	-	.6	4.9
\$900 and under \$925.....	-	-	-	.3	2.3
\$925 and under \$950.....	-	-	-	.2	2.4
\$950 and under \$975.....	-	-	-	.1	.9
\$975 and under \$1,000.....	-	-	-	.3	2.9
\$1,000 and over.....	-	-	-	1.4	.5
Total.....	100.0	100.0	100.0	100.0	100.0
Number of employees.....	5,625	15,188	25,375	28,272	14,927
Average monthly salaries.....	\$447	\$525	\$603	\$693	\$778

<sup>1</sup> For scope of study, see table in appendix A. To avoid showing small proportions of employees scattered at or near the extremes of the distributions for some occupations, the percentages of employees in these intervals have been accumulated and are shown in the interval above or below the extreme interval containing at least 1 percent. The percentages representing these employees are shown in parentheses.

NOTE: Because of rounding, sums of individual items may not equal 100.

Table 6. Employment Distribution by Salary: Drafting and Clerical Occupations

(Percent distribution of employees in selected drafting and clerical occupations, by average weekly salaries, United States except Alaska and Hawaii, <sup>1</sup> June 1967)

Average weekly salaries	Drafts- men- tracers	Draftsmen			Clerks, accounting		Clerks, file		
		I	II	III	I	II	I	II	III
Under \$50.....							0.3	0.2	
\$50 and under \$55.....	-	-	-	-	(0.2)	-	5.9	1.0	-
\$55 and under \$60.....	0.7	-	-	-	2.7	-	23.0	7.3	(2.6)
\$60 and under \$65.....	1.1	-	-	-	9.0	-	26.2	16.2	3.4
\$65 and under \$70.....	2.9	(0.8)	-	-	8.3	(1.3)	19.9	17.7	3.3
\$70 and under \$75.....	8.1	1.1	-	-	11.6	1.2	11.5	16.6	10.5
\$75 and under \$80.....	10.5	1.8	-	-	10.0	2.5	5.6	12.5	8.1
\$80 and under \$85.....	16.3	4.4	-	-	11.5	4.6	3.4	10.2	11.2
\$85 and under \$90.....	13.6	6.1	-	-	10.4	5.5	1.9	6.2	11.9
\$90 and under \$95.....	13.0	8.1	(1.1)	-	8.8	6.2	1.0	4.3	9.5
\$95 and under \$100.....	7.2	8.6	1.6	-	6.2	7.4	(1.4)	2.3	8.6
\$100 and under \$105.....	9.6	11.3	2.5	-	5.8	8.9	-	2.7	8.5
\$105 and under \$110.....	3.9	8.8	3.1	-	3.8	8.4	-	1.3	5.7
\$110 and under \$115.....	4.4	9.3	4.0	-	3.4	7.2	-	(1.8)	3.8
\$115 and under \$120.....	3.3	9.1	6.9	(1.6)	2.5	7.8	-	-	3.6
\$120 and under \$125.....	2.3	8.4	7.9	1.6	2.0	7.7	-	-	4.0
\$125 and under \$130.....	1.0	6.0	7.7	1.9	1.7	7.0	-	-	2.5
\$130 and under \$135.....	1.1	4.7	10.3	3.5	(2.0)	5.9	-	-	1.3
\$135 and under \$140.....	(.8)	3.9	9.2	4.1	-	5.0	-	-	(1.2)
\$140 and under \$145.....	-	2.5	8.9	6.0	-	3.5	-	-	-
\$145 and under \$150.....	-	1.5	7.0	6.5	-	3.2	-	-	-
\$150 and under \$160.....	-	1.5	13.4	17.1	-	4.1	-	-	-
\$160 and under \$170.....	-	1.3	8.1	17.0	-	1.3	-	-	-
\$170 and under \$180.....	-	(.7)	4.4	12.2	-	1.1	-	-	-
\$180 and under \$190.....	-	-	2.7	10.1	-	.2	-	-	-
\$190 and under \$200.....	-	-	(1.1)	5.1	-	-	-	-	-
\$200 and under \$210.....	-	-	-	6.0	-	-	-	-	-
\$210 and under \$220.....	-	-	-	3.9	-	-	-	-	-
\$220 and under \$230.....	-	-	-	1.4	-	-	-	-	-
\$230 and under \$240.....	-	-	-	.7	-	-	-	-	-
\$240 and over.....	-	-	-	1.3	-	-	-	-	-
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees.....	6,640	20,695	30,641	24,245	70,910	51,632	30,929	27,420	8,093
Average weekly salaries.....	\$91.00	\$110.50	\$138.50	\$167.50	\$85.50	\$114.00	\$65.50	\$74.50	\$91.50

See footnote at end of table.

Table 6. Employment Distribution by Salary: Drafting and Clerical Occupations—Continued

(Percent distribution of employees in selected drafting and clerical occupations, by average weekly salaries, United States except Alaska and Hawaii,<sup>1</sup> June 1967)

Average weekly salaries	Key punch operators		Office boys or girls	Secretaries			
	I	II		I	II	III	IV
Under \$50.....	-		0.4				
\$50 and under \$55.....	(0.2)		2.0	-	-	-	
\$55 and under \$60.....	2.9	(0.1)	12.0	-	-	-	
\$60 and under \$65.....	7.0	1.4	17.7	(0.6)	-	-	
\$65 and under \$70.....	10.5	2.4	18.9	1.3	-	-	-
\$70 and under \$75.....	14.0	4.2	16.1	2.8	(1.6)	-	-
\$75 and under \$80.....	13.1	8.3	9.7	4.4	1.2	(1.9)	(1.0)
\$80 and under \$85.....	12.2	10.9	7.6	6.8	2.8	2.9	1.7
\$85 and under \$90.....	10.3	12.2	4.9	8.7	3.8	2.9	2.0
\$90 and under \$95.....	8.1	12.9	2.5	10.5	5.4	4.4	2.5
\$95 and under \$100.....	5.9	11.2	1.9	10.8	7.1	5.1	2.6
\$100 and under \$105.....	4.4	10.0	3.3	12.2	9.4	7.4	6.0
\$105 and under \$110.....	2.4	7.2	1.0	10.1	8.6	6.0	4.1
\$110 and under \$115.....	3.4	6.4	(2.0)	8.3	8.8	5.8	4.1
\$115 and under \$120.....	2.3	5.5	-	7.5	9.3	9.4	7.3
\$120 and under \$125.....	1.3	3.9	-	6.0	9.0	8.1	7.3
\$125 and under \$130.....	(1.9)	1.5	-	4.1	9.6	8.9	8.2
\$130 and under \$135.....	-	(1.7)	-	3.2	7.6	8.2	7.0
\$135 and under \$140.....	-	-	-	1.2	4.4	6.5	7.3
\$140 and under \$145.....	-	-	-	(1.5)	4.1	5.7	7.1
\$145 and under \$150.....	-	-	-	-	2.6	4.7	6.0
\$150 and under \$160.....	-	-	-	-	2.6	5.7	9.9
\$160 and under \$170.....	-	-	-	-	1.7	3.5	6.7
\$170 and under \$180.....	-	-	-	-	(.3)	1.6	4.2
\$180 and under \$190.....	-	-	-	-	-	(1.0)	2.8
\$190 and under \$200.....	-	-	-	-	-	-	1.0
\$200 and over.....	-	-	-	-	-	-	1.1
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees.....	54,997	34,985	26,701	71,505	69,791	40,270	13,025
Average weekly salaries.....	\$83.50	\$95.00	\$72.50	\$102.00	\$115.50	\$122.50	\$133.00

See footnote at end of table.

Table 6. Employment Distribution by Salary: Drafting and Clerical Occupations—Continued

(Percent distribution of employees in selected drafting and clerical occupations, by average weekly salaries, United States except Alaska and Hawaii,<sup>1</sup> June 1967)

Average weekly salaries	Stenographers, general	Stenographers, senior	Switchboard operators		Tabulating-machine operators			Typists	
			I	II	I	II	III	I	II
Under \$ 50	-	-	-	-	-	-	-	-	-
\$ 50 and under \$ 55	(0.2)	-	(1.1)	-	-	-	-	1.0	-
\$ 55 and under \$ 60	1.3	-	4.2	-	(0.8)	-	-	5.4	0.2
\$ 60 and under \$ 65	3.2	-	8.0	(1.5)	3.4	-	-	13.3	1.9
\$ 65 and under \$ 70	6.4	(1.4)	8.0	1.4	10.8	(0.7)	-	16.3	4.5
\$ 70 and under \$ 75	10.7	2.2	11.6	2.8	13.3	2.8	-	18.5	10.1
\$ 75 and under \$ 80	11.4	3.3	11.3	3.9	13.3	3.2	-	13.5	11.8
\$ 80 and under \$ 85	13.4	6.5	10.5	7.8	12.4	4.9	-	11.7	13.4
\$ 85 and under \$ 90	12.4	9.0	11.0	9.5	11.3	8.6	(1.1)	7.7	14.2
\$ 90 and under \$ 95	9.9	10.8	8.9	11.5	8.0	11.0	2.6	4.6	13.0
\$ 95 and under \$ 100	7.6	10.9	7.0	11.5	6.3	9.2	3.3	2.3	8.3
\$ 100 and under \$ 105	6.3	10.6	5.4	11.8	5.7	12.0	5.4	1.9	6.0
\$ 105 and under \$ 110	5.5	9.3	5.4	9.0	4.7	9.0	7.0	1.3	3.2
\$ 110 and under \$ 115	3.8	8.6	4.5	8.9	3.2	9.6	8.5	1.6	3.5
\$ 115 and under \$ 120	4.2	8.0	1.8	6.4	2.7	7.5	8.9	(1.0)	3.2
\$ 120 and under \$ 125	1.9	8.9	(1.1)	6.6	2.3	6.5	7.6	-	4.1
\$ 125 and under \$ 130	1.1	3.9	-	3.7	1.1	5.2	10.9	-	.9
\$ 130 and under \$ 135	(.9)	2.4	-	2.4	(.7)	2.9	6.9	-	1.3
\$ 135 and under \$ 140	-	2.7	-	(1.4)	-	2.0	7.8	-	(.2)
\$ 140 and under \$ 145	-	1.0	-	-	-	1.9	9.3	-	-
\$ 145 and under \$ 150	-	(.3)	-	-	-	1.1	5.5	-	-
\$ 150 and under \$ 160	-	-	-	-	-	(1.9)	7.7	-	-
\$ 160 and under \$ 170	-	-	-	-	-	-	4.6	-	-
\$ 170 and under \$ 180	-	-	-	-	-	-	1.6	-	-
\$ 180 and under \$ 190	-	-	-	-	-	-	(1.2)	-	-
\$ 190 and under \$ 200	-	-	-	-	-	-	-	-	-
\$ 200 and over	-	-	-	-	-	-	-	-	-
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees	71,057	54,407	13,478	9,486	7,741	14,518	7,384	83,144	44,425
Average weekly salaries	\$ 88.50	\$ 103.50	\$ 83.50	\$ 100.50	\$ 86.00	\$ 105.50	\$ 128.50	\$ 75.50	\$ 90.00

<sup>1</sup> For scope of study, see table in appendix A. To avoid showing small proportions of employees scattered at or near the extremes of the distribution for some occupations, the percentages of employees in these intervals have been accumulated and are shown in the interval above or below the extreme interval containing at least 1 percent. The percentages representing these employees are shown in parentheses.

NOTE: Because of rounding, sums of individual items may not equal 100.

Table 7. Occupational Employment Distribution: By Industry Division

(Percent distribution of employees in selected professional, administrative, technical, and clerical occupations,<sup>1</sup> by industry division,<sup>2</sup> United States except Alaska and Hawaii, June 1967)

Occupation	Manu- facturing	Public utilities <sup>3</sup>	Wholesale trade	Retail trade	Finance, insurance, and real estate	Selected services <sup>4</sup>
<u>Professional and administrative</u>						
Accountants.....	69	12	6	( <sup>5</sup> )	8	( <sup>5</sup> )
Auditors.....	44	17	7	6	25	( <sup>5</sup> )
Chief accountants.....	58	7	9	8	15	( <sup>5</sup> )
Attorneys.....	27	17	6	( <sup>5</sup> )	46	( <sup>5</sup> )
Managers, office services.....	63	7	5	( <sup>5</sup> )	21	( <sup>5</sup> )
Buyers.....	86	6	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )
Job analysts.....	77	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	13	5
Directors of personnel.....	74	( <sup>5</sup> )	6	6	9	( <sup>5</sup> )
Chemists.....	88	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	7
Engineers.....	79	10	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	11
<u>Technical</u>						
Engineering technicians.....	78	5	( <sup>5</sup> )	( <sup>5</sup> )	-	17
Draftsmen.....	80	8	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	10
<u>Clerical</u>						
Clerks, accounting.....	41	16	13	12	18	( <sup>5</sup> )
Clerks, file.....	23	5	6	12	53	( <sup>5</sup> )
Keypunch operators.....	43	13	11	7	25	( <sup>5</sup> )
Office boys or girls.....	36	13	9	6	34	( <sup>5</sup> )
Secretaries.....	51	9	7	4	24	4
Stenographers.....	53	13	6	( <sup>5</sup> )	23	( <sup>5</sup> )
Switchboard operators.....	34	14	6	14	30	( <sup>5</sup> )
Tabulating-machine operators.....	42	20	8	4	26	( <sup>5</sup> )
Typists.....	42	6	5	4	40	( <sup>5</sup> )

<sup>1</sup> Each occupation includes the work levels, as defined for survey, for which employment estimates in all industries within scope of the study are shown in table 1.

<sup>2</sup> For scope of study, see table in appendix A.

<sup>3</sup> Transportation (limited to railroad, local and suburban passenger, deep sea water, and air transportation industries), communication, electric, gas, and sanitary services.

<sup>4</sup> Engineering and architectural services; and commercially operated research, development, and testing laboratories only.

<sup>5</sup> Less than 4 percent.



Table 8. Relative Salary Levels: Occupation by Industry Division

(Relative salary levels for selected professional, administrative, technical, and clerical occupations<sup>1</sup> by industry division,<sup>2</sup> United States except Alaska and Hawaii, June 1967)

(Average salary for each occupation in all industries=100)

Occupation	Manu- facturing	Public utilities <sup>3</sup>	Wholesale trade	Retail trade	Finance, insurance, and real estate	Selected services <sup>4</sup>
<u>Professional and administrative</u>						
Accountants.....	100	103	101	98	96	100
Auditors.....	103	101	105	99	92	109
Chief accountants.....	102	104	( <sup>5</sup> )	( <sup>5</sup> )	94	( <sup>5</sup> )
Attorneys.....	108	100	103	( <sup>5</sup> )	95	( <sup>5</sup> )
Managers, office services.....	100	107	( <sup>5</sup> )	( <sup>5</sup> )	96	103
Buyers.....	100	102	101	103	( <sup>5</sup> )	102
Job analysts.....	101	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	88	101
Directors of personnel.....	99	113	98	100	104	110
Chemists.....	100	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	102
Engineers.....	100	96	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	99
<u>Technical</u>						
Engineering technicians.....	99	106	92	( <sup>5</sup> )	( <sup>5</sup> )	106
Draftsmen.....	100	101	98	99	105	101
<u>Clerical</u>						
Clerks, accounting.....	104	105	107	88	90	103
Clerks, file.....	108	122	103	94	95	105
Keypunch operators.....	103	99	101	94	92	102
Office boys or girls.....	104	113	99	93	92	97
Secretaries.....	103	107	100	90	93	106
Stenographers.....	103	108	101	90	90	98
Switchboard operators.....	104	114	104	85	95	102
Tabulating-machine operators.....	105	100	104	94	93	100
Typists.....	105	107	102	96	94	103

<sup>1</sup> Each occupation includes the work levels, as defined for survey, for which data are presented in table 1. In computing relative salary levels for each occupation by industry division, the total employment in each work level in all industries surveyed was used as a constant employment weight to eliminate the effect of differences in the proportion of employment in various work levels within each occupation.

<sup>2</sup> For scope of study, see table in appendix A.

<sup>3</sup> Transportation (limited to railroad, local and suburban passenger, deep sea water, and air transportation industries), communication, electric, gas, and sanitary services.

<sup>4</sup> Engineering and architectural services; and commercially operated research, development, and testing laboratories only.

<sup>5</sup> Insufficient employment in 1 work level or more to warrant separate presentation of data.

Table 9. Average Weekly Hours: Occupation by Industry Division

(Average weekly hours<sup>1</sup> for employees in selected professional, administrative, technical, and clerical occupations<sup>2</sup> by industry division,<sup>3</sup> United States except Alaska and Hawaii, June 1967)

Occupation	Manu- facturing	Public utilities <sup>4</sup>	Wholesale trade	Retail trade	Finance, insurance, and real estate	Selected services <sup>5</sup>
<u>Professional and administrative</u>						
Accountants.....	39.5	39.5	39.5	40.0	38.0	40.0
Auditors.....	39.0	39.5	40.0	39.5	38.0	39.5
Chief accountants.....	39.5	40.0	( <sup>6</sup> )	( <sup>6</sup> )	38.0	( <sup>6</sup> )
Attorneys.....	39.0	39.5	38.5	( <sup>6</sup> )	38.0	( <sup>6</sup> )
Managers, office services.....	39.5	40.0	( <sup>6</sup> )	( <sup>6</sup> )	38.5	40.0
Buyers.....	40.0	40.0	39.5	39.0	( <sup>6</sup> )	40.0
Job analysts.....	39.5	( <sup>6</sup> )	( <sup>6</sup> )	( <sup>6</sup> )	37.5	40.0
Directors of personnel.....	40.0	39.5	39.5	40.5	38.5	40.0
Chemists.....	39.5	( <sup>6</sup> )	( <sup>6</sup> )	( <sup>6</sup> )	( <sup>6</sup> )	39.5
Engineers.....	40.0	39.5	( <sup>6</sup> )	( <sup>6</sup> )	( <sup>6</sup> )	40.0
<u>Technical</u>						
Engineering technicians.....	40.0	39.0	40.0	( <sup>6</sup> )	( <sup>6</sup> )	39.5
Draftsmen.....	40.0	39.5	39.5	37.5	39.0	39.5
<u>Clerical</u>						
Clerks, accounting.....	39.5	39.0	39.5	39.5	38.0	39.5
Clerks, file.....	39.0	39.0	39.0	39.0	38.0	39.0
Keypunch operators.....	39.5	39.5	39.5	39.0	38.0	39.5
Office boys or girls.....	39.0	39.0	39.0	39.0	37.5	39.0
Secretaries.....	39.0	38.5	38.5	39.0	38.0	39.5
Stenographers.....	39.5	39.5	39.0	38.5	38.0	39.5
Switchboard operators.....	39.5	39.5	39.0	39.0	38.0	39.5
Tabulating-machine operators.....	39.5	38.5	39.0	39.0	37.5	39.5
Typists.....	39.5	39.0	39.0	39.0	37.5	39.5

<sup>1</sup> Based on the scheduled workweek for which employees receive their regular straight-time salary. The average for each job category was rounded to the nearest half hour.

<sup>2</sup> Each occupation includes the work levels, as defined for the survey, for which data are presented in table 1.

<sup>3</sup> For scope of study, see table in appendix A.

<sup>4</sup> Transportation (limited to railroad, local and suburban passenger, deep sea water, and air transportation industries), communication, electric, gas, and sanitary services.

<sup>5</sup> Engineering and architectural services; and commercially operated research, development, and testing laboratories only.

<sup>6</sup> Insufficient employment in 1 work level or more to warrant separate presentation of data.



## Appendix A. Scope and Method of Survey

### Scope of Survey

The survey relates to establishments in the United States except Alaska and Hawaii in the following industries: Manufacturing; transportation, communication, electric, gas, and sanitary services; wholesale trade; retail trade; finance, insurance, and real estate; engineering and architectural services; and commercially operated research, development, and testing laboratories. Excluded are establishments employing fewer than the minimum number of workers, as indicated in the accompanying table for each industry division, at the time of reference of the universe data (generally, first quarter of 1966). The variable minimum employment size, which was adopted in the 1966 survey, more nearly equalizes the minimum white-collar employment of establishments among the various industry divisions.

The estimated number of establishments and the total employment within scope of this survey, and within the samples actually studied, are shown for each major industry division in the accompanying table. These estimates also are shown separately for establishments employing 2,500 workers or more and those located in Standard Metropolitan Statistical Areas.<sup>18</sup>

As indicated in the table, the scope of the study was the same for all occupations; however, the clerical and drafting occupations were studied in a larger number of establishments than were the professional, administrative, and engineering technician occupations. The sampling methods used for studying each of these occupational groups are described in detail under Sampling and Estimating Procedures.

### Timing of Survey

Survey collection was timed so that the data would reflect an average reference period of June 1967.<sup>19</sup> The data for the professional, administrative, and engineering technician occupations were obtained by personal visits to a nationwide sample of establishments largely between late March and early September. Visits were timed so that establishments having more than one-half of the survey's white-collar employment had been contacted by the end of June. The most recent information available at the time of the visit was obtained.

The average reference month for clerical and drafting occupations was also June 1967. Data for these occupations were obtained from two sources: The Bureau's occupational wage studies in 44 metropolitan areas which had reference dates of March through September 1967; and in all other areas, from the same sample of establishments that were visited for the professional and administrative occupations.

### Method of Collection

Data were obtained by personal visits of Bureau field economists to representative establishments within the scope of the survey.<sup>20</sup> Employees were classified according to occupation and level, with the assistance of company officials, on the basis of uniform job definitions. In comparing actual duties and responsibilities of employees with those in the survey definitions, extensive use was made of company occupational descriptions, organization charts, and other personnel records. The occupational definitions used in classifying employees appear in appendix C.

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<sup>18</sup> The metropolitan area data in the 1967 survey relate to all 227 SMSA's (within the 48 States surveyed) as revised through April 1966 by the Bureau of the Budget. Earlier surveys represented fewer SMSA's, ranging from 188 in 1962 and earlier surveys to 221 in the 1965 survey.

<sup>19</sup> The seven previous surveys in this series reflected salaries for average reference periods of February for clerical and drafting, and March for all other occupations. Prior to 1963, reports listed these reference periods as "Winter." Beginning with the 1963 report and continuing through 1966, the more specific designation, "February-March" was used.

<sup>20</sup> The surveys in metropolitan areas, used to develop the nationwide estimates for the drafting and clerical occupations, provide for collection by a combination of mail and personal visits in alternate years.

Number of Establishments and Workers Within Scope of Survey<sup>1</sup> and Number Studied by Industry Division, June 1967

Industry division	Minimum employment in establishments in scope of survey	Within scope of survey <sup>1</sup>			Studied for professional and administrative occupations		Studied for drafting and clerical occupations <sup>2</sup>	
		Number of establishments	Workers in establishments		Number of establishments	Workers in establishments	Number of establishments	Workers in establishments
			Total	Professional, administrative, supervisory, and clerical <sup>3</sup>				
United States—all industries <sup>1</sup> .....		28,325	17,473,026	6,478,905	2,778	6,121,318	5,076	7,705,143
Manufacturing .....	250	12,089	11,195,982	3,151,902	1,740	4,246,831	2,525	4,844,469
Nonmanufacturing:								
Transportation, <sup>4</sup> communication, electric, gas, and sanitary services .....	100	2,727	2,037,385	959,464	300	906,458	615	1,170,139
Wholesale trade .....	100	3,147	677,412	339,510	130	57,043	449	159,169
Retail trade .....	250	1,956	1,812,564	411,679	170	408,007	576	855,726
Finance, insurance, and real estate .....	50	7,977	1,532,615	1,473,349	344	371,148	787	535,595
Services:								
Engineering and architectural services; and commercially operated research, development, and testing laboratories only .....	100	429	217,068	143,001	94	131,831	124	140,044
Metropolitan areas—all industries <sup>5</sup> .....		22,518	14,480,926	5,834,217	2,193	5,453,813	4,491	7,037,638
Manufacturing .....	250	8,137	8,544,939	2,682,033	1,252	3,627,855	2,037	4,225,493
Nonmanufacturing:								
Transportation, <sup>4</sup> communication, electric, gas, and sanitary services .....	100	2,030	1,877,540	908,474	264	888,004	579	1,151,685
Wholesale trade .....	100	2,918	644,677	329,003	118	53,472	437	155,598
Retail trade .....	250	1,887	1,781,889	405,787	158	400,176	564	847,895
Finance, insurance, and real estate .....	50	7,149	1,438,397	1,379,339	315	365,187	758	529,635
Services:								
Engineering and architectural services; and commercially operated research, development and testing laboratories only .....	100	397	193,485	129,581	85	119,119	116	127,332
Establishments employing 2,500 workers or more—all industries .....		1,071	6,421,409	2,443,190	642	4,654,909	713	4,807,283
Manufacturing .....	-	701	4,425,891	1,496,997	440	3,317,880	429	3,185,110

<sup>1</sup> The study relates to establishments in industries listed, having total employment at or above the minimum limitation indicated in the first column, in the United States except Alaska and Hawaii.

<sup>2</sup> The drafting and clerical occupations were studied in the same sample of establishments as were the professional and administrative occupations, except in 44 SMSA's. For these areas, the drafting and clerical data were obtained from the Bureau's more intensively sampled surveys of separate metropolitan areas. (For a more detailed explanation, see *Sampling and Estimating Procedures*, p. 40.)

<sup>3</sup> Includes executive, administrative, professional, supervisory, and clerical employees, but excludes technicians and draftsmen, and sales personnel.

<sup>4</sup> Limited to railroad, local and suburban passenger, deep sea water (foreign and domestic), and air transportation industries as defined in the 1957 edition of the *Standard Industrial Classification Manual*.

<sup>5</sup> Standard Metropolitan Statistical Areas in the United States, except Alaska and Hawaii, as revised through April 1966 by the Bureau of the Budget.

### Nature of Data Collected and Presented

The reported salaries represent standard salaries paid for standard work schedules, i. e., to the straight-time salary corresponding to the employee's normal work schedule excluding overtime hours. Nonproduction bonuses are excluded, but cost-of-living bonuses and incentive earnings are included. The average salaries presented relate to full-time employees for whom salary data were available.

About 5 percent of all the establishments asked to supply data on professional, administrative, and technical occupations would not do so. These corresponded to an estimated total in the universe studied of approximately 934,000 workers, about 5.3 percent of 17,473,000. The noncooperating units in the sample were replaced by others in the same industry-size-location classes. Where no such substitutes were available, since all similar units were already in the sample, the weights of the included establishments were increased to account for the missing units.

In the surveys of clerical and drafting workers, the same general procedure was followed to take account of the noncooperators. The refusal rate was lower here, amounting to 4.3 percent.

Under established policies of some companies, officials were not authorized to provide information relating to salaries for all occupations studied. In nearly all instances, however, information was provided on the number of such employees and the appropriate occupational classification. It was thus possible to estimate the proportion of employees for whom salary data were not available. As indicated below, these policies more often related to the higher level positions, mainly because of policies not to disclose pay data for employees considered a part of the management group or classified in occupational levels involving a single employee.

Number of job categories	Percent of employees classified in professional and administrative occupations surveyed for whom salary data were not available
1 -----	10 percent or more Directors of personnel IV (15 percent)
6 -----	5 to 9.9 percent Attorneys VI and VII Chief accountants IV Directors of personnel III Engineers VIII Managers, office services III
14 -----	1 to 4.9 percent
30 -----	Less than 1 percent

Comparisons between establishments that provided salary data for each specific occupation level and those not doing so indicated that the two classes of establishments did not differ materially in industries represented, employment, or pay structure for other jobs in this series for which data were available.

Occupational employment estimates relate to the total in all establishments within the scope of the survey and not the number actually surveyed. Employees for whom salary data were not available were not taken into account in the estimates.<sup>21</sup> These estimates were derived by weighting full-time employees in the occupations studied in each sample establishment in proportion to the number of establishments it represented within the scope of the survey. For example, if the sample establishment was selected from a group of four establishments with similar employment in the same industry and region, each full-time employee found in an occupation studied was counted as four employees in compiling the employment

<sup>21</sup> Also not taken into account were a few instances in which salary data were available for employees in an occupation, but where there was no satisfactory basis for classifying the employees by the appropriate work levels. The occupations involved in these cases were accountants, chemists, engineers, and engineering technicians.

estimates for the occupations. In addition, the professional and administrative occupations were limited to employees meeting the specific criteria in each survey definition and were not intended to include all employees in each field of work.<sup>22</sup> For these reasons, and because of differences in occupational structure among establishments, the estimates of occupational employment obtained from the sample of establishments studied serve only to indicate the relative importance of the occupations and levels as defined for the survey. These qualifications of the employment estimates do not materially affect the accuracy of the earnings data.

In the occupations surveyed, both men and women were classified and included in the occupational employment and earnings estimates. In the professional, administrative, and technical occupations, men were sufficiently predominant to preclude presentation of separate data by sex. For those clerical occupations in which both men and women are commonly employed, separate data by sex are available from the area wage survey reports compiled by metropolitan area. The occupations and work levels included in this study, and in which women accounted for 5 percent or more of the employment, were distributed according to the proportion of women employees, as follows:

Women (percent)	Occupation and level
90 or more -----	All levels of file clerks, keypunch operators, secretaries, stenographers, switchboard operators, and typists
85-89 -----	Accounting clerks I
60-64 -----	Accounting clerks II
45-49 -----	Office boys or girls, tabulating-machine operators I
35-39 -----	Tabulating-machine operators II
20-24 -----	Draftsmen-tracers
15-19 -----	Tabulating-machine operators III, job analysts I, engineering technicians I, chemists I
10-14 -----	Accountants I, buyers I, job analysts II, chemists II
5-9 -----	Accountants II, managers of office services I, job analysts III, directors of personnel I, chemists III, engineering technicians II, draftsmen I

### Sampling and Estimating Procedures

As indicated earlier, this survey relates to all establishments in the United States, except Alaska and Hawaii, within the industry and minimum size scope. Although one sample of establishments was selected for studying the professional, administrative, and engineering technician occupations, and another for the drafting and clerical occupations, both relate to the same population of geographic, industry, and size-of-establishment characteristics. The procedures used for selecting samples for these two groups of occupations are explained in the following paragraphs.

Professional, Administrative, and Engineering Technician Occupations. The sampling procedures called for the detailed stratification of all establishments within scope of the survey by location, industry, and size of employment. From this universe, a nationwide sample of about 2,800 establishments (not companies) was selected systematically so that each geographic unit was represented proportionately within establishment and industry classes.<sup>23</sup> Each industry was sampled separately, the sampling rates dependent on the importance of the industry as an employer having the survey jobs. Within each industry, a

<sup>22</sup> Engineers, for example, are defined to permit classification of employees engaged in engineering work within a band of eight levels, starting with inexperienced engineering graduates and excluding only those within certain fields of specialization or in positions above those covered by level VIII. By way of contrast, such occupations as chief accountants and directors of personnel are defined to include only those with responsibility for a specified program and with duties and responsibilities as indicated for each of the more limited number of work levels selected for study.

<sup>23</sup> A few of the largest employers, together employing approximately one million workers, gave data on a companywide basis. These companies were eliminated from the universe to which the preceding procedure applies. The sample count includes the establishments of these companies within the scope of the survey.

greater proportion of large than of small establishments was included. In combining the data, each establishment was weighted according to its probability of selection, so that unbiased estimates were generated. To illustrate the process, where one establishment out of four was selected, it was given a weight of 4, thus representing itself plus three others. In instances where data were not available for the original sample member, an alternate of the same original probability of selection was chosen in the same industry-size classification. Where there was no suitable substitution for the original sample member, the missing unit was accounted for by assigning additional weight to an existing sample member that was as nearly similar as possible to the missing unit.

Clerical and Drafting Occupations. The nationwide estimates for the clerical and drafting occupations are, in large part, a byproduct of the Bureau's surveys of these occupations in 85 metropolitan areas. Data from 44 of these area wage surveys were adjusted to the scope of the national survey and were included to represent themselves.<sup>24</sup> The sampling of establishments within each of these areas was designed to yield estimates of the area as a whole, and for major industry divisions within the area. As described in the preceding section, the establishments were stratified by industry and employment size, and a sample member selected at random for each stratum.

For all remaining areas, clerical and drafting data were obtained from the same nationwide sample of establishments used for the professional, administrative, and engineering technician occupations. Within this sample there were approximately 700 establishments in areas where locality studies had been done between October 1966 and February 1967. Where possible (in about 400 establishments), clerical and drafting data reported in these studies were updated to reflect general increases occurring to the time professional and administrative data were collected. In all other establishments, clerical and drafting data were collected in conjunction with professional and administrative data.

#### Conversion of Salary Rates

Salary data for the selected occupations were collected in the form in which it was most readily available from company records, i. e., on a weekly, biweekly, semimonthly, monthly, or annual basis. For the initial tabulations, the salary data were first converted to a weekly basis for the clerical and drafting occupations and to a monthly basis for the professional, administrative, and engineering technician occupations. The factors used to convert these data for the two groups of occupations were as follows:

Time interval represented by salary	Salaries for clerical and drafting occupations to weekly basis	Salaries for professional and administrative occupa- tions and for engineering technicians to monthly basis
Weekly-----	1.0000	4.3450
Biweekly-----	.5000	2.1725
Semimonthly-----	.4602	2.0000
Monthly-----	.2301	1.0000
Annual-----	.0192	.0833

Average monthly salaries presented in tables 1, 2, and 3 and annual salaries presented in tables 1 and 2 for the clerical and drafting occupations are derived from the average weekly salaries (to the nearest penny) by use of factors 4.345 and 52.14, respectively, and rounding results to the nearest dollar. Average weekly salaries for these occupations, presented in table 6, are rounded to the nearest half dollar. Average monthly salaries presented in tables 1, 2, and 3 for the professional and administrative occupations and for engineering technicians are rounded to the nearest dollar. To obtain the annual salaries, average monthly salaries (to the nearest penny) are multiplied by 12 and rounded to the nearest dollar.

<sup>24</sup> These were the 44 area wage surveys (excluding Cleveland and San Jose) which had payroll reference dates of March through September 1967, and were, therefore, representative of the same collection time period that applied for the national survey. For a detailed description of changes in survey timing and sampling procedures, see appendix B.



### Method of Determining Median and Quartile Values

Median and quartile values presented in this report were derived from distributions of employees by salary using \$1 class intervals. Weekly salary class intervals were used for draftsmen and clerical occupations and monthly salary class intervals were used for all other occupations. The weekly values were multiplied by 4.345 to obtain monthly values and by 52.14 to obtain annual values. The annual values for other than draftsmen and clerical occupations were obtained by multiplying monthly values by 12.

### Estimates of Sampling Error

The survey procedure yields estimates with widely varying sampling errors, depending on the frequency with which the job occurs, and the dispersion of salaries. Thus for the professional and administrative occupation work levels, the relative standard errors of the average salaries were distributed as follows: 31 were under 2 percent; 8 were 2 and under 4 percent; 3 were 4 and under 6 percent; and 9 were 6 percent and over.<sup>25</sup> The nationwide estimates for the clerical and drafting room occupations, based on the much larger sample, are subject to smaller sampling error—less than 2 percent in all cases except for tabulating-machine operators I (2.7 percent) and file clerks III (3.8 percent). These sampling errors measure the validity of the band within which the true average is likely to fall. Thus, for an occupation with a sample average monthly salary of \$1,000 and a sampling error of 4 percent, the chances are 19 out of 20 that the true average lies within the band from \$960 to \$1,040.

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<sup>25</sup> The 6 percent and over group included: Chief accountants II—6.1 percent; managers, office services IV—6.3 percent; attorneys VI—7.3 percent and VII—6.4 percent; directors of personnel I—8.2 percent and IV—11.8 percent; chemists IV—6.1 percent and VIII—7.7 percent; and engineers VIII—6.9 percent.

## Appendix B. Survey Changes in 1967

The most extensive changes in the 1967 survey involved modifying the sampling, estimating, and collecting procedures in order to advance the survey reference period from February–March to June. Other changes were made in the survey definitions for four occupations and in the occupational coverage of the survey. Each of these changes is described in detail below.

### Changes in Survey Timing and Sampling Procedures

In earlier surveys, data collection had been timed so that the salary estimates related, on the average, to February–March. The primary reason for changing the reference period to June was to shorten the time between the periods when data are collected and when Federal pay adjustments are considered in accordance with the provisions of the Federal Salary Reform Act of 1962. The Executive Branch of the Federal Government uses the survey results to compare Federal and private industry salaries.

To achieve the new reference period for the professional, administrative, and technical occupations, it was sufficient simply to shift the period of data collection. The same also applied to the clerical and drafting occupations in nonmetropolitan areas. However, for clerical and drafting data in metropolitan areas, it was necessary to alter the method of collection and to modify the sample design and estimating procedures.

In prior years, the estimates of the clerical and drafting data for all metropolitan areas were obtained by combining data from the Bureau's separate studies of these occupations in selected metropolitan areas (84 areas in 1966). These 84 metropolitan areas formed a sample of all 221 metropolitan areas (as of March 1965). Each area was selected to represent a stratum of similar areas, except the largest areas which generally represented only themselves. In this way, the area establishment samples gave results both for the individual areas and also, by appropriate weighting, for all metropolitan areas throughout the country. The timing of the locality surveys over the fiscal year enabled them to be combined into a composite which averaged just a month (February) earlier than the data for the professional, administrative, and engineering technician jobs.

For the 1967 survey, it was no longer possible to incorporate all of the individual area information in the same fashion, since the new reference period (June) did not represent the peak of area collection work as in the earlier surveys. Data for the areas surveyed in the period from October to February could not be included in the new composite. Those areas having reference periods in the months following September were too late to be included because of firm commitments for publishing the survey data, and those prior to March were too early to be used without extensive adjustments to account for later increases. Although it would have been possible to confine the collection of clerical data to the same units providing data for the professional, administrative, and engineering technician jobs, this would reduce the sample size from about 7,600 to 2,800 units, thus, substantially increasing the sampling error.

A revised sampling plan was adopted which would have less sampling error than the nationwide sample of 2,800 units, and would meet the timing requirements. This procedure called for the inclusion in the survey of clerical and drafting data for the 44 area studies having payroll reference months from March to September, each area representing only itself. Data for clerical and drafting occupations in the remaining 183 metropolitan areas were collected only in those establishments that were in the sample drawn for the professional, administrative, and technical occupations. Using this composite plan, a total of approximately 5,100 establishments were studied for clerical and drafting data.

Despite the differences in sampling and estimating procedures, the 1967 salary estimates relate to the same geographic, industry, and size-of-establishment characteristics as in 1966.

#### Changes in Occupational Definitions

New survey definitions were used for classifying all accountants, chief accountants, auditors, and attorneys in the 1967 survey. These definitions were revised to facilitate classification by better relating the definitions to duties and responsibilities as they exist in private industry. The work levels of each occupation were intended to represent the same types of jobs as did the same levels of the previous definitions. An evaluation of the survey data and the collection experience revealed that the revised definitions had little effect in changing matches that had been made in the past. Comparisons of data for trend purposes, therefore, were not affected seriously.

#### Changes in Occupational Coverage

The list of occupations included in this survey was amended to include four levels of secretaries, and to exclude freight rate clerks. The latter occupation was studied only in the 1966 survey.

## Appendix C. Occupational Definitions

The primary purpose of preparing job definitions for the Bureau's wage surveys is to assist its field staff in classifying into appropriate occupations, or levels within occupations, workers who are employed under a variety of payroll titles and different work arrangements from establishment to establishment and from area to area. This permits the grouping of occupational wage rates representing comparable job content. To secure comparability of job content, some occupations and work levels are defined to include only those workers meeting specific criteria as to training, job functions, and responsibilities. Because of this emphasis on inter-establishment and interarea comparability of occupational content, the Bureau's occupational definitions may differ significantly from those in use in individual establishments or those prepared for other purposes. Also see note referring to the definitions for the drafting and clerical occupations on page 80.

### ACCOUNTANTS AND AUDITORS

#### ACCOUNTANT

Performs professional accounting work requiring knowledge of the theory and practice of recording, classifying, examining, and analyzing the data and records of financial transactions. The work generally requires a bachelor's degree in accounting or, in rare instances, equivalent experience and education combined. Positions covered by this definition are characterized by the inclusion of work that is analytical, creative, evaluative, and advisory in nature. The work draws upon and requires a thorough knowledge of the fundamental doctrines, theories, principles, and terminology of accountancy, and often entails some understanding of such related fields as business law, statistics, and general management. (See also chief accountant.)

Professional responsibilities in accountant positions above the entry and developmental levels include several such duties as:

- Analyzing the effects of transactions upon account relationships;
- Evaluating alternative means of treating transactions;
- Planning the manner in which account structures should be developed or modified;
- Assuring the adequacy of the accounting system as the basis for reporting to management;
- Considering the need for new or changed controls;
- Projecting accounting data to show the effects of proposed plans on capital investments, income, cash position, and overall financial condition;
- Interpreting the meaning of accounting records, reports, and statements;
- Advising operating officials on accounting matters; and
- Recommending improvements, adaptations, or revisions in the accounting system and procedures.

(Entry and developmental level positions provide opportunity to develop ability to perform professional duties such as those enumerated above.)

ACCOUNTANT—Continued

In addition to such professional work, most accountants are also responsible for assuring the proper recording and documentation of transactions in the accounts. They, therefore, frequently direct nonprofessional personnel in the actual day-to-day maintenance of books of accounts, the accumulation of cost or other comparable data, the preparation of standard reports and statements, and similar work. (Positions involving such supervisory work but not including professional duties as described above, are not included in this description.)

Excluded are accountants whose principal or sole duties consist of designing or improving accounting systems or other nonoperating staff work, e.g., financial analysis, financial forecasting, tax advising, etc. (The criteria that follow for distinguishing among the several levels of work are inappropriate for such jobs.) Note, however, that professional accountant positions with responsibility for recording or reporting accounting data relative to taxes are included, as are operating or cost accountants whose work includes, but is not limited to, improvement of the accounting system.

Some accountants use electronic data processing equipment to process, record, and report accounting data. In some such cases the machine unit is a subordinate segment of the accounting system; in others it is a separate entity or is attached to some other organization. In either instance, providing the primary responsibility of the position is professional accounting work of the type otherwise included, the use of data processing equipment of any type does not of itself exclude a position from the accountant description nor does it change its level.

## Accountant I

General characteristics. At this beginning professional level, the accountant learns to apply the principles, theories, and concepts of accounting to a specific system. The position is distinguishable from nonprofessional positions by the variety of assignments; rate and scope of development expected of the incumbent; and the existence, implicit or explicit, of a planned training program designed to give the entering accountant practical experience. (Terminal positions are excluded.)

Direction received. Works under close supervision of an experienced accountant whose guidance is directed primarily to the development of the trainee's professional ability and to the evaluation of his potential for advancement. Limits of assignments are clearly defined, methods of procedure are specified, and kinds of items to be noted and referred to supervisor are identified.

Typical duties and responsibilities. Performs a variety of accounting tasks such as: Examining a variety of financial statements for completeness, internal accuracy, and conformance with uniform accounting classifications or other specific accounting requirements; reconciling reports and financial data with financial statements already on file, and pointing out apparent inconsistencies or errors; carrying out assigned steps in an accounting analysis, such as computing standard ratios; assembling and summarizing accounting literature on a given subject; preparing relatively simple financial statements, not involving problems of analysis or presentation; and preparing charts, tables, and other exhibits to be used in reports. In addition to such work, may also perform some nonprofessional tasks for training purposes.

Responsibility for direction of others. Usually none.

## Accountant II

General characteristics. At this continuing developmental level the professional accountant makes practical applications of technical accounting practices and concepts beyond the mere application of detailed rules and instructions. Assignments are designed to expand his practical experience and to develop his professional judgment in the application of basic

ACCOUNTANT—Continued

accounting techniques to simple professional problems. He is expected to be competent in the application of standard procedures and requirements to routine transactions, to raise questions about unusual or questionable items, and to suggest solutions. (Terminal positions are excluded.)

Direction received. Work is reviewed closely to verify its general accuracy and coverage of unusual problems, to insure conformance with required procedures and special instructions, and to assure his professional growth. His progress is evaluated in terms of his ability to apply his professional knowledge to basic accounting problems in the day-to-day operations of an established accounting system.

Typical duties and responsibilities. Performs a variety of accounting tasks, e. g., prepares routine working papers, schedules, exhibits, and summaries indicating the extent of his examination, and presenting and supporting his findings and recommendations. Examines a variety of accounting documents to verify accuracy of computations and to ascertain that all transactions are properly supported, are in accordance with pertinent policies and procedures, and are classified and recorded according to acceptable accounting standards.

Responsibility for direction of others. Usually none, although he may supervise a few clerks.

## Accountant III

General characteristics. Performs professional operating or cost accounting work requiring the standardized application of well established accounting principles, theories, concepts, and practices. Receives detailed instructions concerning the overall accounting system and its objectives, the policies and procedures under which it is operated, and the nature of changes in the system or its operation. Characteristically, the accounting system or assigned segment is stable and well established (i. e., the basic chart of accounts, classifications, the nature of the cost accounting system, the report requirements, and the procedures are changed infrequently).

Depending upon the workload involved, the accountant may have such assignments as supervision of the day-to-day operation of: (a) The entire system of a subordinate establishment, or (b) a major segment (e. g., general accounting; cost accounting; or financial statements and reports) of a somewhat larger system, or (c) in a very large and complex system, may be assigned to a relatively narrow and specialized segment dealing with some problem, function, or portion of work which is itself of the level of difficulty characteristic of this level.

Direction received. A higher level professional accountant normally is available to furnish advice and assistance as needed. Work is reviewed for technical accuracy, adequacy of professional judgment, and compliance with instructions through spot checks, appraisal of results, subsequent processing, analysis of reports and statements, and other appropriate means.

Typical duties and responsibilities. The primary responsibility of most positions at this level is to assure that the assigned day-to-day operations are carried out in accordance with established accounting principles, policies, and objectives. The accountant performs such professional work as: Developing nonstandard reports and statements (e. g., those containing cash forecasts reflecting the interrelations of accounting, cost budgeting, or comparable information); interpreting and pointing out trends or deviations from standards; projecting data into the future; predicting the effects of changes in operating programs; or identifying management informational needs, and refining account structures or reports accordingly.

ACCOUNTANT—Continued

Within the limits of his delegated responsibility, makes day-to-day decisions concerning the accounting treatment of financial transactions. Is expected to recommend solutions to complex problems and propose changes in the accounting system for approval at higher levels. Such recommendations are derived from his own knowledge of the application of well-established principles and practices.

Responsibility for the direction of others. In most instances he directs the work of a subordinate nonprofessional staff.

## Accountant IV

General characteristics. Performs professional operating or cost accounting work which requires the application of well-established accounting principles, theories, concepts, and practices to a wide variety of difficult problems. Receives instructions concerning the objectives and operations of the overall accounting system. At this level, compared with level III, the accounting system or assigned segment is more complex, i. e., (a) is relatively unstable, (b) must adjust to new or changing company operations, (c) serves organizations of unusually large size, or (d) is complicated by the need to provide and coordinate separate or specialized accounting treatment and reporting (e. g., cost accounting using standard cost, process cost, and job order techniques) for different operations or divisions of company.

Depending upon the workload and degree of coordination involved, the accountant IV may have such assignments as the supervision of the day-to-day operation of: (a) The entire accounting system of a subordinate establishment, or (b) a major segment (e. g., general accounting; cost accounting; or financial statements and reports) of an accounting system serving a larger and more complex establishment, or (c) the entire accounting system of a large (e. g., employing several thousand persons) subordinate establishment which in other respects has an accounting system of the complexity that characterizes level III.

Direction received. A higher level accountant normally is available to furnish advice and assistance as needed. Work is reviewed by spot checks and appraisal of results for adequacy of professional judgment, compliance with instructions, and overall accuracy and quality.

Typical duties and responsibilities. As at level III, a primary characteristic of most positions at this level is the responsibility of operating an accounting system or major segment of a system in the intended manner.

The accountant IV exercises professional judgment in making frequent appropriate recommendations for: New accounts; revisions in the account structure; new types of ledgers; revisions in reporting system or subsidiary records; changes in instructions regarding the use of accounts; new or refined account classifications or definitions; etc. He also makes day-to-day decisions concerning the accounting treatment of financial transactions and is expected to recommend solutions to complex problems beyond the scope of his responsibility.

Responsibility for direction of others. Accounting staff he supervises, if any, may include professional accountants.

## Accountant V

General characteristics. Performs professional operating or cost accounting work which is of greater than average professional difficulty and responsibility because of the presence of unusual and novel problems or the unusual magnitude or impact of the accounting program. Typically this level of difficulty arises from (a) the large size of the accounting and operating organization, (b) the atypical nature of the accounting problems encountered, or (c) the unusually great involvement in accounting systems design and development.

Examples of assignments characteristic of this level are the supervision of the day-to-day operation of: (a) The entire accounting system of a subordinate establishment having an unusually novel and complex accounting system, or (b) the entire accounting system of a large (e. g., employing several thousand persons) subordinate establishment which in

## ACCOUNTANT—Continued

other respects has an accounting system of the complexity that characterizes level IV, or (c) the entire accounting system of a company or corporation that has a relatively stable and conventional accounting system and employs several thousand persons and has a few subordinate establishments which include accounting units, or (d) a major segment of an accounting system that substantially exceeds the characteristics described in any one of the preceding examples.

Direction received. An accountant of higher level normally is available to furnish advice and assistance as needed. Work is reviewed for adequacy of professional judgment, compliance with instructions, and overall quality.

Typical duties and responsibility. The work is characterized by its unusual difficulty or responsibility. Accountants V typically are directly concerned on a relatively continuous basis with what the nature of the accounting system should be, with the devising or revising of the operating accounting policies and procedures that are necessary, and with the managerial as well as the accounting meaning of the reports and statements for which he is responsible. Accountants V are necessarily deeply involved in fundamental and complex accounting matters and in the managerial problems that are affected.

Responsibility for direction of others. Accounting staff he supervises generally includes professional accountants.

AUDITOR

Performs professional auditing work requiring a bachelor's degree in accounting or, in rare instances, equivalent experience and education combined. Audits the financial records and practices of a company, or of divisions or components of the company, to appraise systematically and verify the accounting accuracy of records and reports and to assure the consistent application of accepted accounting principles. Evaluates the adequacy of the accounting system and internal financial control. Makes appropriate recommendations for improvement as necessary. To the extent determined necessary, examines the transactions entering into the balance sheet and the transactions entering into income, expense, and cost accounts. Determines:

- (1) The existence of recorded assets (including the observation of the taking of physical inventories) and the all-inclusiveness of recorded liabilities.
- (2) The accuracy of financial statements or reports and the fairness of presentation of facts therein.
- (3) The propriety or legality of transactions.
- (4) The degree of compliance with established policies and procedures concerning financial transactions.

Excluded are positions which do not require full professional accounting training because the work is confined on a relatively permanent basis to repetitive examinations of a limited area of company operations and accounting processes, e. g., only accounts payable and receivable; demurrage records and related functions, or station operations only of a railroad company; branch offices which do not engage in the full range of banking and accounting activities of the main bank; warehouse operations only of a mail order company; checking transactions to determine whether or not they conform to prescribed routines or procedures. (Examinations of such repetitive or limited nature normally do not require or permit professional audit work to be performed.)



AUDITOR—Continued

## Auditor I

General characteristics. As a trainee auditor at the entering professional level, performs a variety of routine assignments. Typically, he is rotated through a variety of tasks under a planned training program designed to provide practical experience in applying the principles, theories, and concepts of accounting and auditing to specific situations. (Terminal positions are excluded.)

Direction received. Works under close supervision of an experienced auditor whose guidance is directed primarily to the development of the trainee's professional ability and to the evaluation of his potential for advancement. Limits of assignments are clearly defined, methods of procedure are specified, and kinds of items to be noted and referred to supervisor are identified.

Typical duties and responsibilities. Assists in making audits by performing such tasks as: Verification of the accuracy of the balances in various records; examination of a variety of types of documents and vouchers for accuracy of computations; checking transactions to assure they are properly documented and have been recorded in accordance with correct accounting classifications; verifying the count of inventories; preparing detailed statements, schedules, and standard audit working papers; counting cash and other assets; preparing simple reconciliations; and similar functions.

## Auditor II

General characteristics. At this continuing developmental level the professional auditor serves as a junior member of an audit team, independently performing selected portions of the audit which are limited in scope and complexity. Auditors at this level typically have acquired knowledge of company operations, policies, and procedures. (Terminal positions are excluded.)

Direction received. Detailed instructions are furnished and the work is reviewed to the extent necessary to verify its general accuracy and coverage of unusual problems, to insure conformance with required procedures and special instructions, and to assure the auditor's professional growth. Any technical problems not covered by instructions are brought to the attention of a superior. His progress is evaluated in terms of his ability to apply his professional knowledge to basic auditing situations.

Typical duties and responsibilities. Applies knowledge of accounting theory and audit practices to a variety of relatively simple professional problems in his audit assignments, including such tasks as: The verification of reports against source accounts and records to determine their reliability; reconciliation of bank and other accounts and verifying the detail of recorded transactions; detailed examinations of cash receipts and disbursement vouchers, payroll records, requisitions, work orders, receiving reports, and other accounting documents to ascertain that transactions are properly supported and are recorded correctly from an accounting or regulatory standpoint; or preparing working papers, schedules, and summaries.

## Auditor III

General characteristics. Work at this level consists of the audit of operations and accounting processes that are relatively stable, well-established, and typical of the industry. The audits primarily involve the collection and analysis of readily available findings; there is previous audit experience that is directly applicable; the audit reports are normally prepared in a prescribed format using a standard method of presentation; and few if any major problems are anticipated. The work performed requires the application of substantial knowledges of accounting principles and practices, e.g., bases for distinguishing among capital maintenance and operating expenses; accruing reserves for taxes; and other accounting considerations of an equivalent nature.

AUDITOR—Continued

Direction received. Work is normally within an established audit program and supervision is provided by a higher level auditor who outlines and discusses assignments. Work is spot-checked in progress. Completed assignments are reviewed for adequacy of coverage, soundness of judgment, compliance with professional standards, and adherence to policies.

Typical duties and responsibilities. The auditor examines transactions and verifies accounts; observes and evaluates accounting procedures and internal controls; prepares audit working papers and submits an audit report in the required pattern containing recommendations for needed changes or improvements. He is usually responsible for selecting the detailed audit methods to follow, choosing the audit sample and its size, determining the extent to which discrepancies need to be investigated, and deciding the depth of the analyses required to support reported findings and conclusions.

Examples of assignments involving work of this level:

(1) As a team leader or working alone, independently conducts audits of the complete accounts and related operations of smaller or less complex companies (e.g., involving a centralized accounting system with few or no subordinate, subsidiary, or branch accounting records) or of comparable segments of larger companies.

(2) As a member of an audit team independently accomplishes varied audit assignments of the above described characteristics, typically major segments of complete audits, or assignments otherwise limited in scope of larger and more complex companies (e.g., complex in that the accounting system entails cost, inventory, and comparable specialized systems integrated with the general accounting system).

Illustrative of such assignments are the audit and initial review of accounting treatment and validity of reporting of overhead expenses in a large manufacturing or maintenance organization (e.g., major repair yard of a railroad); or, the checking, verification, and balancing of all accounts receivable and accounts payable; or, the analysis and verification of assets and reserves; or, the inspection and evaluation of accounting controls and procedures.

## Auditor IV

General characteristics. Auditors at this level are experienced professionals who apply thorough knowledge of accounting principles and theory in connection with a variety of audits. Work at this level is characterized by the audit of organizations and accounting processes which are complex and difficult because of such factors as: Presence of new or changed programs and accounting systems; existence of major specialized accounting functions (e.g., cost accounting, inventory accounting, sales accounting), in addition to general accounting; need to consider extensive and complicated regulatory requirements; lack of or difficulty in obtaining information; and other similar factors. Typically, a variety of different assignments are encountered over a period of time, e.g., 1 year. The audit reports prepared are comprehensive, explain irregularities, cite rules or regulations violated, recommend remedial actions, and contain analyses of items of special importance or interest to company management.

Direction received. Within an established audit program, have responsibility for independently planning and executing audits. Unusually difficult problems are discussed with the supervisor who also reviews completed assignments for adherence to principles and standards and the soundness of conclusions.

Typical duties and responsibilities. Auditors at this level have full responsibility for planning the audit, including determination of the aspects to emphasize, methods to be used, development of nonstandard or specialized audit aids such as questionnaires, etc., where previous audit experience and plans are of limited applicability.

AUDITOR—Continued

Included in the scope of work that characterizes this level are such functions as: Evaluation of methods used for determining depreciation rates of equipment; evaluation of assets where original costs are unknown; evaluation of the reliability of accounting and reporting systems; analysis of cost accounting systems and cost reports to evaluate the basis for cost and price setting; evaluation of accounting procurement and supply management records, controls, and procedures; and many others.

Examples of assignments involving work at this level:

(1) As a team leader or working alone, independently plans and conducts audits of the complete accounts and related operations of relatively large and complex companies (e.g., complex in that the accounting system entails cost, inventory, and comparable specialized accounting systems integrated with the general accounting system) or of company branch, subsidiary, or affiliated organizations which are individually of comparable size and complexity, or

(2) As a member of an audit team independently plans and accomplishes audit assignments that constitute major segments of audits of very large and complex organizations, for example, those with financial responsibilities so great as to involve specialized subordinate, subsidiary, or affiliate accounting systems that are complete in themselves.

NOTE: Excluded from level IV are auditors who, as team leader or working alone, conduct complete audits of very large and complex organizations, for example, those with financial responsibilities so great as to involve specialized subordinate, subsidiary, or affiliate accounting systems that are complete in themselves; or are team members assigned to major segments of audits of even larger or more complex organizations.

CHIEF ACCOUNTANT

As the top technical expert in accounting, is responsible for directing the accounting program for a company or for an establishment of a company. The minimum accounting program includes: (1) General accounting (assets, liabilities, income, expense, and capital accounts, including responsibility for profit and loss and balance sheet statements); and (2) at least one other major accounting activity, typically tax accounting, cost accounting, property accounting, or sales accounting. It may also include such other activities as payroll and timekeeping, and mechanical or electronic data processing operations which are an adjunct of the accounting system. (Responsibility for an internal audit program is typically not included.)

The responsibilities of the chief accountant include all of the following:

(1) On own responsibility, developing or adapting or revising an accounting system to meet the needs of the organization.

(2) Supervising, either directly or through subordinate supervisors, the operation of the system with full management responsibility for the quality and quantity of work performed, training and development of subordinates, work scheduling and review, coordination with other parts of the organization served, etc.

(3) Providing directly or through an official such as a comptroller, advisory services to the top management officials of the organization served as to:

(a) The status of financial resources and the financial trends or results of operations as revealed by accounting data, and selecting a manner of presentation that is meaningful to management.

(b) Methods for improving operations as suggested by his expert knowledge of accounting, e.g., proposals for improving cost control, property management, credit and collection, tax reduction, or similar programs.

CHIEF ACCOUNTANT—Continued

Excluded are positions with responsibility for the accounting program if they also include (as a major part of the job) responsibility for budgeting; work measurement; organization, methods and procedures studies; or similar nonaccounting functions. (Positions of such breadth are sometimes titled comptroller, budget and accounting manager, financial manager, etc.)

Some positions responsible for supervising general accounting and one or more other major accounting activities but which do not fully meet all of the responsibilities of a chief accountant specified above may be covered by the descriptions for accountant.

Chief accountant jobs which meet the above characteristics are classified by level <sup>26</sup> of work according to (a) authority and responsibility and (b) technical complexity, using the chart which follows the definitions below.

## Authority and Responsibility

AR-1. The accounting system (i. e., accounts, procedures, and reports to be used) has been prescribed in considerable detail by higher levels in the company or organization. The chief accountant has final, unreviewed authority within the prescribed system, to expand it to fit the particular needs of the organization served, e. g., in the following or comparable ways:

Provides greater detail in accounts and reports or financial statements;

Establishes additional accounting controls, accounts, subaccounts, and subsidiary records; and

Provides special or interim reports and statements needed by the manager responsible for the day-to-day operations of the organization served.

AR-2. The basic accounting system is prescribed in broad outlines rather than in specific detail. While certain major financial reports, overall accounts, and general policies are required by the basic system, the chief accountant has broad latitude and authority to decide the specific methods, procedures, accounts, reports, etc.—to be used within the organizational segment served. He must secure prior approval from higher levels for only those changes which would basically affect the broad requirements prescribed by such higher levels. Typical responsibilities include:

Evaluating and taking final action on recommendations proposed by subordinate establishments for changes in aspects of the accounting system or activities not prescribed by higher authority;

Extending cost accounting operations to areas not previously covered;

Changing from one cost accounting method to another;

Expanding the utilization of computers within the accounting process; and

Preparing accounting reports and statements reflecting the events and progress of the entire organization for which he is responsible; often consolidating data submitted by subordinate segments.

This degree of authority is most typically found at intermediate organizational levels such as regional offices, or division or subsidiary headquarters. It is also found in some company level situations where the authority of the chief accountant is less extensive than is described in AR-3. More rarely it is found in plant level chief accountants who have been delegated more authority than usual for such positions as described in AR-1.

<sup>26</sup> Insufficient data were obtained for level V to warrant presentation of average salaries.

CHIEF ACCOUNTANT—Continued

AR-3. Has complete responsibility for establishing and maintaining the framework for the basic accounting system used in the company, subject only to general policy guidance and control from a higher level company official responsible for general financial management. Typical responsibilities include:

Determining the basic characteristics of the company's accounting system and the specific accounts to be used;

Devising and preparing accounting reports and statements required to meet management's needs for data;

Establishing basic accounting policies, interpretations, and procedures;

Reviewing and taking action on proposed revisions to the company's accounting system suggested by subordinate units; and

Taking final action on all technical accounting matters.

Characteristically, participates extensively in broad company management processes by providing accounting advice, interpretations, or recommendations based on data accumulated in the accounting system and on his professional judgment and experience.

#### Technical Complexity

TC-1. The organization which the accounting program serves has relatively few functions, products, work processes, etc., and these tend to be stable and unchanging. The accounting system operates in accordance with well-established principles and practices or those of equivalent difficulty which are typical of that industry.

TC-2. The organization which the accounting program serves has a relatively large number of functions, products, work processes, etc., which require substantial and frequent adaptations of the basic system to meet management needs (e.g., adoption of new accounts, subaccounts, and subsidiary records; revision of instructions for the use of accounts; improvement or expansion of methods for accumulating and reporting cost data in connection with new or changed work processes).

TC-3. The organization which the accounting program serves puts a heavy demand on the accounting organization for specialized and extensive adaptations of the basic system to meet management needs. Such demands arise because the functions, products, work processes, etc., of the organization are very numerous, diverse, unique, or specialized, or there are other comparable complexities. Consequently, the accounting system, to a considerable degree, is developed well beyond established principles and accounting practices in order to:

Provide for the solution of problems for which no clear precedents exist; or

Provide for the development or extension of accounting theories and practices to deal with problems to which these theories and practices have not previously been applied.

#### Subordinate Staff

In the chart that follows, the number of professional accountants supervised is recognized to be a relatively crude criterion for distinguishing between various classes. It is to be considered less important in the matching process than the other criteria. In addition to the staff of professional accountants in the system for which the chief accountant is responsible, there are clerical, machine operation, bookkeeping, and related personnel.

CHIEF ACCOUNTANT—Continued

Class	Authority and responsibility <sup>1</sup>	Technical complexity <sup>1</sup>	Subordinate staff of professional accountants in the system for which he is responsible.
I	AR-1	TC-1	Only one or two professional accountants, who do not exceed the accountant III job definition.
II	AR-1	TC-2	About 5 to 10 professional accountants, with at least one or two matching the accountant IV job definition.
	<u>or</u>		
	AR-2	TC-1	About 5 to 10 professional accountants. Most of these match the accountant III job definition, but one or two may match the accountant IV job definition.
	<u>or</u>		
	AR-3	TC-1	Only one or two professional accountants, who do not exceed the accountant IV job definition.
III	AR-1	TC-3	About 15 to 20 professional accountants. At least one or two match the accountant V job definition.
	<u>or</u>		
	AR-2	TC-2	About 15 to 20 professional accountants. Many of these match the accountant IV job definition, but some may match the accountant V job definition.
	<u>or</u>		
	AR-3	TC-1	About 5 to 10 professional accountants. Most of these match the accountant III job definition, but one or two may match as high as accountant V.
IV	AR-2	TC-3	About 25 to 40 professional accountants. Many of these match the accountant V job definition, but several may exceed that level.
	<u>or</u>		
	AR-3	TC-2	About 15 to 20 professional accountants. Most of these match the accountant IV job definition, but several may match the accountant V and one or two may exceed that level.
V	AR-3	TC-3	About 25 to 40 professional accountants. Many of these match the accountant V job definition, but several may exceed that level.

<sup>1</sup> AR-1, -2, and -3; and TC-1, -2, and -3 are explained on the preceding pages.

## ATTORNEYS

ATTORNEY

Performs consultation and advisory work and carries out the legal processes necessary to effect the rights, privileges, and obligations of the company. The work performed requires completion of law school with an LL. B. degree (or the equivalent) and admission to the bar. Responsibilities or functions include one or more of the following or comparable duties:

Preparing and reviewing various legal instruments and documents, such as contracts, leases, licenses, purchases, sales, real estate, etc.;

Acting as agent of the company in its transactions;

Examining material (e. g., advertisements, publications, etc.) for legal implications; advising officials of proposed legislation which might affect the company;

Applying for patents, copyrights, or registration of company's products, processes, devices and trademarks; advising whether to instigate or defend law suits;

Conducting pretrial preparations; defending the company in lawsuits; and

Advising officials on tax matters, Government regulations, and/or corporate rights.

Excluded from this definition are:

Patent work which requires professional training in addition to legal training (typically, a degree in engineering or in a science);

Claims examining, claims investigating or similar work for which professional legal training and bar membership is not essential;

Attorneys, frequently titled "general counsel" (and their immediate full associates or deputies), who serve as company officers or the equivalent and are responsible for participating in the overall management and formulation of policy for the company in addition to directing its legal work. (The duties and responsibilities of such positions exceed level VII as described below.)

Attorney jobs which meet the above definitions are to be classified and coded in accordance with the chart below.<sup>27</sup>

Class and code	Difficulty level of legal work <sup>1</sup>	Responsibility level of job <sup>1</sup>	Experience required
I	As a trainee with little or no professional experience assists higher level attorneys and receives assignments such as: Preparing various standard or uncomplicated legal documents; preparing tentative drafts of legal correspondence; reading and checking legal reports for useful items; preparing uncomplicated pleadings; performing miscellaneous legal research. (Receives considerable preliminary instruction, guidance, and close supervision in his work. Has negligible responsibility for final action on legal matters.)		
II	D-1	R-1	At least 1 year of professional attorney experience.
III	<u>or</u> D-1	R-2	Sufficient professional experience, at least 2 years but usually more, to assure clear competence as an attorney.
	D-2	R-1	
IV	<u>or</u> D-2	R-2	At least 1 year, usually more, of professional experience at the D-2 level.
	D-3	R-1	
V	<u>or</u> D-2	R-3	Extensive professional experience at the D-2 or a higher level.
	D-3	R-2	
VI	D-3	R-3	Extensive professional experience at the D-3 level.
VII	D-3	R-4	Extensive professional experience at the D-3 and R-3 levels.

<sup>1</sup> D-1, D-2, D-3 and R-1, R-2, etc., are explained on the following pages.

<sup>27</sup> Insufficient data were obtained for level I to warrant presentation of average salaries.

ATTORNEY—Continued

## Difficulty Level Of Legal Work

D-1. Legal questions are characterized by: Facts that are well-established; clearly applicable legal precedents; and matters not of substantial importance to the organization. (Usually relatively limited sums of money, e.g., a few thousand dollars, are involved.)

Examples of D-1 work:

(a) Legal investigation, negotiation, and research preparatory to defending the organization in potential or actual lawsuits involving alleged negligence where the facts can be firmly established and there are precedent cases directly applicable to the situation.

(b) Searching case reports, legal documents, periodicals, textbooks, and other legal references; and preparing draft opinions on employee compensation or benefit questions when there is a substantial amount of clearly applicable statutory, regulatory, and case material.

(c) Drawing up contracts and other legal documents in connection with real property transactions requiring the development of detailed information but not involving serious questions regarding titles to property or other major factual or legal issues.

D-2. Legal work is regularly difficult by reason of one or more of the following: The absence of clear and directly applicable legal precedents; the different possible interpretations that can be placed on either the facts, the laws, or the precedents involved; the substantial importance of the legal matters to the organization (e.g., sums as large as one hundred thousand dollars are generally directly or indirectly involved); and the matter is being strongly pressed or contested in formal proceedings or in negotiations by the individuals, corporations, or Government agencies involved.

Examples of D-2 work:

(a) Advising on the legal implications of advertising representations when the facts supporting the representations and the applicable precedent cases are subject to different interpretations.

(b) Reviewing and advising on the implications of new or revised laws affecting the organization.

(c) Presenting the organization's defense in court in a negligence lawsuit which is strongly pressed by counsel for an organized group.

(d) Providing legal counsel on tax questions complicated by the absence of precedent decisions that are directly applicable to the organization's situation.

D-3. Legal work is typically complex and difficult because of one or more of the following: The questions are unique and require a high order of original and creative legal endeavor for their solution; the questions require extensive research and analysis and the obtaining and evaluating of expert testimony regarding controversial issues in a scientific, financial, corporate organization, engineering, or other highly technical area; and the legal matter is of critical importance to the organization and is being vigorously pressed or contested (e.g., sums such as a million dollars or more are generally directly or indirectly involved).

Examples of D-3 work:

(a) Advising on the legal aspects and implications of Federal antitrust laws to projected greatly expanded marketing operations involving joint ventures with several other organizations.



ATTORNEY—Continued

(b) Planning legal strategy and representing a utility company in rate or Government franchise cases involving a geographic area including parts or all of several States.

(c) Preparing and presenting a case before an appellate court where the case is highly important to the future operation of the organization and is vigorously contested by very distinguished (e.g., having a broad regional or national reputation) legal talent.

(d) Serving as the principal counsel to the officers and staff of an insurance company on the legal problems in the sale, underwriting, and administration of group contracts involving nationwide or multistate coverages and laws.

(e) Performing the principal legal work in a nonroutine major revision of the company's charter or in effectuating new major financing steps.

## Responsibility Level of Job

R-1. Responsibility for final action is usually limited to matters covered by legal precedents and in which little deviation from standard practice is involved. Any decisions or actions having a significant bearing on the organization's business are reviewed. (Is given guidance in the initial stages of his assignment (e.g., in planning and organizing legal research and studies). Assignments are then carried out with moderate independence although guidance is generally available and is sought from time-to-time on problem points.)

R-2. Usually works independently in investigating the facts, searching legal precedents, defining the legal and factual issues, drafting the necessary legal documents, and developing conclusions and recommendations. Decisions having an important bearing on the organization's business are reviewed. (Receives information from supervisor regarding unusual circumstances or important policy considerations pertaining to a legal problem. If trials are involved, may receive guidance from a supervisor regarding presentation, line of approach, possible line of opposition to be encountered, etc. In the case of nonroutine written presentations the final product is reviewed carefully, but primarily for overall soundness of legal reasoning and consistency with organization policy. Some, but not all attorneys, make assignments to one or more lower level attorneys, aids, or clerks.)

R-3. Carries out assignments independently and makes final legal determinations in matters of substantial importance to his organization. Such determinations are subject to review only for consistency with company policy, possible precedent effect, and overall effectiveness. To carry out his assignments he deals regularly with company officers and top level management officials and confers or negotiates regularly with senior attorneys and officials in other companies or in Government agencies on various aspects of his assigned work. (Receives little or no preliminary instruction on legal problems and a minimum of technical legal supervision. May assign and review work of a few attorneys, but this is not a primary responsibility.)

R-4. Carries out assignments which entail independently planning investigations and negotiations on legal problems of the highest importance to his organization and developing completed briefs, opinions, contracts, or other legal products. To carry out his assignments he represents his organization at conferences, hearings, or trials; and personally confers and negotiates with top attorneys and top ranking officials in private companies or in Government agencies. On various aspects of his assigned work may give advice directly and personally to corporation officers and top level managers, or may work through the general counsel of the company in advising officers. (Generally receives no preliminary instruction on legal problems. On matters requiring the concentrated efforts of several attorneys or other specialists is responsible for directing, coordinating, and reviewing the work of the attorneys involved.)

OR

As a primary responsibility, directs the work of a staff of attorneys, one, but usually more, of whom regularly perform D-3 legal work. With respect to the work directed, gives advice directly to corporation officers and top managerial officers, or may give such advice through

ATTORNEY—Continued

the general counsel. (Receives guidance as to organization policy but no technical supervision or assistance except when he might request advice from, or be briefed on, the overall approach to the most difficult, novel, or important legal questions by the general counsel. Usually reports to the general counsel or his deputy.)

## OFFICE SERVICES

MANAGER, OFFICE SERVICES

Responsible for planning, directing, and controlling of office services, subject only to the most general policy supervision. Plays an active role in anticipating and planning to meet office services needs of the operating organization served. Supervises a group of employees engaged in providing office services of a supporting or "housekeeping" nature to the primary operation of a company, an establishment, or an organizational unit of a company or establishment. (May personally perform some of the functions.) Office services include:

- (a) Receipt, distribution, and dispatch of mail.
- (b) Maintenance of central files.
- (c) Printing or duplication and distribution of forms, publications, etc. (May be limited to ordering the printing or duplication of items. Does not necessarily have charge of a printshop or duplication facilities, especially in large operations, but coordinates the flow to and from the reproduction units.)
- (d) Purchasing office supplies and equipment. (Makes direct purchases of run-of-the-mill office supplies. May be responsible for direct purchase of other items from outside suppliers or may requisition through establishment purchasing departments.)
- (e) Records control and disposal.
- (f) Communications (telephone switchboard and/or teletype service).
- (g) Typing or stenographic pool.
- (h) Office equipment maintenance and repair. (May have direct supervision of maintenance and repair personnel or may coordinate the ordering of such services from outside service suppliers or from a central service unit within the establishment.)
- (i) Space control over office facilities—layout and arrangement of offices. (Typically serves as a staff assistant to management officials in performing this function.)

## Manager, Office Services I

Supervises a staff of employees engaged in performing a few (e.g., four or five) of the above functions as a service to a small organization (e.g., 300 to 600 employees, excluding nonsupervisory plant workers).

## Manager, Office Services II

A. Supervises a staff of employees engaged in performing a few (e.g., four or five) of the above functions as a service to a moderately large organization (e.g., 600 to 1,500 employees, excluding nonsupervisory plant workers).

OR

B. Supervises a staff of employees engaged in performing most (e.g., seven or eight) of the above functions as a service to a small organization (e.g., 300 to 600 employees, excluding nonsupervisory plant workers).

MANAGER, OFFICE SERVICES—Continued

## Manager, Office Services III

A. Supervises a staff of employees engaged in performing a few (e.g., four or five) of the functions as a service to a large organization (e.g., 1,500 to 3,000 employees, excluding nonsupervisory plant workers).

OR

B. Supervises a staff of employees engaged in performing most (e.g., seven or eight) of the above functions as a service to a moderately large organization (e.g., 600 to 1,500 employees, excluding nonsupervisory plant workers).

## Manager, Office Services IV

Supervises a staff of employees engaged in performing most (e.g., seven or eight) of the above functions as a service to a large organization (e.g., 1,500 to 3,000 employees, excluding nonsupervisory plant workers).

## BUYERS

BUYER

Purchases materials, supplies, equipment, and services (e.g., utilities, maintenance, and repair). In some instances items are of types that must be specially designed, produced, or modified by the vendor in accordance with drawings or engineering specifications.

Solicits bids, analyzes quotations received, and selects or recommends supplier. May interview prospective vendors. Purchases items and services at the most favorable price consistent with quality, quantity, specification requirements, and other factors. Prepares or supervises preparation of purchase orders from requisitions. May expedite delivery and visit vendors' offices and plants.

Normally, purchases are unreviewed when they are consistent with past experience, and are in conformance with established rules and policies. Proposed purchase transactions that deviate from the usual or from past experience in terms of prices, quality of items, quantities, etc., or that may set precedents for future purchases, are reviewed by higher authority prior to final action.

In addition to the work described above, some (but not all) buyers direct the work of one or a few clerks who perform routine aspects of the work. As a secondary and subsidiary duty, some buyers may also sell or dispose of surplus, salvage, or used materials, equipment, or supplies.

NOTE: Some buyers are responsible for the purchasing of a variety of items and materials. When the variety includes items and work described at more than one of the following levels, the position should be considered to equal the highest level that characterizes at least a substantial portion of the buyer's time.

Excluded are:

- (a) Buyers of items for direct sale, either wholesale or retail;
- (b) Brokers and dealers buying for clients or for investment purposes;
- (c) Positions that specifically require professional education and qualifications in a physical science or in engineering (e.g., chemist, mechanical engineer);

BUYER—Continued

(d) Buyers who specialize in purchasing a single or a few related items of highly variable quality such as raw cotton or wool, tobacco, cattle, or leather for shoe uppers, etc. Expert personal knowledge of the item is required to judge the relative value of the goods offered, and to decide the quantity, quality, and price of each purchase in terms of its probable effect on the organization's profit and competitive status;

(e) Buyers whose principal responsibility is the supervision of other buyers or the management, direction, or supervision of a purchasing program;

(f) Persons predominantly concerned with contract or subcontract administration;

(g) Persons whose major duties consist of ordering, reordering, or requisitioning items under existing contracts; and

(h) Positions restricted to the clerical functions or to purchase expediting work.

## Buyer I

Purchases "off-the-shelf" types of readily available, commonly used materials, supplies, tools, furniture, services, etc.

Transactions usually involve local retailers, wholesalers, jobbers, and manufacturers' sales representatives.

Quantities purchased are generally small amounts, e.g., those available from local sources.

Examples of items purchased include: Common stationery and office supplies; standard types of office furniture and fixtures; standard nuts, bolts, screws; janitorial and common building maintenance supplies; and common building maintenance or common utility services.

## Buyer II

Purchases "off-the-shelf" types of standard, generally available technical items, materials, and services.

Transactions usually involve dealing directly with manufacturers, distributors, jobbers, etc.

Quantities of items and materials purchased may be relatively large, particularly in the case of contracts for continuing supply over a period of time.

May be responsible for locating or promoting possible new sources of supply. Usually is expected to keep abreast of market trends, changes in business practices in the assigned markets, new or altered types of materials entering the market, etc.

Examples of items purchased include: Industrial types of handtools; electronic tube and component test instruments; standard electronic parts and components; electric motors; gasoline service station equipment; PBX or other specialized telephone services; and routine purchases of common raw materials such as standard grades and sizes of steel bars, rods, and angles.

Also included at this level are buyers of materials of the types described for buyer I when the quantities purchased are large so that local sources of supply are generally inadequate and the buyer must deal directly with manufacturers on a broader than local scale.

## Buyer III

Purchases items, materials, or services of a technical and specialized nature. The items, while of a common general type, are usually made, altered, or customized to meet the user's specific needs and specifications.

BUYER—Continued

Transactions usually require dealing with manufacturers. The number of potential vendors is likely to be small and price differentials often reflect important factors (quality, delivery dates, and places, etc.) that are difficult to evaluate.

The quantities purchased of any item or service may be large.

Many of the purchases involve one or more of such complications as: Specifications that detail, in technical terms, the required physical, chemical, electrical, or other comparable properties; special testing prior to acceptance; grouping of items for lot bidding and awards; specialized processing, packing, or packaging requirements; export packs; overseas port differentials; etc.

Is expected to keep abreast of market and product developments. May be required to locate new sources of supply.

Some positions may involve assisting in the training or supervising of lower level buyers or clerks.

Examples of items purchased include: Castings; special extruded shapes of normal size and material; special formula paints; electric motors of special shape or speed; special packaging of items; and raw materials in substantial quantities.

## Buyer IV

Purchases highly complex and technical items, materials, or services, usually those specially designed and manufactured exclusively for the purchaser.

Transactions require dealing with manufacturers and often involve persuading potential vendors to undertake the manufacturing of custom designed items according to complex and rigid specifications.

Quantities of items and materials purchased are often large in order to satisfy the requirements for an entire large organization for an extended period of time. Complex schedules of delivery are often involved. Buyer determines appropriate quantities to be contracted for at any given period of time.

Transactions are often complicated by the presence of one or more such matters as inclusion of: Requirements for spare parts, preproduction samples and testing, or technical literature; or patent and royalty provisions.

Keeps abreast of market and product developments. Develops new sources of supply.

In addition to the work described above, a few positions may also require supervision over a few lower level buyers or clerks. (No position is included in this level solely because supervisory duties are performed.)

Examples of items purchased include: Special purpose high cost machine tools and production facilities; raw materials of critically important characteristics or quality; parts, subassemblies, components, etc., specially designed and made to order (e.g., communications equipment for installation in aircraft being manufactured; component assemblies for missiles and rockets; and motor vehicle frames).

Buyer V <sup>28</sup>

Purchases items or materials, either technical or nontechnical, in such unusually large quantities that individual purchases can affect the overall market price of the commodity. (NOTE: Only the very largest organizations, e.g., those employing more than 10,000 persons, are able to buy in the quantities contemplated in this paragraph. Even in the very large organizations this level of buying is often absent and even when present, is restricted to a very few buyers or is assigned, not to a buyer but to some higher ranking official.)

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<sup>28</sup> Insufficient data were obtained for level V to warrant presentation of average salaries.

BUYER—Continued

Alternatively, may purchase items of extraordinary technical complexity (e. g., missile guidance systems; items that involve the outermost limits of the physical sciences or engineering) or of unusually high individual value (e. g., multiengine jet aircraft; large capacity computers; and high capacity turbine-generators).

Usually is required to identify and consider all possible sources of supply.

The transactions are so large that they often affect a considerable portion of the industry or trade concerned, resulting in complex scheduling and difficulty in negotiating mutually acceptable arrangements.

Frequently is required to develop new sources of supply through persuasion of manufacturers or other concerns to expand or convert plants and facilities.

In addition to the work described above, a few positions may also require supervision over a few lower grade buyers or clerks. (No position is included in this level solely because supervisory duties are performed.)

## PERSONNEL MANAGEMENT

JOB ANALYST

Performs work involved in collecting, analyzing, and developing occupational data relative to jobs, job qualifications, and worker characteristics as a basis for compensating employees in a fair, equitable, and uniform manner. Performs such duties as studying and analyzing jobs and preparing descriptions of duties and responsibilities and of the physical and mental requirements needed by workers; evaluating jobs and determining appropriate wage or salary levels in accordance with their difficulty and responsibility; independently conducting or participating with representatives of other companies in conducting compensation surveys within a locality or labor market area; assisting in administering merit rating program; reviewing changes in wages and salaries indicated by surveys and recommending changes in pay scales; and auditing individual jobs to check the propriety of evaluations and to apply current job classifications.

## Job Analyst I

As a trainee, performs work in designated areas and of limited occupational scope. Receives immediate supervision in assignments designed to provide training in the application of established methods and techniques of job analysis. Studies the least difficult jobs and prepares reports for review by a job analyst of higher level.

## Job Analyst II

Studies, describes, and evaluates jobs in accordance with established procedures. Is usually assigned to the simpler kinds of both wage and salaried jobs in the establishment. Works independently on such assignments but is limited by instructions of his superior and by defined area of assignment.

## Job Analyst III

Analyzes and evaluates a variety of wage and salaried jobs in accordance with established evaluation systems and procedures. May conduct wage surveys within the locality or participate in conducting surveys of broad compensation areas. May assist in developing survey methods and plans. Receives general supervision but responsibility for final action is limited.

JOB ANALYST—Continued

## Job Analyst IV

Analyzes and evaluates a variety of jobs in accordance with established evaluation systems and procedures, and is given assignment which regularly includes responsibility for the more difficult kinds of jobs. ("More difficult" means jobs which consist of hard-to-understand work processes; e.g., professional, scientific, administrative, or technical; or jobs in new or emerging occupational fields; or jobs which are being established as part of the creation of new organizations; or where other special considerations of these types apply.) Receives general supervision, but responsibility for final action is limited. May participate in the development and installation of evaluation or compensation systems, which may include those for merit rating programs. May plan survey methods and conduct or direct wage surveys within a broad compensation area.

DIRECTOR OF PERSONNEL

Directs a personnel management program for a company or for a plant or establishment of a company. For a job to be covered by this definition, the personnel management program must include responsibility for all three of the following functions:

(1) Administering a formal job evaluation system; i.e., a system in which there are established procedures by which jobs are analyzed and evaluated on the basis of their duties, responsibilities, and qualification requirements in order to provide a foundation for equitable compensation. Typically, such a system includes the use of one or more sets of job evaluation factors and the preparation of formal job descriptions. It may also include such related functions as wage and salary surveys or merit rating system administration. The job evaluation system(s) does not necessarily cover all jobs in the organization, but does cover a substantial portion of the organization.

(2) Employment and placement functions; i.e., recruiting actively for at least some kinds of workers through a variety of sources (e.g., schools or colleges, employment agencies, professional societies, etc.); evaluating applicants against demands of particular jobs by use of such techniques as job analysis to determine requirements, interviews, written tests of aptitude, knowledge, or skill, reference checks, experience evaluations, etc.; recommending selections and job placements to management, etc.

(3) Employee relations and services functions; i.e., functions designed to maintain employees' morale and productivity at a high level (for example, administering a formal or informal grievance procedure; identifying and recommending solutions for personnel problems such as absenteeism, high turnover, low productivity, etc.; administration of beneficial suggestions system, retirement, pension, or insurance plans, merit rating system, etc.; overseeing cafeteria operations, recreational programs, industrial health or safety programs, etc.).

Employee training and development functions may or may not be part of the personnel management program for purposes of matching this definition.

Labor relation activities, if any, are confined mainly to the administration, interpretation, and application of labor union contracts and are essentially similar to those described under (3) above. If responsibility for actual contract negotiation with labor unions as the principal company representative is considered a significant one in the job, i.e., the one which serves as the primary basis for qualification requirements and compensation, the job is excluded from being matched with this definition. Participation in bargaining of a less significant nature, e.g., to negotiate detailed settlement of such matters as specific rates, job classifications, work rules, hiring or layoff procedures, etc., within the broad terms of a general agreement reached at higher levels, or to supply advice and information on technical points to the company's principal representative, will not have the effect of excluding the job from coverage.

DIRECTOR OF PERSONNEL—Continued

The director of personnel not only directs a personnel management program of the intensity and scope outlined previously, but (to be a proper match) he is recognized by the top management officials of the organization he serves as the source of advice and assistance on personnel management matters and problems generally. For example, he is typically consulted on the personnel implications of planned changes in management policy or program, the effects on the organization of economic or market trends, product or production method changes, etc.; he represents management in external contacts with other companies, trade associations, government agencies, etc., when the primary subject matter of the contact is on personnel management matters.

Typically, the director of personnel reports to a company officer or a high management official who has responsibility for the operation of a plant or establishment of a company; or, at company headquarters level, he may report to a company officer in charge of industrial relations and personnel management activities or a similar official.

Directors of personnel jobs which meet the above definition are classified by level<sup>29</sup> of work in accordance with the following tabulation:

Number of employees in work force serviced	Personnel program operations level <sup>1</sup>		Personnel program development level <sup>2</sup>	
	Organization serviced— type A <sup>3</sup>	Organization serviced— type B <sup>4</sup>	Organization serviced— type A <sup>3</sup>	Organization serviced— type B <sup>4</sup>
250-750-----	I	II	II	III
1,000-5,000-----	II	III	III	IV
6,000-12,000-----	III	IV	IV	V
15,000-25,000-----	IV	V	V	-

<sup>1</sup> Personnel program operations level—director of personnel servicing an organizational segment (e.g., a plant) of a company, where the basic personnel program policies, plans, objectives, etc., are established at company headquarters or at some other higher level between the plant and the company headquarters level. The personnel director's responsibility is to put these into operation at the local level, in such a manner as to most effectively serve the local management needs.

<sup>2</sup> Personnel program development level—director of personnel servicing an entire company (with or without subordinate establishments) where the personnel director plays an important role in establishment of basic personnel policies, plans, objectives, etc., for the company, subject to policy direction and control from company officers. There may be instances in which there is such relatively complete delegation of personnel program planning and development responsibility below the company level to an intermediate organization, e.g., a subsidiary or a division, that a job of personnel director for such an organization should be matched as though it were a company level job.

<sup>3</sup> Organization serviced—type A—jobs serviced are (almost exclusively) types which are common in the labor market generally, and consist of relatively easy-to-understand work processes, or for similar reasons do not present particularly difficult recruitment, job evaluation, or training problems. Work force, organizational structure, and other organizational characteristics are relatively stable.

<sup>4</sup> Organization serviced—type B—jobs serviced include a substantial number of types which are largely peculiar to the organization serviced, consist of hard-to-understand work processes (e.g., professional, scientific, administrative, or technical), are jobs in new or emerging occupational fields, are in extremely short supply, have hard-to-match skill requirements, or for similar reasons present difficult recruitment, job evaluation, or training problems. Work force, organizational structure, or other organizational characteristics are complicated, unstable, subject to wide seasonal fluctuations, etc.

NOTE: There are gaps between different degrees of all three elements used to determine job level matches. These gaps have been provided purposely to allow room for judgment in getting the best overall job level match for each job. Thus, a job which services a work force of 850 employees should be matched with level II if it is a personnel program operations level job where the nature of the organization serviced seems to fall slightly below the definition for the type B degree. However, the same job should be matched with level I if the nature of the organization serviced clearly falls well within the definition for the type A degree.

<sup>29</sup> Ibid.



## CHEMISTS AND ENGINEERS

CHEMIST

Performs research, development, interpretive, and analytical work to determine the composition, molecular structure, and properties of substances, to develop or investigate new materials and processes, and to investigate the transformation which substances undergo. Work typically requires a B.S. degree in chemistry or equivalent in education and experience combined.

## Chemist I

General characteristics. As the beginning level of professional work in chemistry, a bachelor's degree with major study in chemistry, or equivalent is required. Typically receives formal classroom or on-the-job training.

Direction received. Performs work under close supervision with specific and detailed instructions as to required tasks and results expected.

Typical duties and responsibilities. Assignments are planned to provide experience in the application of common laboratory techniques and familiarization with methods and practices in the laboratory. Performs a variety of routine analyses, tests, and operations, and assists experienced chemists by carrying out detailed steps of experiments.

Responsibility for the direction of others. None.

## Chemist II

General characteristics. At this continuing developmental level for professional chemists, work is characterized by selection and application of general and specialized methods, techniques, and instruments commonly used in the laboratory. May receive advanced on-the-job training or formal classroom instruction.

Direction received. Supervisors establish the nature and extent of analysis required, specify methods and criteria on new types of assignments, and review work for thoroughness of application of methods and accuracy of results.

Typical duties and responsibilities. Analyzes a wide variety of samples for which there are standard or established methods of analysis or for which the adaptation of standard methods is obvious or determined by others. Conducts specified phases of research projects as an assistant to an experienced chemist.

Responsibility for the direction of others. May supervise a few technicians or aids.

## Chemist III

General characteristics. Performs work requiring application of knowledge of a specialized field of chemistry and ingenuity in the independent evaluation, selection, and adaptation of standard methods and techniques.

Direction received. On routine work, supervision is very general; unusual problems are resolved with close collaboration of supervisor. Completed work is reviewed for application of sound judgment in choice of methods and adequacy of results.

Typical duties and responsibilities. Develops details of research and development assignments in accordance with a line of approach suggested by the supervisor and adapts methods to the specific requirements of assignments. Analyzes samples that require specialized training because standard methods are unapplicable, because of required interpretive judgment of quality of substances, or because of required specialized skill in adapting techniques such as microanalysis.

Responsibility for the direction of others. May supervise a few technicians or aids.

## CHEMIST—Continued

## Chemist IV

General characteristics. Plans and conducts work in chemistry requiring mastery of specialized techniques or considerable ingenuity in selecting and evaluating approaches to unforeseen or novel problems.

Direction received. Generally works independently of technical supervision but refers proposed plans and unusually important or complex problems to supervisor for guidance.

Typical duties and responsibilities. Conducts research assignments requiring the evaluation of alternate methods of approach. Undertakes the more complex, and exacting, or esoteric analytical assignments requiring a specialist in technique or product. Prepares interpretive reports of results and may provide technical advice on significance of results.

Responsibility for the direction of others. May supervise a small staff of chemists and technicians.

## Chemist V

General characteristics. Participates in planning research programs on the basis of specialized knowledge of problems and methods and probable value of results. May serve as an expert in a narrow specialty making recommendations and conclusions which serve as the basis for undertaking or rejecting important projects.

Direction received. Usually discusses important developments with supervisor. Supervision received relates largely to work objectives and administrative aspects.

Typical duties and responsibilities. From broad program objectives, plans, organizes, and supervises or conducts research investigations with responsibility for defining projects and scope and independently selecting lines of approach.

As individual worker, carries out research project requiring origination of new scientific techniques and mature background of knowledge of related fields of science.

Responsibility for the direction of others. May supervise a small group of chemists engaged in varied research projects or a larger group on routine analytical work.

## Chemist VI

General characteristics. Performs work requiring leadership and expert knowledge in a specialized field of chemistry. Conceives, plans, and directs projects of a pioneering nature to create new methods and techniques or to resolve problems which have proved unusually refractory.

Direction received. Supervision received is essentially administrative with assignments broadly indicated in terms of objectives.

Typical duties and responsibilities. Determines the kinds of projects and data needed to meet objectives of programs. Maintains liaison with related organizations and represents the laboratory in important conferences with authority to commit the organization. May serve as a consultant to other chemists in the specialty field.

Responsibility for the direction of others. May plan, organize, direct, and evaluate the work of a group of chemists.

## Chemist VII

General characteristics. Supervisor—provides leadership and scientific guidance for a broad and diversified program in chemistry and related supporting activities such as to require several subordinate supervisors responsible for programs typically identified with level VI. Recommends the facilities, personnel, and funds required to carry out programs and evaluates accomplishments.

CHEMIST—Continued

Individual researcher and consultant—is a nonsupervisory chemist of recognized leadership status and authoritativeness in his company, in a broad area of specialization. Is consulted extensively by associates and others with a high degree of reliance placed on his scientific interpretations and advice.

Direction received. Under general administrative direction.

Typical duties and responsibilities. Supervisor—is responsible for an important segment of a chemical program of a company with extensive and diversified scientific requirements or the entire chemical program of a company where the program is limited in scope. Makes authoritative technical recommendations concerning the scientific objectives and levels of work which will be most profitable in the light of company requirements and scientific and industrial trends and developments.

Individual researcher and consultant—selects problems for research and conceives and plans investigations in which the phenomena and principles are not adequately understood, so that outstanding creativity and mature judgment are required to devise hypotheses and techniques of experimentation and to interpret results. Advises the head of a large laboratory on complex aspects of extremely broad and important programs with responsibility for exploring, justifying, and evaluating proposed and current programs and projects and furnishing advice on unusually complex and novel problems in the specialty field.

Responsibility for the direction of others. Supervisor—see "general characteristics" above.

## Chemist VIII

General characteristics. Supervisor—provides leadership and scientific guidance for a very broad and highly diversified program in chemistry and related supporting activities requiring several subordinate supervisors responsible for programs typically identified with level VII, or a large number of supervisors of lower levels. Recommends the facilities, personnel, and funds required for programs and evaluates accomplishments.

Individual researcher and consultant—serves as a consultant to top-level management on scientific questions of far-reaching significance. Is sought as a consultant by chemists who are themselves specialists in the field. Is a nationally recognized research leader and consultant for his company.

Direction received. Receives general administrative direction.

Typical duties and responsibilities. Supervisor—is responsible for an important segment of a chemical program of a company with very extensive and highly diversified scientific requirements or the entire chemical program of a company where the program is of moderate scope. Is responsible for deciding the kind and extent of chemical and related program needed to accomplish the objectives of the company, for choosing the scientific approaches, for planning and organizing facilities and programs, and for interpreting results.

Individual researcher and consultant—formulates and guides the attack on exceptionally difficult and important problems whose solution would represent a major scientific or technological advance.

Responsibility for the direction of others. Supervisor—see "general characteristics" above.

This level does not include the chief chemist of a company with a very extensive and highly diversified program; or the assistant chief chemist of a company with an unusually extensive and novel chemical program.

ENGINEER

Performs work in research, development, design, testing, analysis, production, construction, maintenance, operation, planning, survey, estimating, application, or standardization of engineering facilities, systems, structures, processes, equipment devices, or materials requiring knowledge of the science and art by which materials, natural resources, and power are made useful. Work typically requires a B.S. degree in engineering or the equivalent in experience and education combined. (Safety engineers, industrial engineers, quality control engineers, and sales engineers are to be excluded.)

## Engineer I

General characteristics. As the beginning level of engineering work, a bachelor's degree in engineering or equivalent is required. Typically receives formal classroom or on-the-job training.

Direction received. Performs work under close supervision with specific and detailed instructions as to required tasks and results expected. Work is checked during progress, and upon completion is reviewed for accuracy.

Typical duties and responsibilities. Performs simple tasks that are planned to provide experience and familiarization with methods and practices of the company in the specialty field and to ascertain the interests and aptitudes of the beginning engineer.

Responsibility for the direction of others. None.

## Engineer II

General characteristics. At this continuing developmental level, performs routine engineering work requiring application of standard techniques, procedures, and criteria in carrying out a sequence of related engineering tasks. Limited exercise of judgment is required on details of work. May receive advanced on-the-job or classroom instructions.

Direction received. Supervisor screens assignments to eliminate difficult problems and selects techniques and procedures to be applied. Receives close supervision on new aspects of assignments.

Typical duties and responsibilities. Using prescribed methods, performs specific and limited portions of a broader assignment of an experienced engineer. Applies standard practices and techniques in specific situations, adjusts and correlates data, recognizes discrepancies in results, and follows operations through a series of related detailed steps or processes.

Responsibility for the direction of others. May supervise a few aids or technicians.

## Engineer III

General characteristics. Work requires independent evaluation, selection, and application of standard engineering techniques, procedures, and criteria, using judgment and ingenuity in making minor adaptations and modifications.

Direction received. Receives instruction on specific assignment objectives, points of emphasis, reference and information sources, and possible solutions. Unusual problems are solved jointly with supervisor, and work is reviewed for application of sound engineering judgment.

ENGINEER—Continued

Typical duties and responsibilities. Assignments include equipment design and development, test of materials, preparation of specifications, process study, research investigations, report preparation, and other activities of limited scope requiring knowledge of principles, practices, and techniques commonly employed in the specific narrow area of assignments. Performs work which involves conventional types of plans, investigations, surveys, structures, or equipment with relatively few complex features for which there are precedents.

Responsibility for the direction of others. May supervise the work of draftsmen, inspectors, and other technicians assigned to assist in the work.

## Engineer IV

General characteristics. Work requires originality and judgment in the independent evaluation, selection, and substantial adaptation and modification of standard techniques, procedures, and criteria. Is recognized as fully competent in all conventional aspects of the subject-matter or functional area of assignments.

Direction received. Receives direct supervision and guidance primarily on novel or controversial problems or questions. Makes independent technical decisions on details of work covered by precedents.

Typical duties and responsibilities. Plans, schedules, and coordinates detailed phases of the engineering work in a part of a major project or in a total project of moderate scope. Devises new approaches to problems encountered. Performs work which involves conventional engineering practice but includes a variety of complex features such as conflicting design requirements, unsuitability of standard materials, and difficult coordination requirements. Work requires a broad knowledge of precedents in the specialty area and a good knowledge of principles and practices of related specialties.

Responsibility for the direction of others. May supervise a few engineers or technicians on routine work.

## Engineer V

General characteristics. Work requires application of intensive and diversified knowledge of engineering principles and practices in broad areas of assignments and related fields. Makes decisions independently on engineering problems and methods, and represents the organization in conferences to resolve important questions and to plan and coordinate work. Positions may be supervisory or nonsupervisory.

Direction received. Receives supervision and guidance only in terms of specific work objectives and critical issues.

Typical duties and responsibilities. Supervisor—plans, develops, coordinates, and directs a large and important engineering project or a number of small projects with many complex features.

Nonsupervisory researcher—carries out complex or novel research assignments requiring the development of new or improved techniques and procedures.

Nonsupervisory staff specialist—develops and evaluates plans and criteria for a variety of projects and activities to be carried out by others.

Responsibility for the direction of others. Supervisor—supervises, coordinates, and reviews the work of a small staff of engineers and technicians. Estimates manpower needs and schedules and assigns work to meet completion date.

ENGINEER—Continued

## Engineer VI

General characteristics. Work is characterized by full technical responsibility for interpreting, organizing, executing, and coordinating assignments. Maintains liaison with other organizations or companies. Positions may be supervisory or nonsupervisory.

Direction received. Assignments are received in terms of broad general objectives and limits. Supervision concerns administrative features of the work.

Typical duties and responsibilities. Conceives and plans engineering projects involving exploration of subject area, definition of scope and selection of problems for investigation, and development of novel concepts and approaches.

Supervisor—plans, develops, coordinates, and directs a number of large and important projects or a project of major scope and importance.

Nonsupervisory researcher—plans and conducts research or other work requiring pioneering in areas in which large blocks of data are controversial or unknown.

Nonsupervisory staff specialist—as an expert in a specific field, performs advisory, consulting, and review work.

Responsibility for direction of others. Supervisor—directs a staff of project engineers and assistants. Evaluates progress of the staff and results obtained, and recommends major changes to achieve overall objectives.

## Engineer VII

General characteristics. Work is characterized by decisions and recommendations which are recognized as authoritative and have an important impact on extensive engineering activities. Initiates and maintains extensive contacts with key engineers and officials of other organizations and companies; this requires skill in persuasion and negotiations of critical issues. Positions may be supervisory or nonsupervisory.

Direction received. Receives general administrative direction.

Typical duties and responsibilities. Demonstrates creativity, foresight, and mature engineering judgment in anticipating and solving unprecedented engineering problems, determining program objectives and requirements, organizing programs and projects, and developing standards and guides for diverse engineering activities.

Supervisor—plans, develops, coordinates, and directs an engineering program consisting of many large and important projects.

Nonsupervisory—performs advisory, consulting, and review work as authoritative specialist or expert in broad program areas.

Responsibility for the direction of others. Supervisor—directs a large staff of project engineers, and engineers and scientists in supporting functions. Several subordinate supervisors are responsible for projects or activities typically identified with level VI.

## Engineer VIII

General characteristics. Work is characterized by authoritative decisions and recommendations which have a far-reaching impact on extensive engineering and related activities of the company. Negotiates critical and controversial issues with top level engineers and officers of other organizations and companies. Positions may be supervisory or nonsupervisory.

Direction received. Receives general administrative direction.

ENGINEER—Continued

Typical duties and responsibilities. Demonstrates a high degree of creativity, foresight, and mature engineering judgment in planning, organizing, and guiding extensive engineering programs and activities of outstanding novelty and importance.

Supervisor—plans, develops, coordinates, and directs a highly complex and diversified engineering program consisting of many large and important projects and supporting activities.

Nonsupervisory—performs advisory and consulting work for his company as a nationally recognized authority for broad program areas of considerable novelty and importance.

Responsibility for the direction of others. Directs a very large staff of project engineers, and engineers and scientists in supporting functions. Several subordinate supervisors are responsible for programs, projects, or activities typically identified with level VII.

This level does not include positions of chief engineers of companies with large engineering organizations; e. g., those engaged in research and development on a variety of complex weapons systems with numerous novel components, or of chiefs of primary organizational segments of companies with very large engineering organizations engaged in unusually extensive and diversified research and development.

## ENGINEERING TECHNICIANS

ENGINEERING TECHNICIAN

To be covered by these definitions, employees must meet all of the following criteria;

- (1) Provides semiprofessional technical support for engineers working in such areas as research, design, development, testing or manufacturing process improvement.
- (2) Work pertains to electrical, electronic, or mechanical components or equipment.
- (3) Required to have some knowledge of science or engineering.

(Excludes production or maintenance workers, quality control testers, craftsmen, draftsmen, designers, and engineers.)

## Engineering Technician I

Performs simple routine tasks under close supervision or from detailed procedures. Work is checked in process or on completion. Performs at this level, one or a combination of such typical duties as:

Assembles or installs equipment or parts requiring simple wiring, soldering, or connecting.

Performs simple or routine tasks or tests such as tensile or hardness tests; operates, and adjusts simple test equipment; records test data.

Gathers and maintains specified records of engineering data such as tests, and drawings; performs computations by substituting numbers in specified formulas; plots data and draws simple curves and graphs.

ENGINEERING TECHNICIAN—Continued

## Engineering Technician II

Performs standardized or prescribed assignments, involving a sequence of related operations. Follows standard work methods or explicit instructions; technical adequacy of routine work is reviewed on completion; nonroutine work may also be reviewed in process. Performs at this level, one or a combination of such typical duties as:

Assembles or constructs simple or standard equipment or parts. May service or repair simple instruments or equipment.

Conducts a variety of standardized tests; may prepare test specimens; sets up and operates standard test equipment; records test data.

Extracts engineering data from various prescribed sources; processes the data following well defined methods; presents the data in prescribed form.

## Engineering Technician III

Performs assignments that are not completely standardized or prescribed. Selects or adapts standard procedures or equipment. Receives initial instructions, equipment requirements and advice from supervisor or engineer; technical adequacy of completed work is checked. Performs at this level, one or a combination of such typical duties as:

Constructs components, subunits or simple models or adapts standard equipment. May troubleshoot and correct malfunctions.

Conducts various tests or experiments which may require minor modifications in test setups or procedures; selects, sets up and operates standard test equipment and records test data.

Extracts and compiles a variety of engineering data; processes or computes data using specified formulas and procedures. Performs routine analysis to check applicability, accuracy, and reasonableness of data.

## Engineering Technician IV

Performs nonroutine assignments of substantial variety and complexity. Receives objectives and technical advice from supervisor or engineer; work is reviewed for technical adequacy. May be assisted by lower level technicians. Performs at this level, one or a combination of such typical duties as:

Works on limited segment of development project; constructs experimental or prototype models to meet engineering requirements; conducts tests or experiments; records and evaluates data and reports findings.

Conducts tests or experiments requiring selection and adaptation or modification of test equipment and test procedures; sets up and operates equipment; records data; analyzes data and prepares test reports.

Compiles and computes a variety of engineering data; may analyze test and design data; develops or prepares schematics, designs, specifications, parts lists or makes recommendations regarding these items. May review designs or specifications for adequacy.

## Engineering Technician V

Performs nonroutine and complex assignments involving responsibility for planning and conducting a complete project of relatively limited scope or a portion of a larger and more diverse project. Selects and adapts plans, techniques, designs or layouts. May coordinate portions of overall assignment; reviews, analyzes and integrates the technical work



ENGINEERING TECHNICIAN—Continued

of others. Supervisor or professional engineer outlines objectives, requirements and design approaches; completed work is reviewed for technical adequacy and satisfaction of requirements. May be assisted by lower level technicians. Performs at this level, one or a combination of such typical duties as:

Designs, develops and constructs major units, devices or equipment; conducts tests or experiments; analyzes results and redesigns or modifies equipment to improve performance; reports results.

Plans or assists in planning tests to evaluate equipment performance. Determines test requirements, equipment modification and test procedures; conducts tests, analyzes and evaluates data and prepares reports on findings and recommendations.

Reviews and analyzes a variety of engineering data to determine requirements to meet engineering objectives; may calculate design data; prepares layouts, detailed specifications, parts lists, estimates, procedures, etc. May check and analyze drawings or equipment to determine adequacy of drawings and design.

## DRAFTSMEN

## Draftsman-tracer

Copies plans and drawings prepared by others by placing tracing cloth or paper over drawings and tracing with pen or pencil. (Does not include tracing limited to plans primarily consisting of straight lines and a large scale not requiring close delineation.)

and/or

Prepares simple or repetitive drawings of easily visualized items. Work is closely supervised during progress.

## Draftsman I

Prepares detail drawings of single units or parts for engineering, construction, manufacturing, or repair purposes. Types of drawings prepared include isometric projections (depicting three dimensions in accurate scale) and sectional views to clarify positioning of components and convey needed information. Consolidates details from a number of sources and adjusts or transposes scale as required.

## Draftsman II

Performs nonroutine and complex drafting assignments that require the application of most of the standardized drawing techniques regularly used. Duties typically involve such work as: Prepares working drawings of subassemblies with irregular shapes, multiple functions, and precise positional relationships between components; prepares architectural drawings for construction of a building including detail drawings of foundations, wall sections, floor plans, and roof. Uses accepted formulas and manuals in making necessary computations to determine quantities of materials to be used, load capacities, strengths, stresses, etc. Receives initial instructions, requirements, and advice from supervisor. Completed work is checked for technical adequacy.

## Draftsman III

Plans the graphic presentation of complex items having distinctive design features that differ significantly from established drafting precedents. Works in close support with the design originator, and may recommend minor design changes. Analyzes the effect of each change on the details of form, function, and positional relationships of components and parts. Works with a minimum of supervisory assistance. Completed work is reviewed by design originator for consistency with prior engineering determinations. May either prepare drawings, or direct their preparation by lower level draftsmen.

## CLERICAL

CLERK, ACCOUNTING

## Clerk, Accounting I

Under supervision, performs one or more routine accounting operations such as posting simple journal vouchers or accounts payable vouchers, entering vouchers in voucher registers; reconciling bank accounts; and posting subsidiary ledgers controlled by general ledgers, or posting simple cost accounting data. This job does not require a knowledge of accounting and bookkeeping principles, but is found in offices in which the more routine accounting work is subdivided on a functional basis among several workers.

## Clerk, Accounting II

Under general direction of a bookkeeper or accountant, has responsibility for keeping one or more sections of a complete set of books or records relating to one phase of an establishment's business transactions. Work involves posting and balancing subsidiary ledger or ledgers such as accounts receivable or accounts payable; examining and coding invoices or vouchers with proper accounting distribution; requires judgment and experience in making proper assignments and allocations. May assist in preparing, adjusting, and closing journal entries; may direct accounting clerks I.

CLERK, FILE

## Clerk, File I

Performs routine filing of material that has already been classified or which is easily classified in a simple serial classification system (e.g., alphabetical, chronological, or numerical). As requested, locates readily available material in files and forwards material; may fill out withdrawal charge. Performs simple clerical and manual tasks required to maintain and service files.

## Clerk, File II

Sorts, codes, and files unclassified material by simple (subject matter) headings or partly classified material by finer subheadings. Prepares simple related index and cross-reference aids. As requested, locates clearly identified material in files and forwards material. May perform related clerical tasks required to maintain and service files.

## Clerk, File III

In an established filing system containing a number of varied subject matter files, classifies and indexes file material such as correspondence, reports, technical documents, etc. May also file this material. May keep records of various types in conjunction with the files. May lead a small group of lower level file clerks.

KEYPUNCH OPERATOR

## Keypunch Operator I

Under close supervision or following specific procedures or instructions, transcribes data from source documents to punched cards. Operates a numerical and/or alphabetical or combination keypunch machine to keypunch tabulating cards. May verify cards. Working from various standardized source documents, follows specified sequences which have been coded or prescribed in detail and require little or no selecting, coding, or interpreting of data to be punched. Problems arising from erroneous items or codes, missing information, etc., are referred to supervisor.

KEYPUNCH OPERATOR—Continued**Keypunch Operator II**

Operates a numerical and/or alphabetical or combination keypunch machine to transcribe data from various source documents to keypunch tabulating cards. Performs same tasks as lower level keypunch operator but in addition, work requires application of coding skills and the making of some determinations, for example, locates on the source document the items to be punched; extracts information from several documents; searches for and interprets information on the document to determine information to be punched. May train inexperienced operators.

OFFICE BOY OR GIRL

Performs various routine duties such as running errands; operating minor office machines, such as sealers or mailers; opening and distributing mail; and other minor clerical work.

SECRETARY

Assigned as personal secretary, normally to one individual. Maintains a close and highly responsive relationship to the day-to-day work activities of the supervisor. Works fairly independently receiving a minimum of detailed supervision and guidance. Performs varied clerical and secretarial duties, usually including most of the following:

- (a) Receives telephone calls, personal callers, and incoming mail, answers routine inquiries, and routes the technical inquiries to the proper persons;
- (b) Establishes, maintains, and revises the supervisor's files;
- (c) Maintains the supervisor's calendar and makes appointments as instructed;
- (d) Relays messages from supervisor to subordinates;
- (e) Reviews correspondence, memoranda, and reports prepared by others for the supervisor's signature to assure procedural and typographic accuracy;
- (f) Performs stenographic and typing work.

May also perform other clerical and secretarial tasks of comparable nature and difficulty. The work typically requires knowledge of office routine and understanding of the organization, programs, and procedures related to the work of the supervisor.

Exclusions

Not all positions that are titled "secretary" possess the above characteristics. Examples of positions which are excluded from the definition are as follows:

- (a) Positions which do not meet the "personal" secretary concept described above;
- (b) Stenographers not fully trained in secretarial type duties;
- (c) Stenographers serving as office assistants to a group of professional, technical, or managerial persons;
- (d) Secretary positions in which the duties are either substantially more routine or substantially more complex and responsible than those characterized in the definition;
- (e) Assistant type positions which involve more difficult or more responsible technical, administrative, supervisory, or specialized clerical duties which are not typical of secretarial work.

**NOTE:** The term "corporate officer," used in the level definitions following, refers to those officials who have a significant corporate-wide policymaking role with regard to major company activities. The title "vice president," though normally indicative of this role, does not in all cases identify such positions. Vice presidents whose primary responsibility is to act personally on individual cases or transactions (e.g., approve or deny individual loan or credit actions; administer individual trust accounts; directly supervise a clerical staff) are not considered to be "corporate officers" for purposes of applying the following level definitions:

SECRETARY—Continued

## Secretary I

(a) Secretary to the supervisor or head of a small organizational unit (e.g., fewer than about 25 or 30 persons); or

(b) Secretary to a nonsupervisory staff specialist, professional employee, administrative officer, or assistant, skilled technician or expert. (NOTE: Many companies assign stenographers, rather than secretaries as described above, to this level of supervisory or nonsupervisory worker.)

## Secretary II

(a) Secretary to an executive or managerial person whose responsibility is not equivalent to one of the specific level situations in the definition for level III, but whose subordinate staff normally numbers at least several dozen employees and is usually divided into organizational segments which are often, in turn, further subdivided. In some companies, this level includes a wide range of organizational echelons; in others, only one or two; or

(b) Secretary to the head of an individual plant, factory, etc., (or other equivalent level of official) that employs, in all, fewer than 5,000 persons.

## Secretary III

(a) Secretary to the chairman of the board or president of a company that employs, in all, fewer than 100 persons; or

(b) Secretary to a corporate officer (other than chairman of the board or president) of a company that employs, in all, over 100 but fewer than 5,000 persons; or

(c) Secretary to the head (immediately below the officer level) over either a major corporate-wide functional activity (e.g., marketing, research, operations, industrial relations, etc.) or a major geographic or organizational segment (e.g., a regional headquarters; a major division) of a company that employs, in all, over 5,000 but fewer than 25,000 employees; or

(d) Secretary to the head of an individual plant, factory, etc. (or other equivalent level of official) that employs, in all, over 5,000 persons; or

(e) Secretary to the head of a large and important organizational segment (e.g., a middle management supervisor of an organizational segment often involving as many as several hundred persons) of a company that employs, in all, over 25,000 persons.

## Secretary IV

(a) Secretary to the chairman of the board or president of a company that employs, in all, over 100 but fewer than 5,000 persons; or

(b) Secretary to a corporate officer (other than the chairman of the board or president) of a company that employs, in all, over 5,000 but fewer than 25,000 persons; or

(c) Secretary to the head, immediately below the corporate officer level, of a major segment or subsidiary of a company that employs, in all, over 25,000 persons.

STENOGRAPHER, GENERAL

Primary duty is to take and transcribe dictation from one or more persons either in shorthand or by Stenotype or similar machine, involving a normal routine vocabulary. May also type from written copy. May maintain files, keep simple records or perform other relatively routine clerical tasks. May operate from a stenographic pool. Does not include transcribing-machine work.

STENOGRAPHER, SENIOR

Primary duty is to take and transcribe dictation from one or more persons either in shorthand or by Stenotype or similar machine, involving a varied technical or specialized vocabulary such as in legal briefs or reports on scientific research. May also type from written copy. May also set up and maintain files, keep records, etc.

OR

Performs stenographic duties requiring significantly greater independence and responsibility than stenographer, general as evidenced by the following: Work requires high degree of stenographic speed and accuracy; a thorough working knowledge of general business and office procedure and of the specific business operations, organization, policies, procedures, files, workflow, etc. Uses this knowledge in performing stenographic duties and responsible clerical tasks such as maintaining followup files; assembling material for reports, memorandums, and letters; composing simple letters from general instructions; reading and routing incoming mail; answering routine questions, etc. Does not include transcribing-machine work.

NOTE: This job is distinguished from that of a secretary in that the secretary normally works in a confidential relationship to only one manager or executive and performs more responsible and discretionary tasks as described in that job definition.

SWITCHBOARD OPERATOR

## Switchboard Operator I

Operates a single- or multiple-position telephone switchboard handling incoming, outgoing, intraplant or office calls. May handle routine long distance calls and record tolls. May perform limited telephone information service. ("Limited" telephone information service occurs if the functions of the establishment serviced are readily understandable for telephone information purposes, or if the requests are routine, e.g., giving extension numbers when specific names are furnished, or if complex calls are referred to another operator.)

## Switchboard Operator II

Operates a single- or multiple-position telephone switchboard handling incoming, outgoing, intraplant or office calls. Performs full telephone information service or handles complex calls, such as conference, collect, overseas, or similar calls, either in addition to doing routine work as described for switchboard operator I, or as a full-time assignment. ("Full" telephone information service occurs when the establishment has varied functions that are not readily understandable for telephone information purposes, e.g., because of overlapping or interrelated functions, and consequently present frequent problems as to which extensions are appropriate for calls.)

## TABULATING-MACHINE OPERATOR

### Tabulating-Machine Operator I

Operates simple tabulating or electrical accounting machines, such as the sorter, reproducing punch, collator, etc., with specific instructions. May include the performance of some simple wiring from diagrams and some filing work. The work typically involves portions of a work unit, for example, individual sorting or collating runs, or repetitive operations.

### Tabulating-Machine Operator II

Operates more difficult tabulating or electrical accounting machines, such as the tabulator and calculator, in addition to the sorter, reproducer, and collator. This work is performed under specific instructions and may include the performance of some wiring from diagrams. The work typically involves, for example, tabulations involving a repetitive accounting exercise, a complete but small tabulating study, or parts of a longer and more complex report. Such reports and studies are usually of a recurring nature where the procedures are well established. May also include the training of new employees in the basic operation of the machine.

### Tabulating-Machine Operator III

Operates a variety of tabulating or electrical accounting machines, typically including such machines as the tabulator, calculator, interpreter, collator, and others. Performs complete reporting assignments without close supervision, and performs difficult wiring as required. The complete reporting and tabulating assignments typically involve a variety of long and complex reports which often are of irregular or nonrecurring type requiring some planning and sequencing of steps to be taken. As a more experienced operator, is typically involved in training new operators in machine operations, or partially trained operators in wiring from diagrams and operating sequences of long and complex reports. Does not include working supervisors performing tabulating-machine operations and day-to-day supervision of the work and production of a group of tabulating-machine operators.

## TYPIST

Uses a typewriter to make copies of various materials or to make out bills after calculations have been made by another person. May include typing of stencils, mats, or similar materials for use in duplicating processes. May do clerical work involving little special training, such as keeping simple records, filing records and reports, or sorting and distributing incoming mail.

### Typist I

Performs one or more of the following: Copy typing from rough or clear drafts; routine typing of forms, insurance policies, etc.; setting up simple standard tabulations, or copying more complex tables already set up and spaced properly.

### Typist II

Performs one or more of the following: Typing material in final form when it involves combining material from several sources or responsibility for correct spelling, syllabication, punctuation, etc., of technical or unusual words or foreign language material; planning layout and typing of complicated statistical tables to maintain uniformity and balance in spacing. May type routine form letters, varying details to suit circumstances.

NOTE: The definitions for the drafting and clerical occupations shown in this bulletin are the same as those used in the Bureau's program of occupational wage surveys in metropolitan areas. (See the list of areas in the order form at the back of this bulletin.) The level designations used in this bulletin, however, differ from those used in the area bulletins. The equivalent level designations for the occupations concerned are as follows:

Occupation	National Survey of Professional, Admini- strative, Technical, and Clerical Pay	Occupational Wage Surveys in Metropolitan Areas
Draftsman.....	I II III	C B A
Clerk, accounting.....	I II	B A
Clerk, file .....	I II III	C B A
Keypunch operator.....	I II	B A
Secretary.....	I II III IV	D C B A
Switchboard operator .....	I II	B A
Tabulating-machine operator .....	I II III	C B A
Typist.....	I II	B A

## Appendix D. Comparison of Average Annual Salaries in Private Industry, June 1967, with Corresponding Salary Rates for Federal Employees Under the General Schedule

The survey was designed, among other uses, to provide a basis for comparing Federal salaries under the General Schedule with general pay levels in private industry. To assure compilation of pay data for work levels that would be equivalent to the Federal grades, the Civil Service Commission collaborated with the Bureau of Labor Statistics to prepare the occupation work level definitions used in the survey. All definitions were graded by the Commission according to the standards established for each grade. For each of the occupation work levels surveyed by the Bureau of Labor Statistics, the equivalent General Schedule grade, as determined by the Commission, is identified in the following table.



Comparison of Average Annual Salaries in Private Industry,<sup>1</sup> June 1967, With Salary Rates  
for Federal Employees Under the General Schedule<sup>2</sup>

Occupation and class surveyed by BLS <sup>3</sup>	Average annual salaries in private industry <sup>4</sup>	Salary rates for Federal employees under the General Schedule <sup>2</sup>										
		Grade <sup>5</sup>	Per annum rates and steps <sup>6</sup>									
			1	2	3	4	5	6	7	8	9	10
Clerks, file I .....	\$3,405	GS 1	\$3,609	\$3,731	\$3,853	\$3,975	\$4,097	\$4,219	\$4,341	\$4,463	\$4,585	\$4,707
Office boys or girls .....	3,777		3,776	3,902	4,028	4,154	4,280	4,406	4,532	4,658	4,784	4,910
Clerks, file II .....	3,877	GS 2	3,925	4,058	4,191	4,324	4,457	4,590	4,723	4,856	4,989	5,122
Keypunch operators I .....	4,344		4,108	4,245	4,382	4,519	4,656	4,793	4,930	5,067	5,204	5,341
Switchboard operators I .....	4,351											
Tabulating-machine operators I .....	4,481											
Typists I .....	3,944											
Clerks, accounting I .....	4,471	GS 3	4,269	4,413	4,557	4,701	4,845	4,989	5,133	5,277	5,421	5,565
Clerks, file III .....	4,772		4,466	4,615	4,764	4,913	5,062	5,211	5,360	5,509	5,658	5,807
Draftsmen-tracers .....	4,734											
Engineering technicians I .....	5,366											
Keypunch operators II .....	4,960											
Stenographers, general .....	4,606											
Switchboard operators II .....	5,234											
Tabulating-machine operators II .....	5,494											
Typists II .....	4,684											
Clerks, accounting II .....	5,935	GS 4	4,776	4,936	5,096	5,256	5,416	5,576	5,736	5,896	6,056	6,216
Draftsmen I .....	5,762		4,995	5,161	5,327	5,493	5,659	5,825	5,991	6,157	6,323	6,489
Engineering technicians II .....	6,305											
Secretaries I .....	5,318											
Stenographers, senior .....	5,393											
Tabulating-machine operators III .....	6,690											
Accountants I .....	6,990	GS 5	5,331	5,507	5,683	5,859	6,035	6,211	6,387	6,563	6,739	6,915
Auditors I .....	7,190		5,565	5,751	5,937	6,123	6,309	6,495	6,681	6,867	7,053	7,239
Buyers I .....	7,030											
Chemists I .....	7,590											
Draftsmen II .....	7,219											
Engineers I .....	8,388											
Engineering technicians III .....	7,235											
Job analysts I .....	7,621											
Secretaries II .....	6,019											
Secretaries III .....	6,375	GS 6	5,867	6,065	6,263	6,461	6,659	6,857	7,055	7,253	7,451	7,649
Accountants II .....	7,820	GS 7	6,137	6,342	6,547	6,752	6,957	7,162	7,367	7,572	7,777	7,982
Auditors II .....	8,354		6,451	6,664	6,877	7,090	7,303	7,516	7,729	7,942	8,155	8,368
Buyers II .....	8,211		6,734	6,959	7,184	7,409	7,634	7,859	8,084	8,309	8,534	8,759
Chemists II .....	8,482											
Draftsmen III .....	8,720											
Engineers II .....	9,078											
Engineering technicians IV .....	8,318											
Job analysts II .....	8,157											
Secretaries IV .....	6,938											
Accountants III .....	8,879	GS 9	7,696	7,957	8,218	8,479	8,740	9,001	9,262	9,523	9,784	10,045
Auditors III .....	9,449		8,054	8,323	8,592	8,861	9,130	9,399	9,668	9,937	10,206	10,475
Attorneys II .....	9,622											
Buyers III .....	9,819											
Chemists III .....	9,719											
Engineers III .....	10,330											
Engineering technicians V .....	9,341											
Job analysts III .....	9,618											
Managers, office services I .....	8,562											
Managers, office services II .....	10,397	GS 10	8,421	8,709	8,997	9,285	9,573	9,861	10,149	10,437	10,725	11,013
Accountants IV .....	10,660	GS 11	8,821	9,115	9,409	9,703	9,997	10,291	10,585	10,879	11,173	11,467
Auditors IV .....	11,633		9,221	9,536	9,851	10,166	10,481	10,796	11,111	11,426	11,741	12,056
Attorneys III .....	11,843		9,657	9,979	10,301	10,623	10,945	11,267	11,589	11,911	12,233	12,555
Buyers IV .....	11,806											
Chemists IV .....	12,044											
Chief accountants I .....	11,768											
Directors of personnel I .....	10,407											
Engineers IV .....	12,424											
Job analysts IV .....	11,964											
Managers, office services III .....	13,011											

See footnotes at end of table.

Comparison of Average Annual Salaries in Private Industry,<sup>1</sup> June 1967, With Salary Rates  
for Federal Employees Under the General Schedule<sup>2</sup>—Continued

Occupation and class surveyed by BLS <sup>3</sup>	Average annual salaries in private industry <sup>4</sup>	Salary rates for Federal employees under the General Schedule <sup>2</sup>										
		Grade <sup>5</sup>	Per annum rates and steps <sup>6</sup>									
			1	2	3	4	5	6	7	8	9	10
Accountants V .....	\$12,795	GS 12	\$10,927	\$11,306	\$11,685	\$12,064	\$12,443	\$12,822	\$13,201	\$13,580	\$13,959	\$14,338
Attorneys IV .....	14,419		11,461	11,843	12,225	12,607	12,989	13,371	13,753	14,135	14,517	14,899
Chemists V .....	14,405											
Chief accountants II .....	13,036											
Directors of personnel II .....	12,394											
Engineers V .....	14,523											
Managers, office services IV .....	15,414											
Attorneys V .....	17,206	GS 13	12,873	13,321	13,769	14,217	14,665	15,113	15,561	16,009	16,457	16,905
Chemists VI .....	16,575		13,507	13,957	14,407	14,857	15,307	15,757	16,207	16,657	17,107	17,557
Chief accountants III .....	15,883											
Directors of personnel III .....	15,319											
Engineers VI .....	16,604											
Attorneys VI .....	21,415	GS 14	15,106	15,629	16,152	16,675	17,198	17,721	18,244	18,767	19,290	19,813
Chemists VII .....	20,110		15,841	16,369	16,897	17,425	17,953	18,481	19,009	19,537	20,065	20,593
Chief accountants IV .....	18,896											
Directors of personnel IV .....	19,186											
Engineers VII .....	19,332											
Attorneys VII .....	27,293	GS 15	17,550	18,157	18,764	19,371	19,978	20,585	21,192	21,799	22,406	23,013
Chemists VIII .....	24,676		18,404	19,017	19,630	20,243	20,856	21,469	22,082	22,695	23,308	23,921
Engineers VIII .....	22,235											

<sup>1</sup> For scope of survey, see appendix A.

<sup>2</sup> Salary rates under the Federal Salary and Fringe Benefits Act of 1966 (first line) which were in effect in June 1967, the reference date for the BLS survey; and salary rates under the Federal Salary Act of 1967 (second line) which became effective at the beginning of the first pay period beginning on or after October 1, 1967.

<sup>3</sup> For definitions, see appendix C.

<sup>4</sup> Survey findings as summarized in table 1 of this report.

<sup>5</sup> Corresponding grades in the General Schedule were supplied by the U.S. Civil Service Commission.

<sup>6</sup> Section 5335 of title 5 of the U.S. Code provides for within-grade increases on condition that the employee's "work is of an acceptable level of competence as defined by the head of the department." For employees who meet this condition, the service requirements are 52 calendar weeks each for salary rates 1, 2, and 3; 104 weeks each for salary rates 4, 5, and 6; and 156 weeks each for salary rates 7, 8, and 9. Section 5336 provides that an additional within-grade increase may be granted within any period of 52 weeks in recognition of high quality performance above that ordinarily found in the type of position concerned.

Under section 5303 of title 5 of the U.S. Code, higher minimum rates (but not exceeding the maximum salary rate prescribed in the General Schedule for the grade or level) and a corresponding new salary range may be established for positions or occupations under certain conditions. The conditions include a finding that the salary rates in private industry are so substantially above the salary rates of the statutory pay schedules as to handicap significantly the Government's recruitment or retention of well-qualified persons. Such special pay scales have been established for specific grades or levels of certain occupations (including engineers and scientists). Information on the special higher pay scales currently in effect, and the occupations and areas to which they apply, may be obtained from the U.S. Civil Service Commission, Washington, D.C., 20415, or its regional offices.



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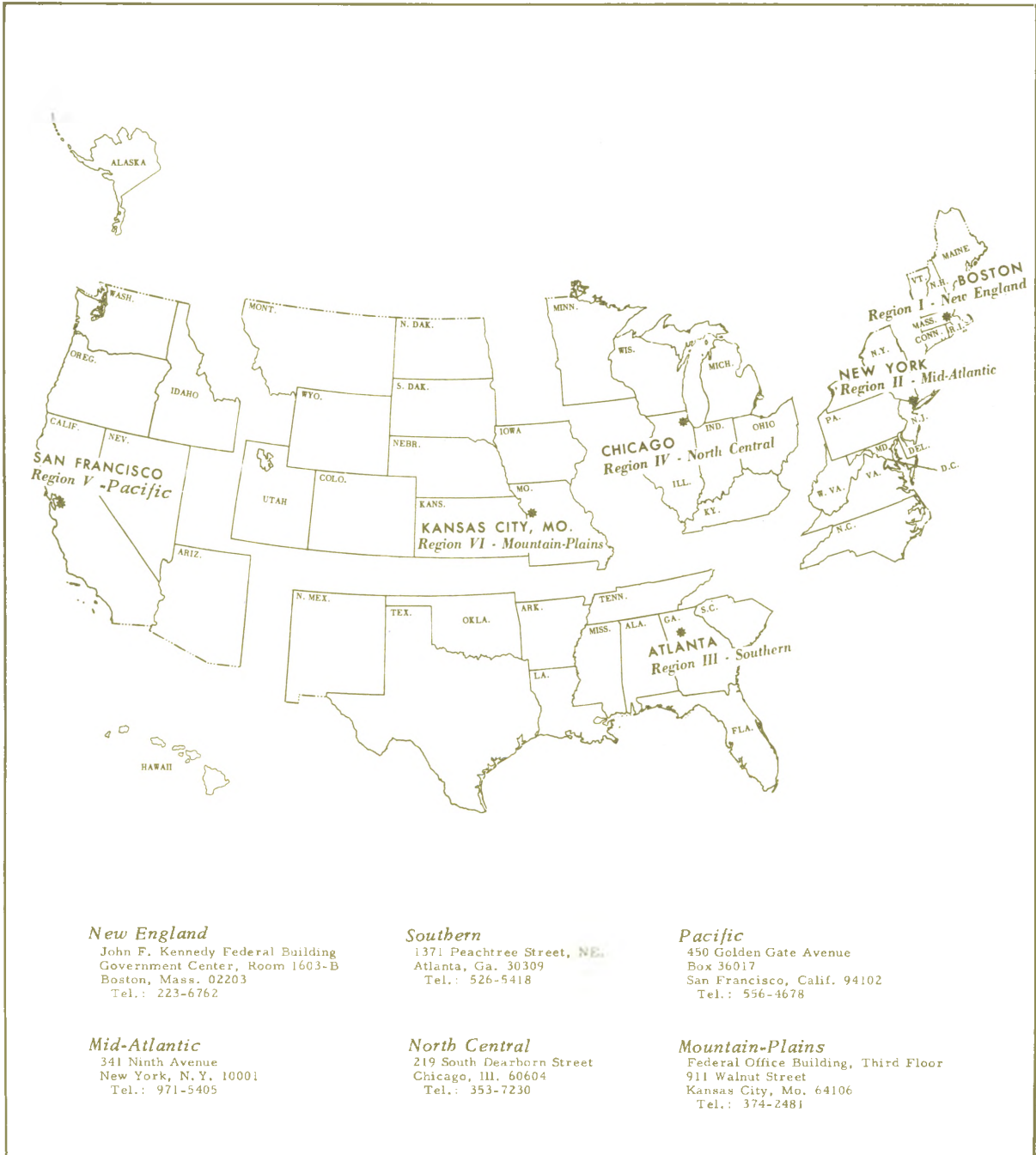
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