

**National Survey of
Professional, Administrative,
Technical, and Clerical Pay
Winter 1960-61**

Bulletin No. 1310

UNITED STATES DEPARTMENT OF LABOR

Arthur J. Goldberg, Secretary

BUREAU OF LABOR STATISTICS

Ewan Clague, Commissioner



**National Survey of
Professional, Administrative,
Technical, and Clerical Pay
Winter 1960-61**

**Accountants and Auditors
Attorneys
Engineers and Scientists
Personnel Management
Clerical Supervisory
Draftsmen
Office Clerical**

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Preface

The Bureau of Labor Statistics provides in this bulletin the results of the second in a series of annual nationwide surveys of compensation for selected professional, administrative, technical, and clerical occupations in private industry. The data, which relate to representative establishments in a broad spectrum of American industry in urban areas, were obtained by personal visits of Bureau field economists. For the most part, the data reflect salaries in effect during the period January-June 1961.

The second survey incorporated some revisions in design developed by the Bureau of Labor Statistics in conjunction with the Bureau of the Budget and the Civil Service Commission. The surveys provide a fund of broadly based information on salary levels and distributions in private employment—that is, on the rates of compensation in the dominant sector of the labor market. As such, the results are useful for wide, general economic analysis. In addition, they provide more information than has hitherto been available on pay in private industry in a form suitable for use in appraising the compensation of salaried employees in the Federal civil service. 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. For office clerical and drafting occupations, selected from among those included in the Bureau's program of locality occupational wage surveys, Bureau of Labor Statistics job definitions were used. Definitions for all other occupations studied were prepared by the Civil Service Commission staff. (See appendix C.)

In addition to the collection of salary data for all occupations studied, information was obtained to permit comparison of supplementary cash bonus payments in the most recent period with those paid in the 1959-60 period to employees in professional and administrative occupations. Information on supplementary benefits such as paid vacations and paid holidays, and health, insurance, and pension plans is not included in this report. This type of information relating to office employees has been incorporated in the BLS bulletins issued separately for each area in which occupational wage surveys were conducted during the year ending June 30, 1961. The areas for which separate reports were issued are listed in the order form at the back of this bulletin.

As a result of experience in the first survey, conducted during the winter of 1959-60, a number of substitutions and improvements were made in the list of professional and administrative occupations defined for survey, as well as in the definitions used in classifying employees and changes in other aspects of the survey design. (See appendix B.) No changes were made in the definitions for the technical and clerical occupations. For this reason, the information on changes in salary levels during the year is based largely upon changes for these latter classes of occupations.

The survey could not have been accomplished without the wholehearted 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 thanks for the splendid cooperation it has received in this difficult undertaking.

This bulletin was prepared in the Bureau's Division of Wages and Industrial Relations under the general supervision of Toivo P. Kanninen. Samuel E. Cohen devised the sampling procedures and supervised the selection of the sample, assisted by Theodore J. Golonka, who was responsible for the preparation of the estimates. The analysis was prepared by Louis E. Badenhop, assisted by Harry F. Zeman. Field work for the survey was directed by the Bureau's Assistant Regional Directors for Wages and Industrial Relations.

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National Survey of Professional, Administrative, Technical, and Clerical Pay, Winter 1960-61

Introduction

The results of the second annual survey of professional, administrative, technical, and clerical pay are presented in the accompanying tables and charts.¹ Nationwide estimates of salary levels are shown for 68 occupation work level categories surveyed in the following industries: Manufacturing; transportation, communication, electric, gas, and sanitary services; wholesale and retail trade; finance, insurance, and real estate; engineering and architectural services; and research, development and testing laboratories.² The data relate to establishments employing 250 or more workers, located in metropolitan areas.

To meet the primary objective of the survey, it was necessary to establish definitions for the professional, administrative, technical, and clerical occupations selected for study that would permit classification of employees included in each occupation 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 levels defined for survey in each occupation ranges from one for office boys or girls to eight 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 a specific band of work levels and were not intended to represent all levels or all workers that may be found in those occupations.

The selected occupations as defined for the study accounted for nearly 900,000 employees or about 8 percent of the estimated total employment in establishments within scope of the survey. Employment in the occupations surveyed 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. The 8 levels of engineers accounted for nearly three-fourths of the 333,000 employees in the professional and administrative occupations as defined for study. Three occupations (accounting clerks, stenographers, and typists) included almost three-fifths of the 493,000 employees in the clerical occupations. The drafting-room occupations studied had aggregate employment of 59,000.

Women accounted for 84 percent of total employment in the clerical occupations studied, compared with 1 percent in the professional and administrative occupations and 3 percent in drafting-room occupations. More than 95 percent of the bookkeeping-machine operators, file clerks, keypunch operators, stenographers, switchboard operators, and typists were women. Among the professional and administrative occupations, the relatively few women employees were largely reported in the first few work levels.

¹ For the most part, the data reflect salaries in effect during the period January-June 1961. Results of the first survey are presented in National Survey of Professional, Administrative, Technical, and Clerical Pay, Winter 1959-60, BLS Bull. 1286 (1960).

² For a detailed description of the scope and method of survey, see appendix A.

The time unit in which salary rates were expressed varied among and within establishments. Although monthly rates were widely reported in the professional and administrative occupations, annual rates were not uncommon, particularly in the higher-salaried positions. Clerical pay rates were commonly on a weekly basis with other time units found in use in many establishments.

Monthly and annual salaries for all occupations studied are presented in table 1. Whereas distributions of employees in professional and administrative occupations are presented in terms of monthly salaries, technical considerations dictated the summarization of employee distributions by weekly salaries in the case of technical and clerical occupations.

The general level of salaries for each occupation or work level is presented in this study as the arithmetic mean of all of 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 table 1.

Charts 1 and 2 show the salary relationships among work levels in each occupation, as well as the relative position of the levels studied in each occupation within the full range of occupations covered in the survey.

Average Salaries

Average (mean) monthly salaries among the 68 occupation work level categories ranged from \$252 for file clerks I to \$1,726 for attorneys V—a level representing heads of legal staffs with responsibility for making studies and recommendations on important technical legal questions, usually reporting to a general counsel of the company or his immediate deputy.³ Within this broad range of defined work levels, monthly salaries averaged less than \$500 in 23 levels, \$500 and under \$1,000 in 32 levels, and \$1,000 or more in 13 levels. The position of the various work levels within these broad monthly salary ranges illustrates the general relationship among levels surveyed.

Under \$500 monthly
(Under \$6,000 annually)

All clerical levels; tracers and junior draftsmen; level I of accountants, auditors, chemists, and job analysts

\$500 and under \$1,000 monthly
(\$6,000 and under \$12,000 annually)

Senior draftsmen; attorneys I through IIIA; engineers I through V; levels II through V of accountants and chemists; levels II and above of auditors and job analysts; levels I and II of directors of personnel; managers of office services I through III; chief accounts I through III

\$1,000 and under \$1,500 monthly
(\$12,000 and under \$18,000 annually)

Level IV of chief accountants and managers of office services; directors of personnel III and IV; levels VI and VII of chemists and engineers; attorneys IV, and IVA

\$1,500 and over monthly
(\$18,000 and over annually)

Level VIII of chemists and engineers; attorneys V

³ Classification of employees in the occupations and work levels surveyed was based on factors detailed in the definitions in appendix C.

Chart 1. SALARIES IN PROFESSIONAL OCCUPATIONS, WINTER 1960-61

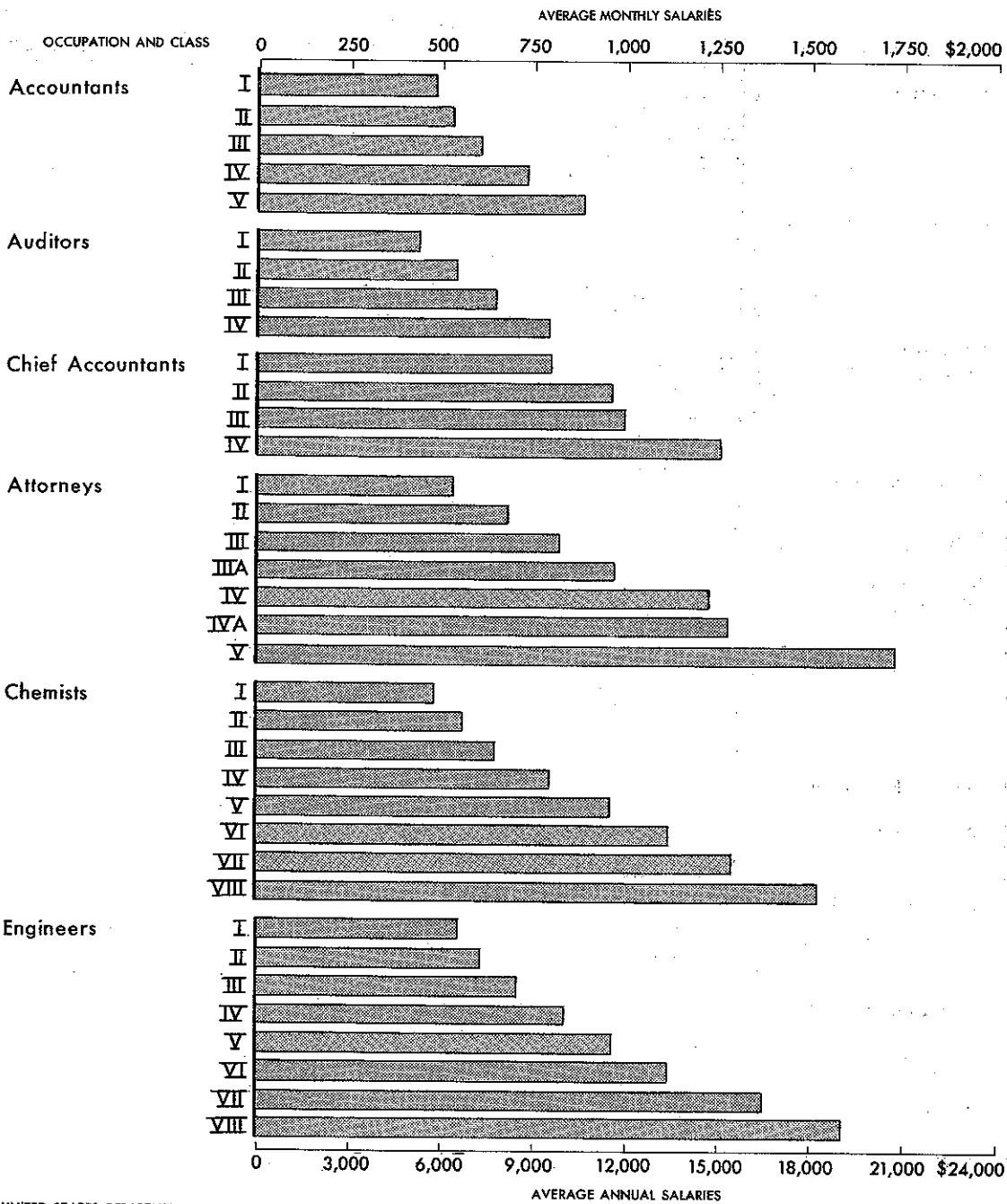
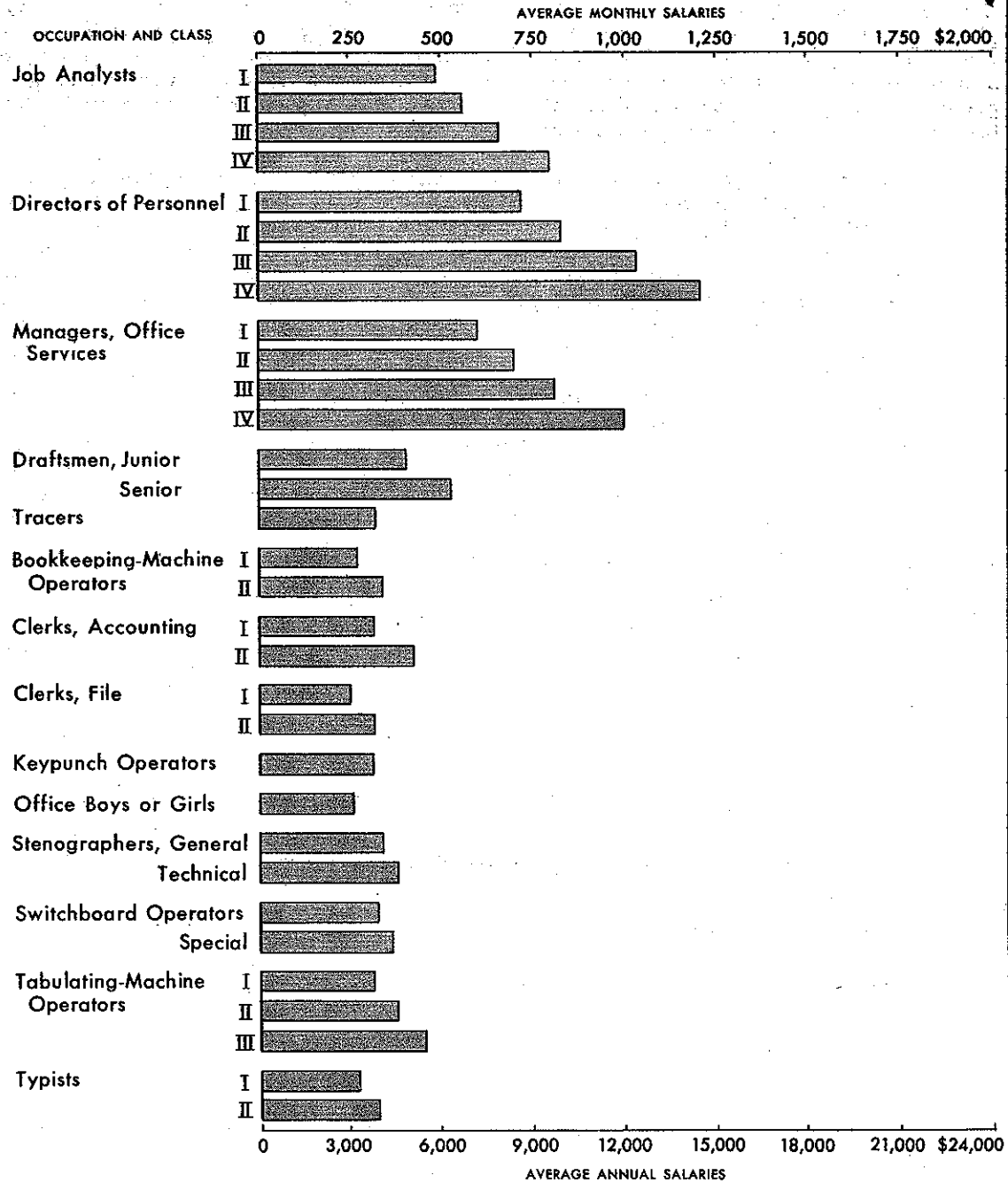


Chart 2. SALARIES IN ADMINISTRATIVE, TECHNICAL, AND CLERICAL OCCUPATIONS, WINTER 1960-61



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Average monthly salaries for the five levels of accountants surveyed ranged from \$478 for accountants I to \$879 for accountants V. Among auditors, average monthly salaries ranged from \$433 for auditors I to \$790 for auditors IV, the highest level surveyed in that series. Level I of both accountants and auditors included trainees with bachelor's degrees in accounting or the equivalent in education and experience combined. More than half the relatively few auditors I and about a fourth of those in the higher levels were employed in finance industries, whereas more than four-fifths of the accountants at all levels were employed in manufacturing and public utilities industries.⁴ At level III, which was the largest group of employees in each of these three series, monthly salaries averaged \$600 for accountants and \$644 for auditors.

Chief accountants were surveyed separately from accountants, and only those were included who met quite specific requirements as to the scope and complexity of the accounting program and as to the subordinate staff they directed. Those with professional duties and responsibilities as described for level I were paid monthly salaries averaging \$797 and those meeting the much higher requirements described for level IV⁵ averaged \$1,251. Chief accountants who met the requirements of the definitions for these four levels were largely employed in manufacturing industries.

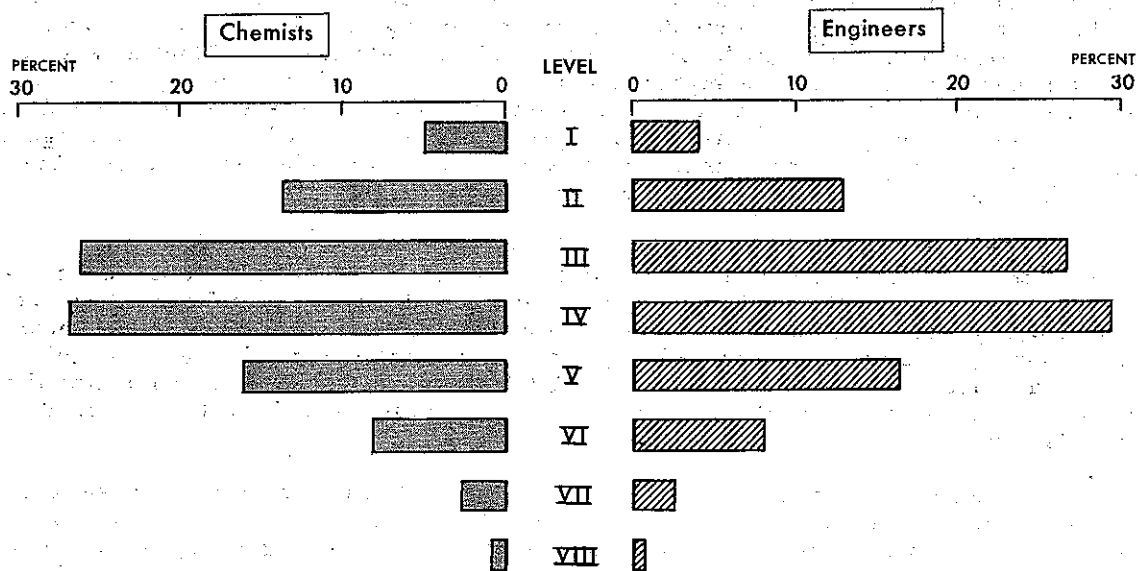
Attorneys classified at level I averaged \$531 a month. These were trainees with LL. B. degrees and bar membership employed in legal advisory departments of firms in which their full professional training could be utilized. At the highest among seven levels of attorneys surveyed (designated level V as the series included levels designated IIIA and IVA), monthly salaries averaged \$1,726. Attorneys at that level included those in charge of legal staffs handling assignments in one or more broad legal areas, with responsibility for recommendations which could have an important bearing on the company's business, but who are usually subordinate to a general counsel or his immediate deputy in large firms. The spread of \$1,195 in average monthly salaries between the entry level and the highest among seven levels studied was greater for attorneys than for any of the other occupational series covered. The finance industries employed the highest proportion of attorneys, with approximately two-fifths in the seven levels combined in those industries compared with a fourth in manufacturing and a slightly smaller proportion in public utilities.

Chemists and engineers were surveyed in eight levels. (See chart 3.) Each series started with a trainee level of professional work, typically requiring a bachelor of science degree or the equivalent in education and experience combined. A level VIII position involved full responsibility over a very broad and highly diversified engineering or chemical program, such as to require several subordinates each directing large and important segments of the program; or, for the employing company, individual research and consultation in difficult problem areas in which the engineer or chemist was a recognized authority and where solutions would represent major scientific or technological advance. (It was recognized in the definition that top positions of some companies with very extensive and complex engineering or chemical programs were above that level.) Among the eight levels of engineers, average monthly salaries ranged from \$548 for level I to \$1,588 for level VIII. Chemists at level I averaged \$481 a month and at level VIII, \$1,523. Although starting salaries for chemists were

⁴ Establishments primarily engaged in providing accounting and auditing services were excluded from the survey.

⁵ Although level V of chief accountant was surveyed, as defined in appendix C, employees meeting requirements for this level were insufficient in number to warrant presentation of average salary figures.

Chart 3. PERCENT OF CHEMISTS AND ENGINEERS IN EACH WORK LEVEL SURVEYED,^{1/}
WINTER 1960-61



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^{1/} Includes a small proportion of employees classified in the occupations for whom salary data were not available.

below those for engineers, the percentage difference in average salaries tended to become smaller at the more advanced work levels. Average monthly salaries at level IV were \$792 for chemists and \$832 for engineers. Level IV represented the largest group in each series and included professional employees who were recognized as fully competent in all technical aspects of their assignments, worked with considerable independence, and in some cases supervised a few professional and technical workers in their respective fields. Manufacturing industries accounted for 80 percent of all engineers and 92 percent of all chemists; public utilities 11 and 2 percent, respectively; and engineering and scientific services industries studied employed most of the others. For both engineers and chemists, salary levels were about the same in manufacturing and public utilities industries, and slightly higher in the engineering and scientific services industries.

Directors of personnel and job analysts, each representing four levels of work,⁶ were studied in the personnel management field. Job analysts I, defined to include trainees under immediate supervision, averaged \$493, compared with \$801 for job analysts IV, who analyze and evaluate a variety of 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, and employee relations and services functions. Those with responsibility for actual contract negotiations 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 \$723 for level I to \$1,211 for level IV. Manufacturing industries accounted for three-fourths of both the job analysts and directors of personnel as defined for the survey.

Managers of office services, as defined for the study, included four levels based on the variety of clerical and other office services supervised and the size of the organization serviced. Those responsible for additional functions of a higher level than those enumerated in the definition were excluded. Among the four levels studied, average monthly salaries ranged from \$604 for level I to \$1,002 for level IV. Those at level I were responsible for providing 4 or 5 of the enumerated office service functions. (See appendix C.) For a staff of 300 to 600 employees, compared to 7 or 8 functions for about 1,500 to 3,000 employees at level IV. Manufacturing industries accounted for three-fifths of the employees in the four levels combined, and an additional fifth were employed in finance industries.

In the drafting field, monthly salaries among three levels of work averaged \$530 for senior (fully experienced) draftsmen, \$408 for junior draftsmen, and \$327 for the relatively small group of tracers. Manufacturing industries accounted for a high proportion of the draftsmen and tracers, with 82 percent employed in those industries, 9 percent in public utilities, and about 7 percent in the engineering, architectural, and scientific services industries studied.

General stenographers accounted for almost 1 of every 5 workers in the 17 clerical occupation work levels studied. Their salaries averaged \$341 a month, which was slightly above the midpoint in the range of average monthly

⁶ Although level V of director of personnel was surveyed, as defined in appendix C, employees meeting requirements for this level were insufficient in number to warrant presentation of average salaries.

salaries for all employees in the clerical work levels represented in the study. Among the clerical jobs studied, monthly salaries ranged from \$252 for file clerks I to \$457 for tabulating-machine operators III, who without close supervision were required to perform complete reporting assignments by machine, including difficult wiring. Office boys or girls, two-fifths of whom were employed in manufacturing industries, averaged \$7 more a month than file clerks I, who were more heavily represented in the finance industries. Women accounted for more than nine-tenths of the employees in 11 work levels and the men accounted for half or more of the employees in 5 (accounting clerks II, office boys or girls, tabulating-machine operators I, II, and III). Although employment in manufacturing exceeded that in each of the 5 nonmanufacturing industry divisions within scope of the survey in 15 of the 17 clerical work levels, in only 6 instances did manufacturing account for as many as half the employees.

Median monthly salaries (the amount below and above which 50 percent of the employees were found) for nearly all work levels were slightly lower than the weighted averages (means) cited earlier. The percentage by which the median differed from the mean was less than 2 percent in 43 of the work levels and as much as 2 but less than 3 percent in 13 additional levels. The amounts by which the weighted average salaries exceeded the medians were largest for attorneys IIIA (6.3 percent), followed by chemists VIII (6.1 percent), chief accountants IV (5.5 percent), and attorneys V (5.1 percent).

Average Weekly Hours

The length of the workweek, upon which the regular straight-time salary was based, was obtained for individual employees in the occupations studied. A distribution of the 68 job categories according to these average weekly hours (rounded to the nearest half hour) is shown in table 2. Workweeks averaged 40 hours in 10 of the 68 job categories, and from 37½ to 39½ hours in all others. Differences in average weekly hours among occupations, and among work levels within occupations, largely reflect variation in the distribution of employment in the various job categories among industries.⁷ In manufacturing and public utilities industries, a 40-hour workweek was predominant, whereas work schedules of less than 40 hours were found to a greater extent in trade and finance industries, particularly in banking and insurance firms. Average workweeks of 39 or less hours for all levels of auditors and attorneys, and most of the office clerical job categories reflect the extent to which they are employed in industries in which such shorter workweeks are more prevalent. In comparison, average weekly hours of 40 or 39.5 for all levels of chemist and engineers, for example, reflect the high incidence of the 40-hour workweek in manufacturing, public utilities, scientific research, and engineering services industries.

Salary Distributions

Percentage distributions of employees by monthly salaries are presented for the professional and administrative occupations in table 3, and by weekly salaries for the drafting and clerical occupations in table 4. Within each of the 68 occupation work levels, salary rates for some of the higher paid employees were twice those of the lowest paid employees. All occupations in which two or

⁷ Studies of scheduled weekly hours of office workers in major labor markets also indicate that shorter workweeks are more prevalent in large north-eastern markets (particularly New York City) than in most areas in other regions. See Wages and Related Benefits, 60 Labor Markets, 1959-60, BLS Bull. 1265-62 (1961).

more levels of work were surveyed showed a substantial degree of overlapping of individual salaries between work levels in the same occupation. Salary ranges established for pay grades or work levels within salary structures of individual firms also exhibited substantial overlap.

The absolute spread between highest and lowest paid workers within work levels, and to a lesser extent the relative spread, tended to widen at the higher work levels for most occupations in which several work levels were surveyed. It is apparent from chart 4 that the relative spread varied considerably among occupations and in many cases was not greater for professional occupation work levels than for clerical levels studied. Thus, when excluding the extreme salaries and expressing the range as a percent of the median salary (chart 4), the relative spread in salaries was greater for most levels of attorneys than for engineers; in each of these occupations, the spread was smallest at the lowest levels. When compared with file clerks I and II and general stenographers, however, the relative spread in salaries was smaller for the two lowest levels of attorneys and for all levels of engineers, except for about the same relative spread in salaries for engineers VIII and general stenographers.

Differences in the range of salaries paid individuals within work levels surveyed undoubtedly reflect a variety of factors other than differences in the work level definitions. As pointed out earlier, employment in the various industries within the scope of the survey may vary considerably from occupation to occupation. Salaries of individual employees in the same occupation and grade level also may vary considerably within establishments. This pattern is particularly apparent in the professional and administrative occupations. Salaries are generally determined on an individual basis or under formalized pay plans which characteristically provide for a wide range in salary rates for each occupation and grade level within the pay structure.

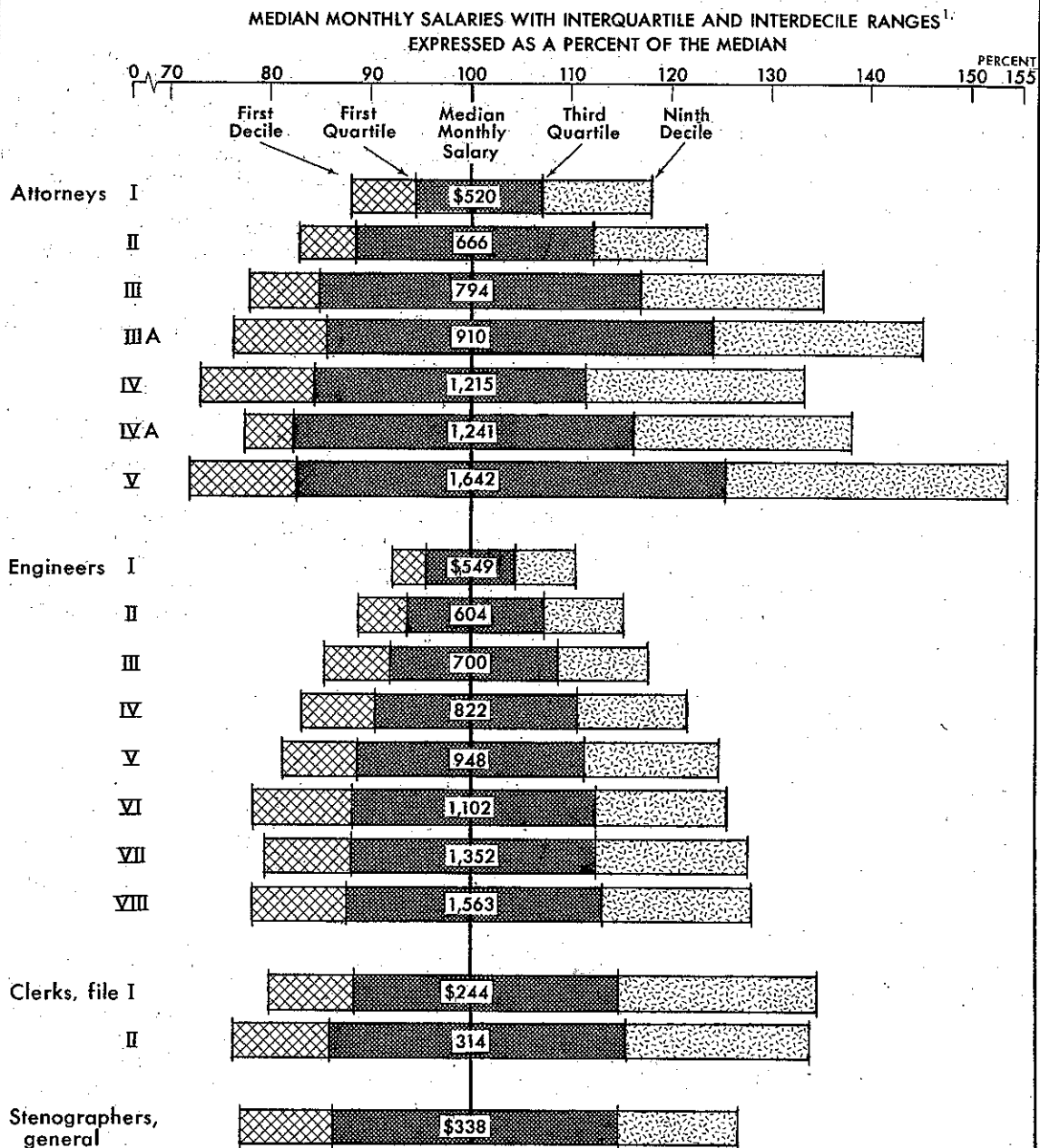
Changes in Salary Levels During the Year

Between the initial (winter 1959-60) and the present survey, various changes were made in the professional and administrative occupations and levels selected for survey, and in the definitions used in classifying employees.⁸ Although most of the changes in these definitions were clarifications and refinements, or improvements in organization, the extent to which differences in salary levels reflect changes in classification of employees could not be measured.

No changes were made in the definitions for the 20 drafting and clerical job categories surveyed in the 2 periods, and it was possible to adjust the 1959-60 data to correspond (as to scope of survey) to the 1960-61 data. Using the 1960-61 occupational employment as constant employment weights, to eliminate the effect of changes in the proportion of workers represented in each level, the increase in average salaries for all employees in the drafting and clerical occupations as a group amounted to 3 percent. Among the 20 occupations and levels, increases in average salaries during the year ranged from 1.9 to 7.7 percent, with most of the increases within a range of 2 to 4 percent. Although similar precise comparisons could not be made for the professional and administrative occupations, increases in average salaries for those occupations did not appear to vary appreciably from the increases shown for the drafting and clerical jobs.

⁸ For a summary of changes made in the 1960-61 survey, see appendix B.

Chart 4. RANGES AND SALARIES FOR SELECTED PROFESSIONAL AND CLERICAL OCCUPATIONS, WINTER 1960-61



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¹The interquartile range is the central part of the array of employees by salary, excluding the upper and lower fourths. The interdecile range excludes the upper and lower tenths of the array.

Supplementary Cash Bonuses

In the 1959-60 survey, information was obtained on the extent to which employees in professional and administrative occupations studied were paid cash bonuses during the year preceding the survey period, and the amount of such payments.⁹ In the 1960-61 survey, information was collected to determine whether bonus payments made by establishments to employees in the professional and administrative occupations tended to be about the same, higher, or lower in the period covered by the current survey as compared with a year earlier (table 5).

Among the 56 professional and administrative job categories covered by the bonus inquiry in the 1959-60 survey, the proportion of employees receiving cash bonuses ranged from 11 to 50 percent; in four-fifths of the jobs, from 15 to 40 percent of the employees received such bonuses. When bonus payments were added to salaries relating to all employees in each category, including those who did not receive bonuses, the average pay for the 56 job categories was increased as follows:

Percent bonus payments added to average salaries	Number of job categories
8.7-10.9	3
5.2-5.7	2
3.0-4.8	8
Less than 3.0	43

It was found that the impact of bonus payments tended to be greatest in the higher work levels.

Cash bonus payments during the year preceding the 1960-61 survey period, compared with a year earlier, added about the same proportion to average salaries in nearly three-fifths of the establishments that paid bonuses in both periods to one or more employees in the professional and administrative occupations studied. Among the other establishments paying bonuses in both periods, approximately a third paid proportionately more and two-thirds paid less in the 1960-61 period.

In addition to data permitting comparison of cash bonus payments to employees in the professional and administrative occupations studied, information was obtained on the incidence of such bonus plans among all establishments within the scope of the 1960-61 survey. Slightly less than half of the establishments had such plans that were in effect in both survey periods; approximately 1 percent of the establishments had discontinued plans that were in effect in the previous year and less than 1 percent had initiated plans during the 1960-61 period.

⁹ Bonus data are presented in greater detail in BLS Bull. 1286, National Survey of Professional, Administrative, Technical, and Clerical Pay, Winter 1959-60.

Table 1. Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry, ¹ winter 1960-61

Occupation and class (See descriptions in appendix C)	Number of employees	Monthly salaries ²				Annual salaries ²			
		Mean	Median	Middle range ³		Mean	Median	Middle range ³	
				First quartile	Third quartile			First quartile	Third quartile
Accountants and Auditors									
Accountants I	4,433	\$478	\$473	\$437	\$520	\$5,736	\$5,676	\$5,244	\$6,240
Accountants II	7,790	527	519	475	570	6,324	6,228	5,700	6,840
Accountants III	15,932	600	593	542	651	7,200	7,116	6,504	7,812
Accountants IV	10,960	727	718	654	797	8,724	8,616	7,848	9,564
Accountants V	4,453	879	851	766	972	10,548	10,212	9,192	11,664
Auditors I	393	433	423	387	486	5,196	5,076	4,644	5,832
Auditors II	1,847	539	533	477	597	6,468	6,396	5,724	7,164
Auditors III	3,397	644	643	565	718	7,728	7,716	6,780	8,616
Auditors IV	1,780	790	768	673	876	9,480	9,216	8,076	10,512
Chief accountants I	532	797	774	692	872	9,564	9,288	8,304	10,464
Chief accountants II	544	957	921	850	1,048	11,484	11,052	10,200	12,576
Chief accountants III	1,125	994	973	849	1,098	11,928	11,676	10,188	13,176
Chief accountants IV	226	1,251	1,186	1,069	1,379	15,012	14,232	12,828	16,548
Attorneys									
Attorneys I	297	531	520	491	557	6,372	6,240	5,892	6,684
Attorneys II	823	678	666	591	748	8,136	7,992	7,092	8,976
Attorneys III	929	817	794	675	930	9,804	9,528	8,100	11,160
Attorneys IIIA	1,169	967	910	780	1,130	11,604	10,920	9,360	13,560
Attorneys IV	1,061	1,222	1,215	1,027	1,356	14,664	14,580	12,324	16,272
Attorneys IVA	503	1,278	1,241	1,022	1,445	15,336	14,892	12,264	17,340
Attorneys V	413	1,726	1,642	1,358	2,061	20,712	19,704	16,296	24,732
Chemists and Engineers									
Chemists I	1,340	481	485	443	524	5,772	5,820	5,316	6,288
Chemists II	3,619	557	547	512	592	6,684	6,564	6,134	7,104
Chemists III	6,943	643	632	577	699	7,716	7,584	6,924	8,388
Chemists IV	7,133	792	779	702	878	9,504	9,348	8,424	10,536
Chemists V	4,256	952	935	838	1,053	11,424	11,220	10,056	12,636
Chemists VI	2,063	1,113	1,091	970	1,241	13,356	13,092	11,640	14,892
Chemists VII	696	1,288	1,233	1,097	1,453	15,456	14,796	13,164	17,436
Chemists VIII	230	1,523	1,435	1,300	1,700	18,276	17,220	15,600	20,400
Engineers I	9,828	548	549	525	574	6,576	6,588	6,300	6,888
Engineers II	30,873	609	604	566	649	7,308	7,248	6,792	7,788
Engineers III	64,671	705	700	644	762	8,460	8,400	7,728	9,144
Engineers IV	71,637	832	822	744	911	9,984	9,864	8,928	10,932
Engineers V	39,056	960	948	843	1,057	11,520	11,376	10,116	12,684
Engineers VI	18,669	1,114	1,102	974	1,241	13,368	13,224	11,688	14,892
Engineers VII	5,424	1,373	1,352	1,193	1,522	16,476	16,224	14,316	18,264
Engineers VIII	1,217	1,588	1,563	1,371	1,770	19,056	18,756	16,452	21,240
Personnel Management									
Job analysts I	145	493	506	457	547	5,916	6,072	5,484	6,564
Job analysts II	498	561	546	488	633	6,732	6,552	5,856	7,596
Job analysts III	796	662	644	574	738	7,944	7,728	6,888	8,856
Job analysts IV	524	801	787	722	863	9,612	9,444	8,664	10,356
Directors of personnel I	642	723	722	651	789	8,676	8,664	7,812	9,468
Directors of personnel II	1,819	833	820	708	911	9,996	9,840	8,496	10,932
Directors of personnel III	872	1,037	996	884	1,174	12,442	11,952	10,608	14,088
Directors of personnel IV	302	1,211	1,159	1,041	1,359	14,532	13,908	12,492	16,308
Office Services									
Managers, office services I	427	604	601	549	653	7,248	7,212	6,588	7,836
Managers, office services II	613	707	706	623	774	8,484	8,472	7,476	9,288
Managers, office services III	246	814	817	726	892	9,768	9,804	8,712	10,704
Managers, office services IV	68	1,002	1,000	846	1,135	12,024	12,000	10,152	13,620

See footnotes at end of table.

Table 1. Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry, ¹ winter 1960-61.—Continued

Occupation and class (See descriptions in appendix C)	Number of employees	Monthly salaries ²				Annual salaries ²			
		Mean	Median	Middle range ³		Mean	Median	Middle range ³	
				First quartile	Third quartile			First quartile	Third quartile
Draftsmen									
Draftsmen, junior	19,402	\$408	\$401	\$356	\$452	\$4,908	\$4,822	\$4,286	\$5,438
Draftsmen, senior	37,254	530	522	465	589	6,382	6,276	5,593	7,087
Tracers	2,635	327	325	283	368	3,931	3,912	3,402	4,427
Clerical									
Bookkeeping-machine operators I	25,562	272	266	237	300	3,278	3,203	2,857	3,609
Bookkeeping-machine operators II	5,341	343	341	296	388	4,121	4,098	3,559	4,671
Clerks, accounting I	52,359	318	309	265	364	3,829	3,720	3,185	4,376
Clerks, accounting II	38,393	425	422	360	483	5,117	5,075	4,337	5,813
Clerks, file I	36,121	252	244	216	280	3,026	2,942	2,602	3,365
Clerks, file II	11,260	322	314	270	363	3,871	3,779	3,246	4,369
Keypunch operators	45,061	318	314	271	363	3,822	3,782	3,266	4,370
Office boys or girls	24,355	259	250	223	287	3,119	3,004	2,684	3,453
Stenographers, general	90,906	341	338	292	388	4,102	4,070	3,516	4,667
Stenographers, technical	7,371	381	382	344	414	4,584	4,597	4,134	4,977
Switchboard operators	16,394	328	332	284	380	3,951	3,989	3,414	4,576
Switchboard operators, special	1,044	364	371	336	401	4,381	4,464	4,041	4,828
Tabulating-machine operators I	12,090	314	310	270	355	3,774	3,730	3,254	4,269
Tabulating-machine operators II	18,541	381	381	336	429	4,586	4,583	4,045	5,157
Tabulating-machine operators III	8,567	457	456	409	507	5,500	5,487	4,917	6,099
Typists I	61,855	275	271	241	306	3,315	3,265	2,897	3,687
Typists II	38,131	326	322	283	368	3,921	3,871	3,403	4,422

¹ For scope of study, see table in appendix A.

² Salaries reported relate to the standard salaries that were paid for standard work schedules; i.e., to the straight-time salary corresponding to the employee's normal work schedule excluding overtime hours.

³ The middle range (interquartile) used here is the central part of the array excluding the upper and lower fourths of the employees.

Table 2. Distribution of 68 selected job categories studied by employees' average weekly hours, ¹ winter 1960-61

Average weekly hours ¹	Number of job categories			Job category
	Professional and administrative	Drafting	Clerical	
	48	3	17	All categories
37.5	1	-	-	Auditors I
38.5	7	-	4	Auditors II Attorneys I, II, IIIA, IV, and IVA Managers, office services IV Clerks, file I and II Office boys or girls Tabulating-machine operators I
39.0	5	-	12	Auditors III and IV Attorneys III and V Job analysts II Bookkeeping-machine operators I and II Clerks, accounting I and II Key punch operators Stenographers, general Switchboard operators Switchboard operators, special Tabulating-machine operators II and III Typists I and II
39.5	26	2	1	Accountants I, II, III, IV, and V Chief accountants II and IV Chemists I, III, IV, V, VI, VII, and VIII Engineers IV, VI, and VII Job analysts I, III, and IV Directors of personnel I, II, III, and IV Managers, office services II and III Draftsmen, junior Tracers Stenographers, technical
40.0	9	1	-	Chief accountants I and III Chemists II Engineers I, II, III, V, and VIII Managers, office services I Draftsmen, senior

¹ The scheduled workweek for which employees receive their regular straight-time salary. Average weekly hours for each job category were rounded to the nearest half-hour.

Table 3. Percent distribution of employees¹ in selected professional and administrative occupations² by average monthly salaries, winter 1960-61

Average monthly salaries	Accountants					Auditors				Chief accountants			
	I	II	III	IV	V	I	II	III	IV	I	II	III	IV
Under \$325	1.4	-	-	-	-	2.5	-	-	-	-	-	-	-
\$325 and under \$350	2.3	-	-	-	-	4.3	-	-	-	-	-	-	-
\$350 and under \$375	3.6	(0.6)	-	-	-	8.4	(0.6)	-	-	-	-	-	-
\$375 and under \$400	4.4	2.2	-	-	-	20.4	1.6	-	-	-	-	-	-
\$400 and under \$425	7.1	4.6	-	-	-	15.8	6.2	0.5	-	-	-	-	-
\$425 and under \$450	13.1	6.3	(1.8)	-	-	8.7	7.5	1.6	-	-	-	-	-
\$450 and under \$475	19.7	11.3	3.7	-	-	9.7	8.3	3.2	-	-	-	-	-
\$475 and under \$500	14.8	11.9	4.6	-	-	12.5	10.7	3.3	-	-	-	-	-
\$500 and under \$525	10.6	16.9	6.9	(2.0)	-	9.9	11.5	6.2	(2.1)	-	-	-	-
\$525 and under \$550	6.5	12.7	11.7	1.6	-	3.3	11.3	4.5	1.0	-	-	-	-
\$550 and under \$575	6.2	10.5	11.7	2.9	-	1.8	8.7	9.3	1.9	1.5	-	-	-
\$575 and under \$600	3.4	7.3	13.3	3.5	-	1.3	9.8	7.9	2.9	1.9	-	-	-
\$600 and under \$625	2.0	4.5	14.3	6.5	(1.3)	(1.5)	8.4	8.7	3.8	4.7	-	-	-
\$625 and under \$650	2.0	3.1	6.9	7.0	2.2	-	2.5	6.9	6.2	1.7	-	-	-
\$650 and under \$675	1.7	3.6	7.3	10.4	3.2	-	5.0	10.9	8.0	9.2	1.7	-	-
\$675 and under \$700	1.1	1.1	4.3	8.4	3.2	-	2.3	7.3	4.2	9.0	1.7	2.7	-
\$700 and under \$725	(.1)	1.2	4.6	10.4	4.9	-	1.6	6.7	6.6	7.7	1.1	3.7	-
\$725 and under \$750	-	(2.2)	3.1	10.1	5.5	-	1.6	6.8	8.3	2.4	2.0	.5	-
\$750 and under \$775	-	-	2.0	6.8	7.2	-	1.4	5.2	7.1	12.2	4.4	4.4	-
\$775 and under \$800	-	-	.9	6.0	6.6	-	(.9)	2.3	6.5	4.5	3.7	3.2	-
\$800 and under \$825	-	-	1.0	5.6	7.1	-	-	2.5	4.4	.8	3.1	1.2	2.7
\$825 and under \$850	-	-	(2.0)	5.3	8.5	-	-	2.2	7.8	6.8	7.2	9.4	1.3
\$850 and under \$875	-	-	-	3.8	5.8	-	-	1.4	4.2	14.5	10.1	4.3	3.5
\$875 and under \$900	-	-	-	2.1	4.4	-	-	1.1	2.4	8.8	4.0	1.8	3.5
\$900 and under \$925	-	-	-	1.9	7.4	-	-	(1.5)	4.3	3.8	13.1	8.1	-
\$925 and under \$950	-	-	-	1.7	4.0	-	-	-	2.8	-	4.8	3.0	.9
\$950 and under \$975	-	-	-	1.4	4.4	-	-	-	2.4	.2	1.3	8.2	4.9
\$975 and under \$1,000	-	-	-	.9	2.8	-	-	-	2.2	1.5	5.3	2.0	2.7
\$1,000 and under \$1,050	-	-	-	1.0	7.5	-	-	-	4.8	5.3	11.9	15.0	.4
\$1,050 and under \$1,100	-	-	-	(.6)	4.6	-	-	-	2.2	-	5.7	7.6	14.2
\$1,100 and under \$1,150	-	-	-	-	3.9	-	-	-	1.8	-	4.0	4.6	11.5
\$1,150 and under \$1,200	-	-	-	-	2.0	-	-	-	1.2	.6	4.4	1.2	6.2
\$1,200 and under \$1,250	-	-	-	-	.8	-	-	-	(1.0)	3.0	3.9	4.9	4.0
\$1,250 and under \$1,300	-	-	-	-	1.2	-	-	-	-	-	1.7	7.7	8.4
\$1,300 and under \$1,350	-	-	-	-	(1.8)	-	-	-	-	-	3.7	3.5	9.3
\$1,350 and under \$1,400	-	-	-	-	-	-	-	-	-	-	(1.3)	1.8	3.1
\$1,400 and under \$1,450	-	-	-	-	-	-	-	-	-	-	-	(1.0)	1.3
\$1,450 and under \$1,500	-	-	-	-	-	-	-	-	-	-	-	-	8.8
\$1,500 and under \$1,550	-	-	-	-	-	-	-	-	-	-	-	-	.9
\$1,550 and under \$1,600	-	-	-	-	-	-	-	-	-	-	-	-	.9
\$1,600 and under \$1,650	-	-	-	-	-	-	-	-	-	-	-	-	3.5
\$1,650 and under \$1,700	-	-	-	-	-	-	-	-	-	-	-	-	.9
\$1,700 and under \$1,750	-	-	-	-	-	-	-	-	-	-	-	-	-
\$1,750 and under \$1,800	-	-	-	-	-	-	-	-	-	-	-	-	.9
\$1,800 and under \$1,850	-	-	-	-	-	-	-	-	-	-	-	-	-
\$1,850 and under \$1,900	-	-	-	-	-	-	-	-	-	-	-	-	-
\$1,900 and under \$1,950	-	-	-	-	-	-	-	-	-	-	-	-	1.8
\$1,950 and over	-	-	-	-	-	-	-	-	-	-	-	-	4.4
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	4,433	7,790	15,932	10,960	4,453	393	1,847	3,397	1,780	532	544	1,125	226
Average monthly salaries	\$478	\$527	\$600	\$727	\$879	\$433	\$539	\$644	\$790	\$797	\$957	\$994	\$1,251

See footnotes at end of table.

Table 3. Percent distribution of employees¹ in selected professional and administrative occupations² by average monthly salaries, winter 1960-61—Continued

Average monthly salaries	Attorneys						
	I	II	III	IIIA	IV	IVA	V
Under \$425	1.3	-	-	-	-	-	-
\$425 and under \$450	5.7	0.2	-	-	-	-	-
\$450 and under \$475	9.1	1.0	-	-	-	-	-
\$475 and under \$500	13.5	3.3	2.5	-	-	-	-
\$500 and under \$525	25.9	2.1	.6	-	-	-	-
\$525 and under \$550	16.8	2.7	-	(0.2)	-	-	-
\$550 and under \$575	9.8	11.5	2.0	1.5	-	-	-
\$575 and under \$600	6.4	6.6	1.9	3.9	-	-	-
\$600 and under \$625	2.4	11.1	3.9	-	-	-	-
\$625 and under \$650	2.4	7.2	6.6	.9	-	-	-
\$650 and under \$675	.7	7.0	7.3	.9	-	-	-
\$675 and under \$700	2.0	10.2	7.0	3.5	-	-	-
\$700 and under \$725	-	6.6	3.1	4.3	-	-	-
\$725 and under \$750	.3	6.2	4.2	2.5	(0.6)	-	-
\$750 and under \$775	2.0	2.7	5.7	6.9	2.4	-	-
\$775 and under \$800	-	7.8	6.8	2.3	.5	-	-
\$800 and under \$825	1.0	4.1	4.4	4.3	2.7	-	-
\$825 and under \$850	.7	2.3	6.2	7.1	1.6	0.4	-
\$850 and under \$875	-	.6	4.3	5.2	1.6	1.2	-
\$875 and under \$900	-	1.9	4.2	4.6	1.3	4.6	-
\$900 and under \$925	-	1.7	3.7	4.7	3.5	.8	-
\$925 and under \$950	-	.5	2.7	2.5	.9	-	(0.2)
\$950 and under \$975	-	.4	2.4	2.8	1.2	5.6	1.2
\$975 and under \$1,000	-	1.1	3.0	1.5	5.6	6.4	-
\$1,000 and under \$1,050	-	(1.3)	3.6	8.2	5.8	13.7	6.1
\$1,050 and under \$1,100	-	-	8.0	3.0	8.7	5.2	.5
\$1,100 and under \$1,150	-	-	2.4	7.1	8.4	5.2	1.0
\$1,150 and under \$1,200	-	-	1.4	4.4	3.2	2.0	1.5
\$1,200 and under \$1,250	-	-	.4	3.8	7.0	6.4	8.2
\$1,250 and under \$1,300	-	-	.6	2.1	9.6	6.2	2.9
\$1,300 and under \$1,350	-	-	1.0	4.0	9.8	7.0	2.7
\$1,350 and under \$1,400	-	-	.1	1.7	5.9	6.6	4.6
\$1,400 and under \$1,450	-	-	-	1.4	1.6	4.4	2.9
\$1,450 and under \$1,500	-	-	-	1.6	4.1	4.2	8.7
\$1,500 and under \$1,550	-	-	-	.7	2.2	4.4	4.1
\$1,550 and under \$1,600	-	-	-	1.5	.7	3.6	2.9
\$1,600 and under \$1,650	-	-	-	(1.0)	2.5	.8	3.1
\$1,650 and under \$1,700	-	-	-	-	1.3	.8	5.1
\$1,700 and under \$1,750	-	-	-	-	1.8	3.2	5.8
\$1,750 and under \$1,800	-	-	-	-	2.8	.8	1.7
\$1,800 and under \$1,850	-	-	-	-	(2.7)	.4	2.4
\$1,850 and under \$1,900	-	-	-	-	-	.6	2.2
\$1,900 and under \$1,950	-	-	-	-	-	.4	2.4
\$1,950 and under \$2,000	-	-	-	-	-	-	3.6
\$2,000 and under \$2,050	-	-	-	-	-	2.2	.2
\$2,050 and under \$2,100	-	-	-	-	-	-	4.4
\$2,100 and under \$2,150	-	-	-	-	-	-	3.4
\$2,150 and under \$2,200	-	-	-	-	-	3.4	2.7
\$2,200 and under \$2,250	-	-	-	-	-	-	1.0
\$2,250 and under \$2,300	-	-	-	-	-	-	3.4
\$2,300 and under \$2,350	-	-	-	-	-	-	.2
\$2,350 and under \$2,400	-	-	-	-	-	-	-
\$2,400 and over	-	-	-	-	-	-	³ 10.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees	297	823	929	1,169	1,061	503	413
Average monthly salaries	\$531	\$678	\$817	\$967	\$1,222	\$1,278	\$1,726

See footnotes at end of table.

Table 3. Percent distribution of employees¹ in selected professional and administrative occupations² by average monthly salaries, winter 1960-61—Continued

Average monthly salaries	Chemists							
	I	II	III	IV	V	VI	VII	VIII
Under \$350	4.7	-	-	-	-	-	-	-
\$350 and under \$375	1.3	-	-	-	-	-	-	-
\$375 and under \$400	3.0	-	-	-	-	-	-	-
\$400 and under \$425	8.1	(1.2)	-	-	-	-	-	-
\$425 and under \$450	11.0	2.5	(0.8)	-	-	-	-	-
\$450 and under \$475	15.8	5.6	1.5	-	-	-	-	-
\$475 and under \$500	15.8	9.6	2.0	-	-	-	-	-
\$500 and under \$525	16.0	12.8	4.8	-	-	-	-	-
\$525 and under \$550	11.9	20.6	5.6	(0.7)	-	-	-	-
\$550 and under \$575	7.0	15.8	9.3	1.2	-	-	-	-
\$575 and under \$600	2.2	10.1	10.8	2.1	-	-	-	-
\$600 and under \$625	1.2	7.7	12.3	3.1	-	-	-	-
\$625 and under \$650	1.3	4.3	10.1	3.8	-	-	-	-
\$650 and under \$675	(.6)	3.2	10.1	5.9	-	-	-	-
\$675 and under \$700	-	1.4	8.1	7.6	(2.5)	-	-	-
\$700 and under \$725	-	1.6	6.0	9.0	2.1	-	-	-
\$725 and under \$750	-	1.5	5.3	6.7	2.3	-	-	-
\$750 and under \$775	-	(2.2)	4.0	8.7	4.2	-	-	-
\$775 and under \$800	-	-	2.5	7.0	5.1	(0.5)	-	-
\$800 and under \$825	-	-	1.6	5.8	5.8	1.6	2.7	-
\$825 and under \$850	-	-	1.1	7.6	5.9	3.7	-	-
\$850 and under \$875	-	-	1.0	5.1	6.4	.9	-	-
\$875 and under \$900	-	-	1.2	5.0	6.2	3.8	.4	-
\$900 and under \$925	-	-	(1.9)	4.8	7.4	4.0	1.7	-
\$925 and under \$950	-	-	-	4.4	5.6	4.8	1.7	-
\$950 and under \$975	-	-	-	3.4	6.3	7.2	1.6	-
\$975 and under \$1,000	-	-	-	1.8	4.7	3.6	1.0	-
\$1,000 and under \$1,050	-	-	-	2.7	10.0	11.8	6.3	-
\$1,050 and under \$1,100	-	-	-	2.1	7.9	9.8	10.2	1.3
\$1,100 and under \$1,150	-	-	-	(1.3)	4.8	7.5	10.3	1.3
\$1,150 and under \$1,200	-	-	-	-	4.7	7.6	7.9	7.4
\$1,200 and under \$1,250	-	-	-	-	3.6	9.8	9.1	6.5
\$1,250 and under \$1,300	-	-	-	-	2.7	5.3	4.7	8.7
\$1,300 and under \$1,350	-	-	-	-	1.3	6.9	7.8	8.7
\$1,350 and under \$1,400	-	-	-	-	(.5)	4.2	4.2	7.8
\$1,400 and under \$1,450	-	-	-	-	-	2.5	5.0	11.7
\$1,450 and under \$1,500	-	-	-	-	-	1.5	5.7	7.8
\$1,500 and under \$1,550	-	-	-	-	-	1.0	2.3	3.0
\$1,550 and under \$1,600	-	-	-	-	-	1.0	3.4	5.2
\$1,600 and under \$1,650	-	-	-	-	-	(.9)	3.4	2.6
\$1,650 and under \$1,700	-	-	-	-	-	-	2.0	3.0
\$1,700 and under \$1,750	-	-	-	-	-	-	1.6	3.5
\$1,750 and under \$1,800	-	-	-	-	-	-	.7	1.3
\$1,800 and under \$1,850	-	-	-	-	-	-	2.4	6.1
\$1,850 and under \$1,900	-	-	-	-	-	-	1.0	1.7
\$1,900 and under \$1,950	-	-	-	-	-	-	.1	.9
\$1,950 and under \$2,000	-	-	-	-	-	-	1.0	1.7
\$2,000 and under \$2,050	-	-	-	-	-	-	(1.4)	.9
\$2,050 and under \$2,100	-	-	-	-	-	-	-	1.3
\$2,100 and under \$2,150	-	-	-	-	-	-	-	1.3
\$2,150 and under \$2,200	-	-	-	-	-	-	-	-
\$2,200 and under \$2,250	-	-	-	-	-	-	-	2.6
\$2,250 and over	-	-	-	-	-	-	-	3.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees	1,340	3,619	6,943	7,133	4,256	2,063	696	230
Average monthly salaries	\$481	\$557	\$643	\$792	\$952	\$1,113	\$1,288	\$1,523

See footnotes at end of table.

Table 3. Percent distribution of employees¹ in selected professional and administrative occupations² by average monthly salaries, winter 1960-61—Continued

Average monthly salaries	Engineers							
	I	II	III	IV	V	VI	VII	VIII
Under \$350 -----	-	-	-	-	-	-	-	-
\$350 and under \$375 -----	-	-	-	-	-	-	-	-
\$375 and under \$400 -----	-	-	-	-	-	-	-	-
\$400 and under \$425 -----	(0.6)	-	-	-	-	-	-	-
\$425 and under \$450 -----	1.2	-	-	-	-	-	-	-
\$450 and under \$475 -----	3.0	(0.9)	-	-	-	-	-	-
\$475 and under \$500 -----	4.8	1.3	-	-	-	-	-	-
\$500 and under \$525 -----	15.6	3.3	(0.9)	-	-	-	-	-
\$525 and under \$550 -----	25.5	9.6	1.4	-	-	-	-	-
\$550 and under \$575 -----	25.6	15.3	2.8	-	-	-	-	-
\$575 and under \$600 -----	11.3	16.6	5.4	(1.0)	-	-	-	-
\$600 and under \$625 -----	7.1	16.5	7.8	1.4	-	-	-	-
\$625 and under \$650 -----	3.2	11.9	9.1	2.5	-	-	-	-
\$650 and under \$675 -----	1.4	9.5	11.7	3.6	-	-	-	-
\$675 and under \$700 -----	(.7)	5.9	10.8	4.4	(1.9)	-	-	-
\$700 and under \$725 -----	-	3.8	11.3	6.1	1.3	-	-	-
\$725 and under \$750 -----	-	2.7	9.7	7.8	1.9	-	-	-
\$750 and under \$775 -----	-	1.7	9.0	8.1	5.7	(1.7)	-	-
\$775 and under \$800 -----	-	(.9)	5.6	8.1	5.8	1.1	-	-
\$800 and under \$825 -----	-	-	4.7	7.6	4.4	2.8	-	-
\$825 and under \$850 -----	-	-	3.8	7.8	5.7	2.9	-	-
\$850 and under \$875 -----	-	-	2.1	7.6	5.8	2.6	-	-
\$875 and under \$900 -----	-	-	1.6	5.8	5.4	2.7	-	-
\$900 and under \$925 -----	-	-	(2.5)	6.7	6.5	3.8	-	-
\$925 and under \$950 -----	-	-	-	4.2	6.1	3.5	-	-
\$950 and under \$975 -----	-	-	-	3.8	5.9	4.0	-	-
\$975 and under \$1,000 -----	-	-	-	3.2	7.2	3.9	(3.5)	-
\$1,000 and under \$1,050 -----	-	-	-	5.0	10.3	10.9	3.6	0.2
\$1,050 and under \$1,100 -----	-	-	-	2.6	7.8	9.6	5.2	1.0
\$1,100 and under \$1,150 -----	-	-	-	1.7	5.3	9.3	6.2	1.7
\$1,150 and under \$1,200 -----	-	-	-	(.9)	4.3	9.2	7.6	4.8
\$1,200 and under \$1,250 -----	-	-	-	-	3.3	8.4	6.5	5.0
\$1,250 and under \$1,300 -----	-	-	-	-	2.3	5.8	8.5	5.3
\$1,300 and under \$1,350 -----	-	-	-	-	1.5	5.4	8.6	4.9
\$1,350 and under \$1,400 -----	-	-	-	-	(1.5)	3.2	8.4	5.2
\$1,400 and under \$1,450 -----	-	-	-	-	-	3.0	7.8	5.8
\$1,450 and under \$1,500 -----	-	-	-	-	-	2.1	5.9	7.1
\$1,500 and under \$1,550 -----	-	-	-	-	-	1.6	7.2	7.5
\$1,550 and under \$1,600 -----	-	-	-	-	-	(2.4)	3.4	5.8
\$1,600 and under \$1,650 -----	-	-	-	-	-	-	3.7	5.1
\$1,650 and under \$1,700 -----	-	-	-	-	-	-	2.7	6.1
\$1,700 and under \$1,750 -----	-	-	-	-	-	-	2.2	7.4
\$1,750 and under \$1,800 -----	-	-	-	-	-	-	1.6	5.4
\$1,800 and under \$1,850 -----	-	-	-	-	-	-	1.9	5.9
\$1,850 and under \$1,900 -----	-	-	-	-	-	-	3.2	2.0
\$1,900 and under \$1,950 -----	-	-	-	-	-	-	.4	2.5
\$1,950 and under \$2,000 -----	-	-	-	-	-	-	.2	1.2
\$2,000 and under \$2,050 -----	-	-	-	-	-	-	.1	2.7
\$2,050 and under \$2,100 -----	-	-	-	-	-	-	1.3	1.6
\$2,100 and under \$2,150 -----	-	-	-	-	-	-	(.4)	2.1
\$2,150 and under \$2,200 -----	-	-	-	-	-	-	-	.8
\$2,200 and under \$2,250 -----	-	-	-	-	-	-	-	.4
\$2,250 and over -----	-	-	-	-	-	-	-	2.5
Total -----	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees -----	9,828	30,873	64,671	71,637	39,056	18,669	5,424	1,217
Average monthly salaries -----	\$548	\$609	\$705	\$832	\$960	\$1,114	\$1,373	\$1,588

See footnotes at end of table.

Table 3. Percent distribution of employees¹ in selected professional and administrative occupations² by average monthly salaries, winter 1960-61—Continued

Average monthly salaries	Job analysts				Directors of personnel				Managers, office services			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
\$325 and under \$350	9.0	-	-	-	-	-	-	-	-	-	-	-
\$350 and under \$375	-	(1.6)	-	-	-	-	-	-	-	-	-	-
\$375 and under \$400	.7	3.6	-	-	-	-	-	-	-	-	-	-
\$400 and under \$425	6.2	2.2	-	-	-	-	-	-	-	-	-	-
\$425 and under \$450	5.5	3.8	1.4	-	-	-	-	-	(1.9)	-	-	-
\$450 and under \$475	11.7	5.6	-	-	-	-	-	-	5.9	-	-	-
\$475 and under \$500	13.8	15.3	3.6	-	(0.8)	-	-	-	9.6	4.1	-	-
\$500 and under \$525	14.5	7.0	5.3	-	3.6	-	-	-	2.8	1.1	-	-
\$525 and under \$550	15.9	12.7	7.5	0.4	5.0	(1.1)	-	-	5.2	2.3	-	-
\$550 and under \$575	11.7	7.6	7.4	1.3	7.8	1.5	-	-	7.5	6.5	2.0	-
\$575 and under \$600	6.2	5.4	6.4	.6	-	2.5	-	-	16.9	5.4	-	-
\$600 and under \$625	3.4	8.0	9.0	1.9	5.0	4.6	-	-	15.7	6.0	4.9	-
\$625 and under \$650	(1.4)	6.8	12.2	4.4	2.5	2.5	-	-	8.7	7.2	2.8	-
\$650 and under \$675	-	10.2	7.0	5.7	13.4	5.2	2.6	-	8.9	8.5	9.3	2.9
\$675 and under \$700	-	1.0	7.0	4.8	4.8	4.6	1.4	-	3.5	6.0	2.8	-
\$700 and under \$725	-	3.2	5.3	6.7	8.1	9.0	1.3	-	3.0	12.2	2.8	1.5
\$725 and under \$750	-	1.0	5.4	5.5	7.9	4.3	.6	-	4.0	12.1	9.3	2.9
\$750 and under \$775	-	1.4	6.3	13.5	10.4	5.3	-	-	3.0	3.8	1.6	7.4
\$775 and under \$800	-	.4	1.9	10.7	10.4	1.8	4.6	-	1.2	4.6	6.9	-
\$800 and under \$825	-	1.6	4.1	9.4	.8	9.4	2.8	(0.3)	-	3.9	11.0	1.5
\$825 and under \$850	-	-	2.8	8.0	.5	9.2	9.3	2.0	-	4.7	10.6	10.3
\$850 and under \$875	-	1.4	.5	4.2	4.0	7.6	1.8	4.6	.9	3.4	4.5	1.5
\$875 and under \$900	-	-	2.3	6.1	1.7	5.1	1.8	-	-	1.0	9.3	1.5
\$900 and under \$925	-	-	.8	1.7	5.0	3.1	10.2	1.3	.2	4.1	6.1	1.5
\$925 and under \$950	-	-	2.6	2.1	2.8	.3	2.8	1.7	-	2.0	2.4	5.9
\$950 and under \$975	-	-	(1.1)	3.1	-	5.1	5.3	3.0	1.2	(1.1)	2.8	11.8
\$975 and under \$1,000	-	-	-	3.1	3.1	3.1	6.8	4.3	-	-	3.3	1.5
\$1,000 and under \$1,050	-	-	-	1.9	1.7	4.9	11.8	9.6	-	-	2.0	11.8
\$1,050 and under \$1,100	-	-	-	2.1	(.6)	.5	2.4	6.0	-	-	2.8	-
\$1,100 and under \$1,150	-	-	-	1.1	-	3.0	6.9	15.2	-	-	1.2	19.1
\$1,150 and under \$1,200	-	-	-	1.7	-	1.0	5.8	11.3	-	-	(1.2)	8.8
\$1,200 and under \$1,250	-	-	-	-	-	2.8	4.7	6.3	-	-	-	1.5
\$1,250 and under \$1,300	-	-	-	-	-	-	4.7	5.6	-	-	-	2.9
\$1,300 and under \$1,350	-	-	-	-	-	1.4	5.7	3.3	-	-	-	2.9
\$1,350 and under \$1,400	-	-	-	-	-	(1.2)	.1	3.6	-	-	-	-
\$1,400 and under \$1,450	-	-	-	-	-	-	1.0	6.6	-	-	-	-
\$1,450 and under \$1,500	-	-	-	-	-	-	2.8	3.3	-	-	-	2.9
\$1,500 and under \$1,550	-	-	-	-	-	-	(2.9)	.3	-	-	-	-
\$1,550 and under \$1,600	-	-	-	-	-	-	-	3.6	-	-	-	-
\$1,600 and under \$1,650	-	-	-	-	-	-	-	-	-	-	-	-
\$1,650 and under \$1,700	-	-	-	-	-	-	-	2.3	-	-	-	-
\$1,700 and under \$1,750	-	-	-	-	-	-	-	1.0	-	-	-	-
\$1,750 and under \$1,800	-	-	-	-	-	-	-	.3	-	-	-	-
\$1,800 and under \$1,850	-	-	-	-	-	-	-	3.3	-	-	-	-
\$1,850 and under \$1,900	-	-	-	-	-	-	-	(1.0)	-	-	-	-
\$1,900 and under \$1,950	-	-	-	-	-	-	-	-	-	-	-	-
\$1,950 and under \$2,000	-	-	-	-	-	-	-	-	-	-	-	-
\$2,000 and under \$2,050	-	-	-	-	-	-	-	-	-	-	-	-
\$2,050 and under \$2,100	-	-	-	-	-	-	-	-	-	-	-	-
\$2,100 and over	-	-	-	-	-	-	-	-	-	-	-	-
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
Number of employees	145	498	796	524	642	1,819	872	302	427	613	246	68
Average monthly salaries	\$493	\$561	\$662	\$801	\$723	\$833	\$1,037	\$1,211	\$604	\$707	\$814	\$1,002

¹ In order 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 most cases, in the interval above or below the extreme interval containing at least 1 percent. The percentages representing these employees are shown in parentheses.

² For scope of study, see table in appendix A.

³ Workers were distributed as follows: 0.2 percent at \$2,400 to \$2,450; 0.2 percent at \$2,450 to \$2,500; 1.0 percent at \$2,500 to \$2,550; 2.4 percent at \$2,600 to \$2,650; 0.5 percent at \$2,650 to \$2,700; 1.5 percent at \$2,700 to \$2,750; 5.1 percent at \$2,900 to \$2,950.

NOTE: Because of rounding, sum of individual items may not equal totals.

Table 4. Percent distribution of employees¹ in selected technical and clerical occupations² by average weekly salaries, winter 1960-61

Average weekly salaries	Draftsmen, junior	Draftsmen, senior	Tracers
Under \$50	-	-	0.4
\$50 and under \$55	-	-	6.3
\$55 and under \$60	(0.9)	-	6.1
\$60 and under \$65	1.7	-	11.5
\$65 and under \$70	3.5	-	12.5
\$70 and under \$75	5.3	-	13.0
\$75 and under \$80	9.0	-	15.6
\$80 and under \$85	10.3	(1.5)	9.7
\$85 and under \$90	12.6	1.5	7.8
\$90 and under \$95	13.3	4.2	6.8
\$95 and under \$100	10.4	5.6	4.9
\$100 and under \$105	9.3	8.0	3.9
\$105 and under \$110	5.7	8.9	(1.6)
\$110 and under \$115	4.2	9.7	-
\$115 and under \$120	3.8	9.7	-
\$120 and under \$125	3.8	9.4	-
\$125 and under \$130	2.3	8.1	-
\$130 and under \$135	1.5	7.1	-
\$135 and under \$140	1.2	6.0	-
\$140 and under \$145	(1.3)	5.3	-
\$145 and under \$150	-	3.3	-
\$150 and under \$160	-	5.3	-
\$160 and under \$170	-	3.9	-
\$170 and under \$180	-	1.6	-
\$180 and over	-	.7	-
Total	100.0	100.0	100.0
Number of employees	19,402	37,254	2,635
Average weekly salaries	\$94.00	\$122.50	\$75.50

See footnotes at end of table.

Table 4. Percent distribution of employees¹ in selected technical and clerical occupations² by average weekly salaries, winter 1960-61—Continued

Average weekly salaries	Bookkeeping-machine operators		Clerks, accounting		Clerks, file		Key-punch operators	Office boys or girls	Stenographers, general	Stenographers, technical
	I	II	I	II	I	II				
Under \$35	-	-	-	-	(0.2)	-	-	-	-	-
\$35 and under \$40	0.2	-	0.1	-	1.0	-	-	0.3	-	-
\$40 and under \$45	2.1	-	1.3	-	8.3	0.3	0.6	6.0	(0.2)	-
\$45 and under \$50	8.6	0.9	3.6	-	15.6	2.5	2.5	12.6	1.0	-
\$50 and under \$55	14.5	1.8	7.3	(0.5)	20.0	6.1	6.5	20.5	3.2	-
\$55 and under \$60	18.6	4.6	9.8	1.0	16.8	10.3	8.7	20.1	5.3	(0.6)
\$60 and under \$65	20.2	9.3	13.0	2.0	14.3	12.7	12.5	13.6	9.7	2.3
\$65 and under \$70	12.6	12.5	12.1	3.5	8.0	12.3	13.1	8.0	11.3	5.5
\$70 and under \$75	7.8	12.3	10.1	5.3	5.0	11.6	11.7	5.0	11.3	7.9
\$75 and under \$80	5.6	11.6	11.5	7.4	4.4	10.9	12.0	4.2	12.9	10.0
\$80 and under \$85	3.7	12.0	7.8	8.2	2.8	10.8	9.5	5.0	11.9	11.0
\$85 and under \$90	2.3	10.6	5.2	8.7	1.9	5.7	6.5	2.5	9.0	19.6
\$90 and under \$95	1.7	10.0	4.9	9.0	(1.8)	4.4	8.4	1.5	8.8	17.2
\$95 and under \$100	1.2	6.2	4.3	9.2	-	5.3	4.6	(.9)	6.6	8.6
\$100 and under \$105	(.9)	3.5	3.1	8.5	-	2.5	2.0	-	4.1	5.6
\$105 and under \$110	-	2.7	2.7	9.5	-	1.8	1.1	-	2.4	6.2
\$110 and under \$115	-	(1.8)	1.5	7.0	-	1.3	(.3)	-	(2.3)	2.5
\$115 and under \$120	-	-	(1.7)	5.4	-	(1.5)	-	-	-	1.3
\$120 and under \$125	-	-	-	4.6	-	-	-	-	-	1.2
\$125 and under \$130	-	-	-	2.5	-	-	-	-	-	(.6)
\$130 and under \$135	-	-	-	2.3	-	-	-	-	-	-
\$135 and under \$140	-	-	-	2.1	-	-	-	-	-	-
\$140 and under \$145	-	-	-	1.6	-	-	-	-	-	-
\$145 and over	-	-	-	1.8	-	-	-	-	-	-
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees	25,562	5,341	52,359	38,393	36,121	11,260	45,061	24,355	90,906	7,371
Average weekly salaries	\$63.00	\$79.00	\$73.50	\$98.00	\$58.00	\$74.50	\$73.50	\$60.00	\$78.50	\$88.00

See footnotes at end of table.

Table 4. Percent distribution of employees¹ in selected technical and clerical occupations² by average weekly salaries, winter 1960-61—Continued

Average weekly salaries	Switchboard operators	Switchboard operators, special	Tabulating-machine operators			Typists	
			I	II	III	I	II
Under \$40 -----	0.4	-	-	-	-	(0.2)	-
\$40 and under \$45 -----	1.1	-	0.4	-	-	1.9	-
\$45 and under \$50 -----	2.3	(0.8)	1.6	0.1	-	8.0	(0.9)
\$50 and under \$55 -----	5.1	1.1	7.8	1.0	-	12.8	3.5
\$55 and under \$60 -----	6.2	2.6	9.8	2.6	-	17.0	7.4
\$60 and under \$65 -----	8.7	3.1	10.9	3.6	-	18.9	12.3
\$65 and under \$70 -----	10.8	6.7	14.9	5.1	(0.8)	14.7	14.0
\$70 and under \$75 -----	11.3	6.1	14.1	7.0	1.7	9.8	13.8
\$75 and under \$80 -----	12.7	9.0	11.2	10.8	3.9	6.5	13.3
\$80 and under \$85 -----	9.6	18.6	10.6	13.6	5.2	4.5	9.9
\$85 and under \$90 -----	11.9	15.2	6.6	10.7	6.2	2.8	8.9
\$90 and under \$95 -----	10.1	22.3	4.6	11.0	8.2	1.7	6.1
\$95 and under \$100 -----	5.9	7.1	2.5	12.1	11.7	(1.2)	6.5
\$100 and under \$105 -----	2.3	3.3	3.3	8.1	11.5	-	1.8
\$105 and under \$110 -----	(1.5)	1.8	1.3	6.9	11.1	-	1.0
\$110 and under \$115 -----	-	1.6	(.2)	3.0	11.1	-	(.5)
\$115 and under \$120 -----	-	(.7)	-	2.4	8.5	-	-
\$120 and under \$125 -----	-	-	-	1.3	6.9	-	-
\$125 and under \$130 -----	-	-	-	(.8)	4.9	-	-
\$130 and under \$135 -----	-	-	-	-	2.5	-	-
\$135 and under \$140 -----	-	-	-	-	3.2	-	-
\$140 and over -----	-	-	-	-	2.4	-	-
Total -----	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees -----	16,394	1,044	12,090	18,541	8,567	61,855	38,131
Average weekly salaries -----	\$76.00	\$84.00	\$72.50	\$88.00	\$105.50	\$63.50	\$75.50

¹ In order 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 most cases, in the interval above or below the extreme interval containing at least 1 percent. The percentages representing these employees are shown in parentheses.

² For scope of study, see table in appendix A.

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

Table 5. Percent distribution of establishments¹ with supplementary cash bonus plans applying to professional and administrative occupations studied² by comparison between bonuses paid in 1959-60 and 1960-61 survey periods

Item	Percent of establishments
Establishments with employees in professional and administrative occupations studied:	
Number	9,680
Percent	100
Cash bonus plans applying in both 1959-60 and 1960-61 survey periods	44
Bonuses paid in both periods	41
Bonuses paid in 1960-61 period only	1
Bonuses paid in 1959-60, but not in 1960-61 period	1
Bonuses not paid in either period	1
Cash bonus plan discontinued in 1960-61 period	1
Cash bonus plan initiated in 1960-61 period	(³)
No cash bonus plan applying in either 1959-60 or 1960-61 period	53
Information not available	2
Establishments with employees in professional and administrative occupations studied who were eligible to participate in cash bonuses paid in both 1959-60 and 1960-61 survey periods:	
Number	3,927
Percent	100
Bonus added about the same to employee's pay in both periods	56
Bonus added more to employee's pay in 1960-61 period	13
Bonus added less to employee's pay in 1960-61 period	28
Bonus paid in both periods, year-to-year comparison not available	3

¹ For scope of study, see table in appendix A.

² Coverage in this table is limited to the 9,680 establishments in the 1960-61 survey which had employees in the professional and administrative occupations studied. An establishment was considered as having a cash bonus plan if 1 or more of its employees in the professional and administrative occupations studied were eligible to participate. Bonus information relates to the year preceeding the 1959-60 and 1960-61 survey periods.

³ Less than 0.5 percent.

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

Appendix A: Scope and Method of Survey

Scope of Survey

This survey relates to all 188 Standard Metropolitan Statistical Areas in the United States, excluding Hawaii, as revised through 1959 by the Bureau of the Budget. Coverage within those areas was limited to establishments 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. Establishments with fewer than 250 workers at the time of reference of the universe data (in general, first quarter of 1960) were excluded. The estimated number of establishments and the total employment within the scope of the survey, and within the sample actually studied, are listed separately for each major industry division in the accompanying table. As indicated in the table, and explained later in detail, the scope of the study was the same for all occupations; however, the survey consisted of two separate parts, with one sample of establishments studied for the professional and administrative occupations, and another larger sample for drafting and clerical occupations.

Establishments and workers within scope of survey¹ and number studied by industry division, winter 1960-61

Industry division	Within scope of study ¹		Studied for professional and administrative occupations		Studied for technical and clerical occupations ²	
	Number of establishments	Workers in establishments	Number of establishments	Workers in establishments	Number of establishments	Workers in establishments
All divisions surveyed	11,691	11,288,000	1,722	4,137,272	4,637	6,698,569
Manufacturing	7,400	7,299,700	1,179	2,807,981	2,571	3,933,573
Nonmanufacturing:						
Transportation, ³ communication, electric, gas, and sanitary services	1,150	1,625,000	209	695,994	624	1,213,194
Wholesale trade	526	237,300	35	20,866	235	126,748
Retail trade	1,580	1,315,700	161	326,194	713	885,112
Finance, insurance, and real estate	940	716,600	90	226,764	445	480,154
Services:						
Engineering and architectural services; and research, development, and testing laboratories only	95	93,700	48	59,473	49	59,788

¹ The study relates to establishments in industries listed employing 250 or more workers in the 188 Standard Metropolitan Statistical Areas in the United States (excluding Hawaii) as revised through 1959 by the Bureau of the Budget.

² The national estimates for the drafting and clerical occupations were developed from data collected in the Bureau's occupational wage surveys in major labor markets, excluding data for establishments not within the scope of the survey as determined for the study of professional and administrative occupations.

³ 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.

Timing of Survey

Salary and related data for the professional and administrative occupations were collected by personal visits to sample establishments during the first half of 1961, largely between February 1 and May 31. The most recent information available at the time of the visit was obtained. For the drafting and clerical occupations, the survey was designed to develop nationwide estimates from data collected in the Bureau's occupational wage surveys by labor market, conducted between August 1960 and June 1961. Although some of the areas were surveyed in 1960, those surveyed in the first half of 1961 (with the areas they represented in the nationwide estimates) accounted for two-thirds of the office employment within the scope of the survey in all metropolitan areas combined.

Method of Collection

Data were obtained by personal visits of Bureau field economists to representative establishments within the scope of the survey.¹⁰ Employees were classified according to occupation and level, with the assistance of company officials, on the basis of uniform job descriptions. In comparing actual duties and responsibilities of employees with those in the survey descriptions, extensive use was made of company occupational descriptions, organization charts, and other personnel records. The occupational descriptions used in classifying employees appear in appendix C.

Nature of Data Collected and Presented

The average salaries reported relate to the standard salaries that were paid for standard work schedules; i. e., to the straight-time salary corresponding to the employee's normal work schedule excluding overtime hours. The average salaries presented relate to employees for whom salary data were available.

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
6 -----	10 or more percent Directors of personnel IV (27 percent) Engineers VIII (21 percent) Chief accountants IV (19 percent) Attorneys V (17 percent) Directors of personnel III (11 percent) Engineers VII (10 percent)
9 -----	5 to 9.9 percent Chief accountants I, II, and III Attorneys IV and IYA Chemists VIII Directors of personnel I and II Managers, office services IV
33 -----	Less than 5 percent

Comparisons between establishments that provided salary data for each specific occupational 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.

¹⁰ The surveys in major labor markets, from which nationwide estimates were developed for the drafting and clerical occupations, provide for collection of data for some areas by a combination of mail and personal visits in alternate years. For establishments reporting by mail, the occupational classifications are based on those made on personal visits in the previous year.

Occupational employment estimates relate to the total in all establishments within the scope of the study and not the number actually surveyed. Employees for whom salary data were not available were not taken into account in the estimates. 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.¹¹ 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 drafting occupations, one or the other sex was 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 occupational wage survey reports by labor market area.

Sampling and Estimating Procedures

Although the published estimates relate to 188 Standard Metropolitan Statistical Areas, as revised by the Bureau of the Budget through 1959, the survey was conducted almost entirely within a sample of 80 areas.¹² Within these 80 areas, a sample of establishments was chosen, so that the sampling plan can be described as a two-stage design.

The sample of 80 areas was based upon the selection of 1 area from a stratum of similar areas. The criteria of stratification were region and type of industrial activity. Each area had a chance of selection roughly proportionate to its total nonagricultural employment. Each of the 35 largest areas formed a stratum by itself, and was certain of inclusion in the sample. Each of these areas represented only itself, but each of the 45 other areas represented itself and similar units.

The design used in the selection of the establishments studied for the professional and administrative occupations differed from that used in the drafting and clerical occupations. As explained earlier, data for the latter occupations were collected in the Bureau's program of occupational wage surveys conducted in the 80 areas. The establishments in those surveys were chosen to provide separate area estimates, with industry division detail, while the design for the survey of professional and administrative occupations was intended to yield only nationwide data with no industrial breakdown, and hence required fewer establishments.

In the case of drafting and clerical occupations, each establishment sample within the area was selected independently to permit the presentation of separate data for that area. These samples were selected from a list of establishments stratified by size (employment) and industry. A greater proportion of the large establishments was selected, but in combining the data each establishment was given its appropriate weight—i e., where an establishment was chosen as one of four, it was given a weight of four.

Nationwide estimates for the drafting and clerical occupations in 4,600 establishments were formed by applying to each set of data the weights needed to expand these into estimates for the stratum represented by the sample area, and then combining these stratum estimates. In the case of the 35 large self-representing areas, these weights were one. In each of the 45 smaller areas, the weight was the ratio of the total nonagricultural employment in the stratum to that in the sample area.

¹¹ 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 level of work included.

¹² In a few instances, establishments outside the 80 areas but within the 188 areas were added to the sample in certain industries when it was not possible to obtain within the sampled area a representative establishment for the stratum.

In the study of professional and administrative occupations, the sampling procedure called for the detailed stratification of the universe of 188 areas by industry and size of establishment. Where one of several areas was selected for study to represent a stratum of several areas, an estimate of the universe for that stratum was derived by weighting the industry and size-of-establishment employment totals in the sample area by the weight used in the larger survey described in the preceding paragraph. From this estimated universe, a sample of approximately 1,700 establishments was selected systematically so that each geographic unit was represented proportionately within the size-of-establishment and industry classes.¹³ Although no conscious effort was made to control the representation for each area through all the industries, a count shows that each area contributes nearly its proportionate share to the whole sample.

Each industry was sampled separately, the sampling rates depending on the importance of the industry as an employer of the jobs surveyed, particularly in the scientific and engineering series. Within each industry, a greater proportion of large establishments was selected, but as in the clerical surveys, each establishment was weighted to represent all other units of the same class.

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 salary scales. Thus, for engineers III, the relative standard error of the average salary is 0.5 percent, whereas for chemists VIII, it is 3.8 percent. Most of the relative errors are less than 1.75 percent for the professional and administrative occupations. The nationwide estimates for the clerical and drafting room occupations, based on the much larger sample, are subject to much smaller sampling error.

¹³ A few of the largest employers, together employing nearly 900,000, gave data on a companywide basis. These companies were eliminated from the universe to which the preceding sampling procedure applied. The sample count includes the establishments of these companies within the 188 metropolitan areas.

Appendix B: Survey Changes in 1960-61

In initiating an annual nationwide salary survey of professional, administrative, technical, and clerical occupations by defined levels of work, it was expected that improvements could be made in at least some aspects of the survey in the first few years. The 1959-60 survey was designed, in part, to provide supplementary information that would be useful in reexamining the industrial and occupational coverage.

Changes in Scope of Survey

The industrial and geographic scope of the survey was the same in both periods, with the exception of the minimum size of establishment included. The 1960-61 survey was limited to establishments employing 250 or more workers, whereas the 1959-60 survey included establishments employing 100 or more workers. Although the establishment sample in the most recent study was selected almost entirely from 80 areas as compared with a sample selected largely from 60 areas in the earlier period, the data were appropriately weighted so that both surveys relate to all 188 Standard Metropolitan Statistical Areas in the United States, excluding Hawaii, as revised through 1959 by the Bureau of the Budget. The effect of the change in the minimum size of establishment covered was eliminated from data used in the analysis of salary changes during the year, by excluding data for establishments with fewer than 250 workers from the 1959-60 survey tabulations. This change in the 1959-60 survey results reduced the number of workers in some occupations, mainly in the clerical and drafting groups, but had comparatively little effect upon average salaries for most occupations studied.

Changes in Occupational Definitions

A number of changes were suggested as a result of the experience of Bureau field economists and employers in applying the occupational definitions in the 1959-60 survey. As indicated below, most of the changes in definitions were clarifications and refinements, or improvements in organization, to obtain uniformity in interpretation.

For the professional and administrative occupations in which changes were made in the definitions, the corresponding level designations in the 1959-60 survey are shown. Differences in average salaries for equivalent levels of work may reflect reclassification of employees in accordance with changes in definitions, in addition to actual changes in salary rates. No changes were made in the definitions for drafting and clerical occupations.

Accountant.—A general description of the accounting series was added which specifies the minimum accounting program responsibilities and professional background requirements that are included. To assist in distinguishing levels of responsibility, factors to be considered were explained in more detail, and separate definitions were established for accountants and chief accountants. The addition of a beginning professional accounting level, which was specifically excluded previously, changed the Roman numeral relationships. The approximate relationship among levels is indicated below.

1960-61 level designations:										
Accountant	-----	I	II	III	IV	V	-	-	-	-
Chief accountant	-----	-	-	-	I	II	III	IV	V	
1959-60 corresponding levels:										
Accountant	-----	-	I	II	III	IV	V	-	-	

Auditor.—Minor changes were made to exclude more clearly employees in positions not requiring full professional accounting training. This change eliminated some employees previously included, but had little effect upon comparability of the survey data for the various levels surveyed in the two periods.

1960 level designations	-----	I	II	III	IV
1959-60 corresponding levels	-----	I	II	III	IV

Attorney.—The introduction to the level definitions was revised to exclude employees in patent work requiring professional competence in another field such as engineering in addition to law, and to exclude specialists such as those examining or investigating claims which did not require use of full professional legal training. Intermediate levels IIIA and IVA were added which resulted in the inclusion of a few employees previously omitted and in the transfer of some of the employees previously classified in levels III, IV, or V. Level VI was excluded from the 1960-61 survey. The approximate relationship among levels is as follows:

1960-61 level designations	---	I	II	III	IIIA	IV	IVA	V	-
1959-60 corresponding levels	-----	I	II	III	-	IV	-	V	VI

Chemist.—To facilitate classification of employees by level of work, the factors to be considered in determining levels were arranged in the same order under uniform sub-headings within each level definition. Levels I and II were revised to more clearly exclude technicians in terminal positions, by greater emphasis upon professional background and level of development toward full professional competence rather than upon level of productive work performed. The number of levels surveyed was increased by adding two higher levels, VII and VIII. In applying the definitions for levels VII and VIII, it was necessary to review previous classifications in levels V and VI, which resulted in some reclassification to higher levels.

1960-61 level designations	----	I	II	III	IV	V	VI	VII	VIII
1959-60 corresponding levels	-----	I	II	III	IV	V	VI	-	-

Engineer.—Changes and the relationship among levels covered in the two survey periods are the same as indicated above for chemist.

Job Analyst.—Changes were limited to clarifications in the definition for level IV to identify more clearly the kinds of jobs analyzed and evaluated, and the nature of supervision received at that level. No changes were made in the level designations.

1960-61 level designations	-----	I	II	III	IV
1959-60 corresponding levels	-----	I	II	III	IV

Director of Personnel.—For more uniform application of the level definitions, this category was revised to include only directors of personnel with responsibility for specific personnel functions as defined in the introduction. The level definitions also were revised and reorganized to permit taking into account more combinations of job factors in determining appropriate level classifications. These changes had considerable influence upon comparability with corresponding levels surveyed previously, but resulted in more accurate classification of employees with equivalent responsibilities into the same level of work.

Manager, Office Services.—Statements were added to indicate more clearly the types of office services responsibilities to be considered in determining appropriate level classifications. No changes were made in the level designations or definitions.

1960-61 level designations	-----	I	II	III	IV
1959-60 corresponding levels	-----	I	II	III	IV

Draftsmen.—No changes were made in the definitions for junior draftsman, senior draftsman, or tracer.

Clerical.—No changes were made in any of the definitions for the clerical occupations.

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 is essential in order to permit 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.

ACCOUNTANTS AND AUDITORS

ACCOUNTANT

Performs accounting work requiring professional knowledge of the theory and practice of recording, classifying, examining, and analyzing the data and records of financial transactions. Personally or by supervising others provides accounting service to management by maintaining the books of account, accumulating cost or other similar data, preparing reports and statements, and maintaining the accounting system by interpreting, supplementing, and revising the system as necessary. The work requires a professional knowledge of accounting and a bachelor's degree in accounting or equivalent experience and education combined. (See also chief accountant.)

Accountant I

General characteristics.—At this beginning professional level, position is distinguished 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 beginning accountant practical experience in the operations of an established accounting system. Learns to apply the principles, theories, and concepts of accounting to a particular accounting system.

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

Typical duties and responsibilities.—Many of the assignments will include duties some of which may be nonprofessional in nature such as proving arithmetical accuracy; examining standard accounting documents for completeness, internal accuracy, and conformance with specific accounting requirements; tracing and reconciling records of financial transactions; and preparing detailed statements and schedules for reports. The presence of such nonprofessional tasks, provided they are part of the training and development process, do not prevent the matching of a job if it otherwise meets this definition.

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

ACCOUNTANT—Continued

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 insure 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.—Prepares routine working papers, schedules, exhibits, and summaries indicating the extent of his examination and developing and supporting his findings and recommendations. This includes the examination of a variety of accounting documents to verify accuracy of computations and to ascertain that all transactions are properly supported, are in accordance with pertinent regulations, and are classified and recorded according to acceptable accounting standards.

Responsibility for direction of others.—Usually none, although 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.

Direction received.—A professional accountant at higher level normally is available to furnish advice and assistance as needed. Work is examined 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 insure that the day-to-day operations of the segment or system are carried out in accordance with accounting principles and the policies and objectives of the accounting system. Within limits of delegated responsibility, the accountant makes the day-to-day decisions concerning the accounting treatment of financial transactions. He is expected to recommend solutions to complex problems and propose changes in the accounting system, but he has no authority to effectuate these solutions or changes. His solutions are derived from his own knowledge of the application of well established principles and practices or by referring the problem to his superior for solution.

Responsibility for the direction of others.—In most instances 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 technical accounting problems are more difficult and a greater degree of coordination among more numerous types of accounting records and operations may be essential.

Direction received.—An accountant at 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 accuracy and quality by spot checks and appraisal of results.

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 segment in the intended manner. Makes day-to-day decisions concerning the accounting treatment of financial transactions. He is expected to recommend solutions to complex problems beyond the scope of his responsibility and to propose changes in the accounting system. But he has no authority to act independently on these problems.

ACCOUNTANT—Continued

Responsibility for direction of others.—Accounting staff supervised, if any, may include professional accountants.

Accountant V

General characteristics.—Performs professional operating or cost accounting work requiring the application of accounting principles and practices to the solution of very difficult problems for which no clear precedents exist, or to the development or extension of theories and practices to problems to which they have not been applied previously. Also at this level are positions having more than average responsibility because of the nature, magnitude, or impact of the assigned work.

Is more directly concerned with what the system or segment should be, what operating accounting policies and procedures should be established or revised, and the meaning of the data in the reports and statements for which he is responsible.

Direction received.—An accountant at 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 responsibilities.—In addition to insuring that the system or segment is operated as intended, is deeply involved in the fundamental and complex technical and managerial problems.

Responsibility for direction of others.—Accounting staff supervised, if any, includes professional accountants.

AUDITOR

Audits the financial records of various companies or divisions or components of companies, to appraise systematically and verify the accounting accuracy of the records and reports. 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; and (4) the degree of compliance with established policies and procedures concerning financial transactions. Evaluates the adequacy of the accounting system and internal financial control. Makes appropriate recommendations for improvement as necessary. (Work typically requires a bachelor's degree in accounting or equivalent experience and education combined.)

Excluded from the definition are positions which call for auditing duties which may require detailed knowledge of the operations of a particular company, but do not require full professional accounting training. For example, when the primary responsibility of the position is to check transactions to determine whether or not they conform to prescribed routines or procedures, it is excluded.

Auditor I

As a trainee auditor at the entering professional level, performs a variety of routine assignments under the close supervision of an experienced auditor.

Auditor II

This is the continuing developmental level for the professional auditor. As a junior member of an audit team, independently performs assigned portions of the audit examination which are limited in scope and complexity, such as physically counting to verify inventory items, checking assigned subsidiary ledger accounts against supporting bills or vouchers, checking and balancing various subsidiary ledgers against control accounts, or other similar duties designed to help the team leader check, verify, or prove the accounting entries. Responsibility extends only to the verification of accuracy of computations and the determination that all transactions are properly supported. Any technical problems not covered by instructions are brought to the attention of a superior.

AUDITOR—Continued

Auditor III

(1) As auditor in charge of an audit team or in charge of individual audits, independently conducts regular recurring audits in accordance with a prescribed audit policy of the accounts of smaller or less complex companies having gross income up to approximately \$3 million per year, or similar size branch or subsidiary organizations of larger companies. Under minimum supervision, either working alone, or with the assistance of one or two subordinate auditors, examines transactions and verifies accounts; observes and evaluates local 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, or (2) as a member of an audit team auditing a larger and more complex organization (approximately \$4 to \$25 million gross income per year), independently performs the audit examination of a major segment of the audit such as the checking, verification, and balancing of all accounts receivable and accounts payable, the analysis and verification of assets and reserves, or the inspection and the evaluation of controls and procedures.

Auditor IV

(1) As auditor in charge of an audit team or of individual audits under minimum supervision with the assistance of approximately five subordinate auditors, independently conducts regular recurring audits of companies having gross income of approximately \$4 to \$24 million per year or in companies with much larger gross incomes, audits of accounts of branch or subsidiary organizations of those companies each of which have gross income of \$4 to \$25 million per year. Plans and conducts the audit and prepares an audit report containing recommendations for changes or improvements in accounting practices, procedures, or policies; or (2) as a member of an audit team auditing the accounts of a larger and more complex organization (over \$30 million gross income per year), is assigned relatively independent responsibility for a major segment of the audit such as the checking, verification, and balancing of all accounts receivable and accounts payable, the analysis and verification of assets and reserves, or the inspection and evaluation of controls and procedures.

CHIEF ACCOUNTANT

Responsible for directing a total accounting program for a company or for an establishment of a company. The minimum accounting program includes: (1) General accounting (maintaining records of assets, liabilities, income, expense, and capital accounts, including responsibility for profit and loss and balance sheet statements); and (2) with 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, tabulating machine operation, etc. (Responsibility for an internal audit program is typically not included.)

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

- (1) Developing, 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 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 in a manner that is meaningful to management.
 - (b) Methods for improving operations as suggested by his expert knowledge of the financial situation, e.g., proposals for improving cost control, property management, and credit and collection, tax reduction, or similar programs.

CHIEF ACCOUNTANT—Continued

Definition does not cover 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, or procedures studies, or similar functions. Such work is typical of positions sometimes titled as comptroller, budget and accounting manager, financial manager, etc.

The number of professional accountants supervised, as used in the following definitions, is recognized to be a relatively crude criterion for distinguishing between the various definitions. It is to be considered as less important in the matching process than the other criteria.

Chief Accountant I

Authority and responsibility.—Directs the accounting program for an establishment of a company. The accounting system has been established in considerable detail at higher organizational levels in the company, i.e., accounts, procedures, and reports to be used have been prescribed. The chief accountant has authority, within this prescribed system, to adapt and expand it to fit the particular needs of the organization served, e.g., to provide greater detail; to establish additional accounting controls; to provide special or interim reports and statements needed by the establishment manager for day-to-day operations, etc.

Technical complexity.—The level of technical complexity of the accounting program is indicated by the fact that the organization which it 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.

Subordinate staff.—Typically, the subordinate staff in the system for which he is responsible includes only one or two professional accountants, in addition to clerical, machine operation, bookkeeping, and related personnel. The subordinate professional accountant jobs do not exceed the accountant III job definitions.

Chief Accountant II

Authority and responsibility.—Directs the accounting program for an establishment of a company. The accounting system has been established in considerable detail at higher organizational levels in the company, i.e., accounts, procedures, and reports to be used have been prescribed. The chief accountant has authority, within this prescribed system, to adapt and expand it to fit the particular needs of the organization served, e.g., to provide greater detail; to establish additional accounting controls; to provide special or interim reports and statements needed by the establishment manager for day-to-day operations, etc.

Technical complexity.—The level of technical complexity of the accounting program is indicated by the fact that the organization which it serves has a relatively large number of functions, products, work processes, etc., requiring substantial adaptations of the basic system to meet local management needs. (The level of technical complexity of the accounting program falls between that described for chief accountant I and chief accountant III.)

Subordinate staff.—Typically, the subordinate staff in the system for which he is responsible includes about 5 to 10 professional accountants in addition to clerical, machine operation, bookkeeping, and related personnel. At least one or two of the subordinate professional accountant jobs match the accountant IV job definition.

or

Authority and responsibility.—Directs the accounting program for an establishment of a company when the delegated authority to modify the basic accounting system established at higher organizational levels within the company clearly exceeds that described as typical of chief accountant I. The basic accounting system is prescribed only in broad outlines rather than in specific detail, e.g., while certain major financial reports, overall accounts, general policies, etc., are required by the basic system, the chief accountant has broad

CHIEF ACCOUNTANT—Continued

latitude to decide what specific methods, procedures, accounts, reports, etc., are to be used within the organizational segment he serves. He has authority to evaluate and take final action on recommendations for changes in that portion of the system for which he is responsible, but he must secure prior approval from higher organizational levels for any changes which would affect the basic system prescribed by such higher levels. Accounting reports and statements prepared reflect the events and progress of the entire organizational segment of the company for which he is responsible, and usually these reports represent consolidations of accounting data submitted by subordinate segments of the organization which have accounting responsibilities. (This degree of authority is most characteristically found at an organizational level (see chief accountant III) and the plant level (see chief accountant I). However, if a similar degree of authority has been delegated to the plant level, the chief accountant at such a place should be matched with this definition.)

Technical complexity.—The level of technical complexity of the accounting program is indicated by the fact that the organization which it 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.

Subordinate staff.—Typically, the subordinate staff in the system for which he is responsible includes about 5 to 10 professional accountants, in addition to clerical, machine operation, bookkeeping, and related personnel. Most of the subordinate professional accountant jobs match the accountant III job definition, but one or two may match accountant IV.

Chief Accountant III

Authority and responsibility.—Directs the accounting program for an establishment of a company. The accounting system has been established in considerable detail at higher organizational levels in the company, i. e., accounts, procedures, and reports to be used have been prescribed. The chief accountant has authority, within this prescribed system, to adapt and expand it to fit the particular needs of the organization served, e. g., to provide greater detail; to establish additional accounting controls; to provide special or interim reports and statements needed by the establishment manager for day-to-day operations, etc.

Technical complexity.—The degree of technical complexity of the accounting program is caused by the fact that it serves an organization whose functions, products, work processes, etc., are very numerous, varied, unique, specialized or which, for similar reasons, puts a heavy demand on the accounting organization for specialized and extensive adaptations of the basic system to meet management needs. The accounting system, to a considerable degree, is developed well beyond the established principles and practices in order to provide methods for the solution of problems for which no clear precedents exist or to provide for the development or extension of theories and practices to problems to which they have not been previously applied.

Subordinate staff.—Typically, the subordinate staff includes about 15 to 20 professional accountants, in addition to clerical, machine operation, bookkeeping, and related personnel. At least one or two of the subordinate professional accountant jobs match the accountant V job definition.

OR

Authority and responsibility.—Directs the accounting program for an establishment of a company when the delegated authority to modify the basic accounting system established at higher organizational levels within the company clearly exceeds that described as typical of chief accountant I. The basic accounting system is prescribed only in broad outlines rather than in specific detail, e. g., while certain major financial reports, overall accounts, general policies, etc., are required by the basic system, the chief accountant has broad latitude to decide what specific methods, procedures, accounts, reports, etc., are to be used within the organizational segment he serves. He has authority to evaluate and take final action on recommendations for changes in that portion of the system for which he is responsible, but he must secure prior approval from higher organizational levels for any changes which would affect the basic system prescribed by such higher levels. Accounting reports and statements prepared reflect the events and progress of the entire organizational

CHIEF ACCOUNTANT—Continued

segment of the company for which he is responsible, and usually these reports represent consolidations of accounting data submitted by subordinate segments of the organization which have accounting responsibilities. (This degree of authority is most characteristically found at an organizational level in the company which is intermediate between the company headquarters level (see chief accountant III) and the plant level (see chief accountant I). However, if a similar degree of authority has been delegated to the plant level, the chief accountant at such a place should be matched with this definition.)

Technical complexity.—The level of technical complexity of the accounting program is indicated by the fact that the organization which it serves has a relatively large number of functions, products, work processes, etc., requiring substantial adaptations of the basic system to meet management needs. (The level of technical complexity of the accounting program falls between that described for chief accountant I and chief accountant III.)

Subordinate staff.—The subordinate staff in the system for which he is responsible includes about 15 to 20 professional accountants, in addition to clerical, machine operation, bookkeeping, and related personnel. Many of the subordinate professional accountant jobs match the accountant IV job definition, but some may match accountant V.

or

Authority and responsibility.—Directs the accounting program for an entire company with or without subordinate establishments. 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 usually from a company official responsible for general financial management, frequently an officer of the company. The chief accountant evaluates and takes final action on recommendations for basic changes in the accounting system, originating from subordinate units within the system. Accounting reports and statements prepared reflect the events and progress of the entire company, and to the extent that subordinate accounting segments exist, they represent consolidations of accounting data submitted by these segments.

Technical complexity.—The level of technical complexity of the accounting program is indicated by the fact that the organization which it 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.

Subordinate staff.—Typically, the subordinate staff in the system for which he is responsible includes about 5 to 10 professional accountants, in addition to clerical, machine operation, bookkeeping, and related personnel. Most of the subordinate professional accountant jobs match the accountant III job definition, but one or two may match as high as accountant V.

Chief Accountant IV

Authority and responsibility.—Directs the accounting program for an establishment of a company when the delegated authority to modify the basic accounting system established at higher organizational levels within the company clearly exceeds that described as typical of chief accountant I. The basic accounting system is prescribed only in broad outlines rather than in a specific detail, e.g., while certain major financial reports, overall accounts, general policies, etc., are required by the basic system, the chief accountant has broad latitude to decide what specific methods, procedures, accounts, reports, etc., are to be used within the organizational segment he serves. He has authority to evaluate and take final action on recommendations for changes in that portion of the system for which he is responsible, but he must secure prior approval from higher organizational levels for any changes which would affect the basic system prescribed by such higher levels. Accounting reports and statements prepared reflect the events and progress of the entire organizational segment of the company for which he is responsible, and usually these reports represent consolidations of accounting responsibilities. (This degree of authority is most characteristically found at an organizational level in the company which is intermediate between the company headquarters level (see chief accountant III) and the plant level (see chief accountant I.) However, if a similar degree of authority has been delegated to the plant level, the chief accountant at such a place should be matched with this definition.)

CHIEF ACCOUNTANT—Continued

Technical complexity.—The degree of technical complexity of the accounting program is caused by the fact that it serves an organization whose functions, products, work processes, etc., are very numerous, varied, unique, specialized or which, for similar reasons, puts a heavy demand on the accounting organization for specialized and extensive adaptations of the basic system to meet management needs. The accounting system, to a considerable degree, is developed well beyond the established principles and practices in order to provide methods for the solution of problems for which no clear precedents exist or to provide for the development or extension of theories and practices to problems to which they have not been previously applied.

Subordinate staff.—Typically, the subordinate staff in the system for which he is responsible includes about 25 to 40 professional accountants, in addition to clerical, machine operation, bookkeeping, and related personnel. Many of the subordinate professional accountant jobs match the accountant V job definition, but several may exceed that level.

or

Authority and responsibility.—Directs the accounting program for an entire company with or without subordinate establishments. 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 usually from a company official responsible for general financial management, frequently an officer of the company. The chief accountant evaluates and takes final action on recommendations for basic changes in the accounting system, originating from subordinate units within the system. Accounting reports and statements prepared reflect the events and progress of the entire company and, to the extent that subordinate accounting segments exist, they represent consolidations of accounting data submitted by these segments.

Technical complexity.—The level of technical complexity of the accounting program is indicated by the fact that the organization which it serves has a relatively large number of functions, products, work processes, etc., requiring substantial adaptations of the basic system to meet management needs. (The level of technical complexity of the accounting program falls between that described for chief accountant I and chief accountant III.)

Subordinate staff.—Typically, the subordinate staff in the system for which he is responsible includes about 15 to 20 professional accountants, in addition to clerical, machine operation, bookkeeping, and related personnel. Most of the subordinate professional accountant jobs match the accountant IV job definition, but several may match accountant V, and one or two may even exceed that level.

Chief Accountant V

Authority and responsibility.¹⁴—Directs the accounting program for an entire company with or without subordinate establishments. 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 usually from a company official responsible for general financial management, frequently an officer of the company. The chief accountant evaluates and takes final action on recommendations for basic changes in the accounting system, originating from subordinate units within the system. Accounting reports and statements prepared reflect the events and progress of the entire company and, to the extent that subordinate accounting segments exist, they represent consolidations of accounting data submitted by these segments.

¹⁴ Insufficient data were obtained for this level to warrant presentation of average salaries.

CHIEF ACCOUNTANT—Continued

Technical complexity.—The degree of technical complexity of the accounting program is caused by the fact that it serves an organization whose functions, products, work processes, etc., are very numerous, varied, unique, specialized or which, for similar reasons, puts a heavy demand on the accounting organization for specialized and extensive adaptations of the basic system to meet management needs. The accounting system, to a considerable degree, is developed well beyond the established principles and practices in order to provide methods for the solution of problems for which no clear precedents exist or to provide for the development or extension of theories and practices to problems to which they have not been previously applied.

Subordinate staff.—Typically, the subordinate staff in the system for which he is responsible includes about 25 to 40 professional accountants, in addition to clerical, machine operation, bookkeeping, and related personnel. Many of the subordinate professional accountant jobs match the accountant V job definition, but several may exceed that level.

ATTORNEYS

ATTORNEY

Performs work involved in providing consultation and advice to operating officials of the company with respect to its legal rights, privileges, and obligations. Performs such duties as anticipating any legal problems or risks involving the company and advising company officials; preparing and reviewing various legal instruments and documents, such as contracts for leases, licenses, sales, purchases, real estate, etc.; keeping informed of proposed legislation which might affect the company and advising the appropriate company officials; examining and checking for legal implications public statements or advertising material; advising company whether to prosecute or defend law suits; acting as agent of the company in its transactions; and applying for patents, copyrights, or registration of the company's products, processes, devices, and trademarks. (Patent work which requires training in a technical field, e. g., engineering in addition to legal training, is excluded. Claims examining, claims investigating, or similar work are excluded even though the work is performed by persons with a LL. B. degree, unless there is clear evidence that the job actually requires use of full professional legal training such as that of an attorney who performs investigative duties as a preliminary phase of his total responsibility for preparing a case for trial or actually trying a case in court.)

Attorney I

As a trainee (LL. B. with membership in bar), performs routine legal work, such as preparing briefs or drawing up contracts for review and evaluation by attorneys of higher grade. Receives immediate supervision in assignments designed to provide training in the application of established methods and techniques of legal research, drafting of legal instruments, etc.

Attorney II

Performs a variety of legal assignments, e. g., (1) drawing up contracts which require some ingenuity and an ability to evaluate the legal sufficiency of contract terms; (2) preparing draft opinions on legal questions involved in such areas as claims, grievances, labor laws, etc., when the legal question can be resolved relatively easily in the light of well established facts and clearly applicable precedents. Receives general supervision during assignments, with most of work reviewed by an attorney of higher grade. Responsibility for final action is usually limited to matters which are covered by instructions and prior approval of a superior.

ATTORNEY—Continued

Attorney III

Performs a variety of legal assignments, primarily in the study and analysis of legal questions, problems, or cases. Prepares draft opinions or other kinds of legal work on legal questions involved in such areas as claims, grievances, labor laws, etc., when the questions are complicated by the absence of legal precedents clearly and directly applicable to the case, or by the different possible constructions which might be placed on either the facts or the laws and precedents involved. Typically specializes in one legal field, e. g., labor law, real estate, contracts, etc. Receives general supervision during initial and final stages of assignments, but is expected to conduct work with relative independence. Responsibility for final action is usually limited to matters covered by legal precedents and in which little deviation from standard forms and practices is involved. Any decisions or actions having a bearing on the company's business are reviewed by a superior. May supervise or review the work of a few assistants, normally not attorneys.

Attorney IIIA

Similar to attorney III but the work is performed under considerably less close supervision and direction. The attorney is expected to independently investigate the facts, search out precedents, define the legal and factual issues, draft all necessary documents, opinions, etc., and present conclusions and recommendations for review. Guidance from superiors during this process occurs only if the problem is clearly more difficult than normal for this level. The final product is reviewed carefully, but primarily for overall soundness of legal reasoning and consistency with company policy, rather than for accuracy of technical detail.

Attorney IV

Responsible for a broad legal area in which assignments cover a wide range of difficult and complex legal questions and problems. Primarily serves in an advisory capacity, making studies and developing opinions which may have an important bearing on the conduct of the company's business (e. g., recommending action to protect the company's trademarks and copyrights in foreign countries). Receives a minimum of technical legal supervision. May supervise a small staff of attorneys.

Attorney IVA

Similar to attorney IV but the legal questions and problems are of outstanding difficulty and complexity or of crucial importance to the welfare of the company. For example, (1) complex factual and policy issues which require extensive research, analysis, and obtaining and evaluating expert testimony in controversial areas of science, finance, corporate structure, engineering, etc.; or (2) cases involve very large sums of money (e. g., about \$1 million) or, for other reasons, are very vigorously contested.

Attorney V

Plans, conducts, and supervises legal assignments within one or more broad legal areas. Supervises a staff of attorneys, and has responsibility for evaluating their performance and approving recommendations which may have an important bearing on the conduct of the company's business. Receives guidance as to company policy but no technical supervision or assistance except when he might request advice on the most difficult, novel, or important technical legal questions. Usually reports to the general counsel or chief attorney of the company or his immediate deputy.

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 chemist, 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.

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—Continued

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 acquiring 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 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.

ENGINEER—Continued

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 IV.

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.

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 organization; 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.

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 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.

DIRECTOR OF PERSONNEL—Continued

- (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.).

Employees 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.

The director of personnel not only directs a personnel management program of the intensity and scope outlined above, 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 level¹⁵ of work in accordance with the following tabulation:

¹⁵ Insufficient data were obtained for level V to warrant presentation of average salaries.

Number of employees in work force serviced	Personnel program operations level ¹		Personnel program development level ²	
	Organization serviced—type A ³	Organization serviced—type B ⁴	Organization serviced—type A ³	Organization serviced—type B ⁴
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	-

¹ **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.

² **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.

³ **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.

⁴ **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 fluctuation, etc.

NOTE: There are gaps between different degrees of all 3 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.

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 print shop 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., 4 or 5) 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 II**

Supervises a staff of employees engaged in performing a few (e.g., 4 or 5) of the above functions as a service to a moderately large organization (e.g., 600 to 1,500 employees, excluding nonsupervisory plant workers).

or

Supervises a staff of employees engaged in performing most (e.g., 7 or 8) of the above functions as a service to a small organization (e.g., 300 to 600 employees, excluding nonsupervisory plant workers).

Manager, Office Services III

Supervises a staff of employees engaged in performing a few (e.g., 4 or 5) of the functions as a service to a large organization (e.g., 1,500 to 3,000 employees, excluding nonsupervisory plant workers).

or

Supervises a staff of employees engaged in performing most (e.g., 7 or 8) 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., 7 or 8) of the above functions as a service to a large organization (e.g., 1,500 to 3,000 employees, excluding nonsupervisory plant workers).

DRAFTSMEN**DRAFTSMAN, JUNIOR (Assistant Draftsman)**

Draws to scale units or parts of drawings prepared by draftsman or others for engineering, construction, or manufacturing purposes. Uses various types of drafting tools as required. May prepare drawings from simple plans or sketches, or perform other duties under direction of a draftsman.

DRAFTSMAN, SENIOR

Prepares working plans and detail drawings from notes, rough or detailed sketches for engineering, construction, or manufacturing purposes. Duties involve a combination of the following: Preparing working plans, detail drawings, maps, cross-sections, etc., to scale by use of drafting instruments; making engineering computations such as those involved in strength of materials, beams and trusses; verifying completed work, checking dimensions, materials to be used, and quantities; writing specifications; and making adjustments or changes in drawings or specifications. May ink in lines and letters on pencil drawings, prepare detail units of complete drawings, or trace drawings. Work is frequently in a specialized field such as architectural, electrical, mechanical, or structural drafting.

TRACER

Copies plans and drawings prepared by others, by placing tracing cloth or paper over drawing and tracing with pen or pencil. Uses T-square, compass, and other drafting tools. May prepare simple drawings and do simple lettering.

CLERICAL

BOOKKEEPING-MACHINE OPERATOR

Operates a bookkeeping machine (Remington Rand, Elliott Fisher, Sundstrand, Burroughs, and National Cash Register, with or without a typewriter keyboard) to keep a record of business transactions.

Bookkeeping-Machine Operator I

Keeps a record of one or more phases or sections of a set of records usually requiring little knowledge of basic bookkeeping. Phases or sections include accounts payable, payroll, customers' accounts (not including simple type of billing described under biller, machine), cost distribution, expense distribution, inventory control, etc. May check or assist in preparation of trial balances and prepare control sheets for the accounting department.

Bookkeeping-Machine Operator II

Keeps a set of records requiring a knowledge of and experience in basic bookkeeping principles and familiarity with the structure of the particular accounting system used. Determines proper records and distribution of debit and credit items to be used in each phase of the work. May prepare consolidated reports, balance sheets, and other records by hand.

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, usually of material that has already been classified or which is easily identifiable, or locates or assists in locating material in files. May perform incidental clerical duties.

Clerk, File II

In an established filing system containing a number of varied subject-matter files, classifies and indexes correspondence or other material; may also file this material. May keep records of various types in conjunction with files or may supervise others in filing and locating material in the files. May perform incidental clerical duties.

KEYPUNCH OPERATOR

Under general supervision and with no supervisory responsibilities, records accounting and statistical data on tabulating cards by punching a series of holes in the cards in a specified sequence, using an alphabetical or a numerical keypunch machine, following written information on records. May duplicate cards by using the duplicating device attached to machine. May keep files of punch cards. May verify own work or work of others.

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.

STENOGRAPHER, GENERAL

Primary duty is to take dictation from one or more persons, either in shorthand or by Stenotype or similar machine, involving a normal routine vocabulary, and to transcribe this dictation on a typewriter. May also type from written copy. May also set up and keep files in order, keep simple records, etc. Does not include transcribing-machine work.

STENOGRAPHER, TECHNICAL

Primary duty is to take 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, and to transcribe this dictation on a typewriter. May also type from written copy. May also set up and keep files in order, keep simple records, etc. Does not include transcribing-machine work.

SWITCHBOARD OPERATOR

Operates a single- or multiple-position telephone switchboard. Duties involve handling incoming, outgoing, intraplant, or office calls. May handle routine long distance calls and records toll calls. May perform limited information work, for example, furnishing telephone extension numbers when a specific name is furnished. May occasionally take telephone orders.

SWITCHBOARD OPERATOR, SPECIAL

In addition to the work described above for switchboard operator or as a full-time assignment, serves as a "special" operator who handles the more complex long-distance calls (e.g., conference, collect, overseas, or similar calls) or performs full telephone information service (e.g., where a knowledge of the work done in different parts of the organization is required).

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—Continued

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.; and 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; and 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.

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