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## AREA WAGE SURVEY

The Allentown-Bethlehem-Easton, PennsylvaniaNew Jersey, Metropolitan Area, May 1971


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U.S. DEPARTMENT OF LABOR
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bUREAU OF LABOR STATISTICS
Geoffrey H. Moore, Commissioner


## AREA WAGE SURVEY

The Allentown-Bethlehem-Easton, PennsylvaniaNew Jersey, Metropolitan Area, May 1971

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## Preface

## Contents

ram. In each area, information on occupational earnings is collected annually and on establishment practices and supplementary wage provisions biennially.

This bulletin presents results of the survey in Allentown-Bethlehem-Easton, Pa.-N.J., in May 1971. The Standard Metropolitan Statistical Area, as defined by the Bureau of the Budget through January 1968, consists of Lehigh and Northampton Counties, Pa., and Warren County, N.J. This study was conducted by the Bureau's regional office in Philadelphia, Pa., under the general direction of Irwin L. Feigenbaum, Assistant Regional Director for Operations.

The Bureau of Labor Statistics program of annual occupational wage surveys in metropolitan areas is designed to provide data on occupational earnings, and establishment practices and supplementary wage provisions. It yields detailed data by selected industry division for each of the areas studied, for geographic regions, and for the United States. A major consideration in the program is the need for greater insight into (1) the movement of wages by occupational category and skill level, and (2) the struc ture and level of wages among areas and industry divisions.

At the end of each survey, an individual area bulletin presents the survey results. After completion of all of the individual area bulletins for a round of surveys, two summary bulletins are issued. The first brings data for each of the metropolitan areas studied into one bulletin The second presents information which has been projected from individual metropolitan area data to relate to geographic regions and the United States.

Ninety areas currently are included in the pro-
Page
Introduction1
 ..... 4
Tables

1. Establishments and workers within scope of survey andnumber studied3
2. Indexes of standard weekly salaries and straight-timehourly earnings for selected occupational groups, andpercents of change for selected periods5
A. Occupational earnings:
$A-1$. Office occupations-men and women
$A-1$. Office occupations-men and women ..... 6
A-2. Professional and technical occupations-men and
A-2. Professional and technical occupations-men and women women ..... 8
A-3. Office, professional, and technical occupations-
men and women combined
men and women combined ..... 9 ..... 9
A-4. Maintenance and powerplant occupations ..... 9
10
A-4. Maintenance and powerplant occupations--........ ..... 11
Appendix. Occupational descriptions ..... 14------
$\qquad$1
NOTE: Similar tabulations are available for other areas. (See inside back cover.)

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## Introduction

This area is 1 of 90 in which the U.S. Department of Labor's Bureau of Labor Statistics conducts surveys of occupational earnings and related benefits on an areawide basis. ${ }^{1}$

This bulletin presents current occupational employment and earnings information obtained largely by mail from the establishments visited by Bureau field economists in the last previous survey for occupations reported in that earlier study. Personal visits were made to nonrespondents and to those respondents reporting unusual changes since the previous survey.

In each area, data are obtained from representative establishments within six broad industry divisions: Manufacturing; transportation, communication, and other public utilities; wholesale trade; retail trade; finance, insurance, and real estate; and services. Major industry groups excluded from these studies are government operations and the construction and extractive industries. Establishments having fewer than a prescribed number of workers are omitted because they tend to furnish insufficient employment in the occupations studied to warrant inclusion. Separate tabulations are provided for each of the broad industry divisions which meet publication criteria.

These surveys are conducted on a sample basis because of the unnecessary cost involved in surveying all establishments. To obtain optimum accuracy at minimum cost, a greater proportion of large than of small establishments is studied. In combining the data, however, all establishments are given their appropriate weight. Estimates based on the establishments studied are presented, therefore, as relating to all establishments in the industry grouping and area, except for those below the minimum size studied.

## Occupations and Earnings

The occupations selected for study are common to a variety of manufacturing and nonmanufacturing industries, and are of the following types: (1) Office clerical; (2) professional and technical; (3) maintenance and powerplant; and (4) custodial and material movement. Occupational classification is based on a uniform set of job descriptions designed to take account of interestablishment variation in duties within the same job. The occupations selected for study are listed and described in the appendix. The earnings data following the job titles are for all industries combined. Earnings data for some of the occupations listed and described, or for some industry divisions within occupations, are not presented in the A-series tables, because
${ }^{1}$ Included in the 90 areas are four studies conducted under contract with the New York State Department of Labor. These areas are Binghamton (New York portion only); Rochester (office occuin 77 areas at the request of the Wage and Hour Division of the U.S. Department of Labor.
either (1) employment in the occupation is too small to provide enough either (1) employment in the occupation is too small to provide enough
data to merit presentation, or (2) there is possibility of disclosure of individual establishment data. Earnings data not shown separately for industry divisions are included in all industries combined data, where shown. Likewise, data are included in the overall classification when a subclassification of secretaries or truckdrivers is not shown or information to subclassify is not available.

Occupational employment and earnings data are shown for full-time workers, i.e., those hired to work a regular weekly schedule in the given occupational classification. Earnings data exclude premium pay for overtime and for work on weekends, holidays, and late shifts. Nonproduction bonuses are excluded, but cost-of-living allowances and incentive earnings are included. Where weekly hours are reported, as for office clerical occupations, reference is to the standard workweek (rounded to the nearest half hour) for which employees receive their regular straight-time salaries (exclusive of pay for overtime at regular and/or premium rates). Average weekly earnings for these occupations have been rounded to the nearest half dollar.

These surveys measure the level of occupational earnings in an area at a particular time. Comparisons of individual occupational averages over time may not reflect expected wage changes. The averages for individual jobs are affected by changes in wages and employment patterns. For example, proportions of workers employed by high- or low-wage firms may change or high-wage workers may advance to better jobs and be replaced by new workers at lower rates. Such shifts in employment could decrease an occupational average even though most establishments in an area increase wages during the year. Trends in earnings of occupational groups, shown in table 2, are better indicators of wage trends than individual jobs within the groups.

The averages presented reflect composite, areawide estimates. Industries and establishments differ in pay level and job staffing and, thus, contribute differently to the estimates for each job. The pay relationship obtainable from the averages may fail to reflect accurately the wage spread or differential maintained among jobs in individual establishments. Similarly, differences in average pay levels for men and women in any of the selected occupations should not be assumed to reflect differences in pay treatment of the sexes within individual establishments. Other possible factors which may contribute to differences in pay for men and women include: Differences in progression within established rate ranges, since only the actual rates paid incumbents are collected; and differences in specific duties performed, although the workers are classified appropriately within the same survey job description. Job descriptions used in classifying
employees in these surveys are usually more generalized than those used in individual establishments and allow for minor differences among establishments in the specific duties performed.

Occupational employment estimates represent the total in all establishments within the scope of the study and not the number actually surveyed. 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 jobs studied. These differences in occupational structure do not affect materially the accuracy of the earnings data.

## Establishment Practices and Supplementary Wage Provisions

Tabulations on selected establishment practices and supplementary wage provisions (B-series tables) are not presented in this bulletin. Information for these tabulations is collected biennially. These tabulations on minimum entrance salaries for inexperienced women office workers; shift differentials; scheduled weekly hours; paid holidays; paid vacations; and health, insurance, and pension plans are presented (in the B-series tables) in previous bulletins for this area.

Table 1. Establishments and workers within scope of survey and number studied in Allentown-Bethlehem-Easton, Pa.-N.J., ${ }^{1}$ by major industry division, ${ }^{2}$ May 1971

| Industry division | Minimum employment in establishments in scope of study | Number of establishments |  | Workers in establishments |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Within scope of study ${ }^{3}$ | Studied | Within scope of study ${ }^{4}$ |  | Studied |
|  |  |  |  | Number | Percent |  |
| All divisions | - | 522 | 131 | 119,736 | 100 | 69,884 |
| Manufacturing--------------- | 50 | 365 | 68 | 93,720 | 78 | 53, 426 |
| Nonmanufacturing-------------------------------------------- | - | 157 | 63 | 26,016 | 22 | 16,458 |
| Transportation, communication, and other public utilities ${ }^{5}$ $\qquad$ | 50 | 32 | 17 | 7,072 | 6 | 5,983 |
| Wholesale trade ${ }^{6}$----------------------------------------- | 50 | 22 | 7 | 1,674 | 1 | 591 |
|  | 50 | 61 | 18 | 11,333 | 10 | 5,879 |
| Finance, insurance, and real estate ${ }^{6}-$----------------------------------------- Services 67 | 50 50 | 16 26 | 129 | 3,259 2,678 | 3 2 | 2,464 1,541 |
|  |  |  |  | 2,678 | 2 | 1,541 |

${ }^{1}$ The Allentown-Bethlehem-Easton Standard Metropolitan Statistical Area, as defined by the Bureau of the Budget through January 1968, consists of Lehigh and Northampton Counties, Pa., and Warren County, N.J. The "workers within scope of study" estimates shown in this table provide a reasonably accurate description of the size and composition of the labor force included in the survey. The estimates are not intended, however, to serve as a basis of comparison with other employment indexes for the area to measure employment trends or levels since (1) planning of wage
surveys requires the use of establishment data compiled considerably in advance of the payroll period studied, and (2) small establishments are surveys requires the use of establishmen
excluded from the scope of the survey.

2 The 1967 edition of the Standard Industrial Classification Manual was used in classifying establishments by industry division,
${ }^{3}$ Includes all establishments with total employment at or above the minimum limitation. All outlets (within the area) of companies in such industries as trade, finance, auto repair service, and motion picture theaters are considered as establishment.
${ }^{4}$ Includes all workers in all establishments with total employment (within the area) at or above the minimum limitation.
${ }^{6}$ This industry division is represented in estimates for "all industries" and "nonmanufacturing" in the Series A tables. Separate presentation to merit separate study, (2) the sample was not designed initially to permit separate presentation, (3) response was insufficient or inadequate to permit separate presentation, and (4) there is possibility of disclosure of individual establishment data.
and other personal services; business services; automobile repair, rental, and parking; motion pictures nopprofit membership organizations (excluding religious and charitable organizations); and engineering and architectural services.

Almost four-fifths of the workers within scope of the survey in the Allentown-
Bethlehem-Easton area were employed in manufacturing firms. The following presents the Bethlehem-Easton area were employed in manufacturing firms. The following p
major industry groups and specific industries as a percent of all manufacturing

Industry groups
Primary metal industries .------ 24
Apparel and other textile $\qquad$
products -----------------
Electrical equipment and

Textile mill products
Fabricated metal product
products -------
This information is based on estimates of total employment derived from universe materials compiled prior to actual survey. Proportions in various industry divisions may
differ from proportions based on the results of the survey as shown in table 1 above.

## Wage Trends for Selected Occupational Groups

Presented in table 2 are indexes and percentages of change in average salaries of office clerical workers and industrial nurses, and in average earnings of selected plant worker groups. The indexes are a measure of wages at a given time, expressed as a percent of wages during the base period. Subtracting 100 from the index yields the percentage change in wages from the base period to the date of the index. The percentages of change or increase relate to wage changes between the indicated dates. Annual rates of increase, where shown, reflect the amount of increase for 12 months when the time period between surveys was other than 12 months. These computations were based on the assumption that wages increased at a constant rate between surveys. These estimates are measures of change in averages for the area; they are not intended to measure average pay changes in the establishments in the area.

## Method of Computing

Each of the following key occupations within an occupational group was assigned a constant weight based on its proportionate employment in the occupational group:

Office clerical (men and women): Office cerical (men and women)- Skilled maintence (men)

Bookkeeping-machin
operators, class B
lenks, accounting, classes
$A$ and $B$
ledks, file, classes
A, B, and C
Cleiks, payroll
Comptometer operators
Keypunch operators, classes
$A$ and $B$
Office boys and girls

Continued Secretaries
Senographers, genera
Stenographers, senio
Switch operators, classes
A and B
Tabulating-machine operators,
Typists,
Industrial nurses (men and women): Nurses, industrial (registered)

Carpenters
Machinists
Mechanics
Mechanics
Mechanics (automotive)
Painters
Painters
Pipefitters
Tool and die makers
Unskilled plant (men): Janitors, porters, and cleaners Laborers, material handling

The average (mean) earnings for each occupation were multiplied by the occupational weight, and the products for all occupations in the group were totaled. The aggregates for 2 consecutive years were related by dividing the aggregate for the later year by the aggregate for the earlier year. The resultant relative, less 100 percent,
shows the percentage change. The index is the product of multiplying the base year relative (100) by the relative for the next succeeding year and continuing to multiply (compound) each year's relative by the previous year's index.

For office clerical workers and industrial nurses, the wage trends relate to regular weekly salaries for the normal workweek, exclusive of earnings for overtime. For plant worker groups, they measure changes in average straight-time hourly earnings, excluding premium pay for overtime and for work on weekends, holidays, and late shifts. The percentages are based on data for selected key occupations and include most of the numerically important jobs within each group.

## Limitations of Data

The indexes and percentages of change, as measures of change in area averages, are influenced by: (1) general salary and wage changes, (2) merit or other increases in pay received by individual workers while in the same job, and (3) changes in average wages due to changes in the labor force resulting from labor turnover, force expansions, force reductions, and changes in the proportions of workers employed by establishments with different pay levels. Changes in the labor force can cause increases or decreases in the occupational averages without actual wage changes. It is conceivable that even though all establishments in an area gave wage increases average wages may have declined because lower-paying establishments entered the area or expanded their work forces. Similarly, wages may have remained relatively constant, yet the averages for an area may have risen considerably because higher-paying establishments entered the area.

The use of constant employment weights eliminates the effect of changes in the proportion of workers represented in each job included in the data. The percentages of change reflect only changes in average pay for straight-time hours. They are not influenced by changes in standard work schedules, as such, or by premium pay for overtime. Where necessary, data were adjusted to remove from the indexes and percentages of change any significant effect caused by changes in the scope of the survey.

Table 2. Indexes of standard weekly salaries and straight-time hourly earnings for selected occupational groups in Allentown-Bethlehem-Easton, Pa.-N.J., May 1970 and May 1971, and percents of change ${ }^{1}$ for selected periods

| Period | All industries |  |  |  | Manufacturing |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Office clerical (men and women) | $\begin{gathered} \text { Industrial } \\ \text { nurses } \\ \text { (men and } \\ \text { women) } \end{gathered}$ | Skilled maintenance trades (men) | Unskilled plant workers (men) | Office clerical (men and women) | Industrial nurses (men and women) | Skilled maintenance trades (men) | Unskilled plant workers (men) |
| $\begin{aligned} & \text { May } 1970 \\ & \text { May } 1971 \end{aligned}$$\qquad$ | Indexes (February 1967=100) |  |  |  |  |  |  |  |
|  | 117.0 | 132.7 | ${ }^{2} 122.1$ | 122.3 | 115.3 | 132.7 | ${ }^{2} 121.9$ | 118.8 |
|  | 125.0 | 145.2 | 131.0 | 134.2 | 123.6 | 145.2 | 130.7 | 130.0 |
|  | Indexes (February 1961=100) |  |  |  |  |  |  |  |
| February 1967 <br> May 1971 | 119.5 | 110.2 | 119.1 | 117.5 | 119.8 | 110.2 | 118.5 | 116.0 |
|  | Percents of change ${ }^{1}$ |  |  |  |  |  |  |  |
| March 1960 to February 1961: <br> 11 -month increase. $\qquad$ <br> Annual rate of increase. $\qquad$ | 4.1 | 4.2 | 3.2 | 1.7 |  | 4.2 | 3.1 | 1.2 |
|  | 4.5 | 4.6 | 3.5 | 1.9 | 5.1 | 4.6 | 3.4 | 1.3 |
| February 1961 to February 1962 ------------------- | 5.3 | . 5 | 3.8 | 2.4 | 5.7 | . 5 | 3.3 | 2.3 |
| February 1962 to February 1963 -------------------- | 2.7 | 1.5 | 1.5 | 2.6 | 2.6 | 2.0 | 1.6 | 1.1 |
| February 1963 to February 1964------------------ | 1.1 | 2.5 | 2.7 | 3.4 | . 7 | 2.0 | 2.6 | 2.7 |
| February 1964 to February 1965 -------------------- | 2.6 | 3.4 | 3.1 | 2.9 | 2.0 | 3.9 | 3.0 | 2.9 |
| February 1965 to February 1966------------------- | 3.7 | ${ }^{2}-.9$ | 2.9 | 2.9 | 5.2 | ${ }^{2}-1.4$ | 2.8 | 3.1 |
| February 1966 to February 1967 --------------------- ${ }_{\text {February } 1967 \text { to June 1968: }}{ }^{\text {a }}$ - | 2.7 | 2.8 | 3.9 | 2.1 | 2.2 | 2.8 | 4.0 | 2.7 |
| 16 -month increase.------- | 5.2 | 12.4 | 7.5 | 5.8 | 4.5 | 12.4 | 7.3 | 4.8 |
|  | 3.8 | 9.2 | 5.6 | 4.3 | 3.4 | 9.2 | 5.4 | 3.6 |
| June 1968 to May 1969: 11 -month increase... | 5.8 | 7.4 | 4.4 | 5.5 | 6.2 | 7.4 | 4.3 | 5.7 |
|  | 6.3 | 8.1 | 4.8 | 6.0 | 6.8 | 8.1 | 4.7 | 6.2 |
| May 1969 to May 1970 ------------------------------------- | 5.3 | 9.9 | ${ }^{2} 8.9$ | 9.5 | 4.0 | 9.9 | ${ }^{2} 8.9$ | 7.2 |
| May 1970 to May 1971 --------------------------------- | 6.8 | 9.4 | 7.3 | 9.7 | 7.2 | 9.4 | 7.2 | 9.4 |

1 All changes are increases unless otherwise indicated.
2 Revised estimate.

NOTE: Most previously published indexes for the Allentown-Bethlehem-Easton area used February 1961 as the base period. They can be converted to the new base period by dividing them by the corre-
sponding index numbers for February 1967 on the February 1961 base period as shown in the table. (The result should be multiplied by 100.)

## A. Occupational earnings

Table A-1. Office occupations-men and women
(Average straight-time weekly hours and earnings for selected occupations studied on an area basis by industry division, Allentown-Bethlehem-Easton, Pa.-N.J., May 1971)


See footnotes at end of tables.

Table A-1. Office occupations-men and women-Continued


See footnotes at end of tables.

Table A-2. Professional and technical occupations-men and women
(Average straight-time weekly hours and earnings for selected occupations studied on an area basis by industry division, Allentown-Bethlehem-Easton, Pa.-N.J., May 1971)


See footnotes at end of tables

Table A-3. Office, professional, and technical occupations-men and women combined


See footnote at end of tables

Table A-4. Maintenance and powerplant occupations


See footnotes at end of tables.

Table A-5. Custodial and material movement occupations


See footnotes at end of tables.

Table A-5. Custodial and material movement occupations-Continued
(Average straight-time hourly earnings for selected occupations studied on an area basis by industry division, Allentown-Bethlehem-Easton, Pa.-N.J., May 1971)


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## Footnotes

1 Standard hours reflect the workweek for which employees receive their regular straight-time salaries (exclusive of pay for overtime at regular and/or premium rates), and the earnings correspond to these weekly hours.
${ }^{2}$ The mean is computed for each job by totaling the earnings of all workers and dividing by the number of workers. The median designates position-half of the employees surveyed receive more than the rate shown; half receive less than the rate shown. The middle range is defined by 2 rates of pay; a fourth of the workers earn less than the lower of these rates and a fourth earn more than the higher rate.

Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

## Appendix. Occupational Descriptions

The primary purpose of preparing job descriptions for the Bureau's wage surveys is to assist its field staff in classifying into appropriate ccupations workers who are employed under a variety of payroll titles and different work arrangements from establishment to establishment and from area to area. This permits the grouping of occupational wage rates representing comparable job content. Because of this emphasis on
interestablishment and interarea comparability of occupational content, the Bureau's job descriptions may differ significantly from those in use in individual establishments or those prepared for other purposes. In applying these job descriptions, the Bureau's field economists are instructed
to exclude working supervisors; apprentices; learners; beginners; trainees; and handicapped, part-time, temporary, and probationary workers.

## OFFICE

Biller, machine
Prepares statements, bills, and invoices on a machine other than an ordinary or electromatic typewriter. May also keep records as to billings or shipping charges or perform othe
clerical work incidental to billing operations. For wage study purposes, billers, machine, are lerical work incidental to billing operations. For wage study purposes, billers, machine, are
classified by type of machine, as follows: lassified by type of machine, as follows.
Biller, machine (billing machine). Uses a special billing machine (Moon Hopkins, Elliott
Fisher, Purroughs, etc., which are combination typing and adding machines) to prepare bills
and invocices from customers' purchase orders. internally prepared orders. shipping memo-
randums, etc. Usually involves application of predetermined discounts and shipping charges,
and entry of necessary extensions, which may or or may not be computed ont the biling chaching machine,
and totals which are automatically accumulated by machine. The operation usually involves a large number of carbon copies of the bill being prepared and is often done on a fanfold machine.

Biller, machine (bookkeeping machine). Uses a bookkeeping machine (Sundstrand, Elliott isher, Remington Rand, etc., which may or may not have typewriter keyboard) to prepare
customers' bills as part of the accounts receivable operation. Generally involves the simultaheous entry of figures on customers' ledger record. The machine automatically accumulates debit or credit balances. Does not involve a knowledge of bookkeeping. Works from uniform and standard types of sales and credit slips.

BOOKKEEPING-MACHINE OPERATOR
National Casates a bookkeeping machine (Remington Rand, Elliott Fisher, Sundstrand, Burroughs, National Cash
transactions.

Class A. 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 distritution 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. -

Class B. 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, 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.
CLERK, ACCOUNTING
Class A. 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 edger or ledgers such as accounts receivable or accounts payable; examining and coding
nvoices or vouchers with proper accounting distribution; and requires judgment and experience in making proper assignations and allocations. May assist in preparing, adjusting, and
closing journal entries; and may direct class B accounting clerks. Class B. 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 vontrolled by 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 knowlgeneral ledgers, or posting simple cost accounting data. This job does not require a knowl-
edge 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, FILE Class A. In an established filing system containing a number of varied subject matter ments, etc. May also file this material. May keep records of various types in conjunction
with the files. May lead a small group of lower level file clerks. - - _ - .

Class B. Sorts, codes, and files unclassified material by simple (subject matter) headings or partiy classified material by finer subheadings. Prepares simple related index and
cross-reference aids. As requested, locates clearly identified material in files and forwards the service hes.

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

CLERK, ORDER
Receives customers' orders for material or merchandise by mail, phone, or personally.
nvolve any combination of the following: Quoting prices to customers; Duties involve any combination of the following: Quoting prices to customers; making out an order
sheet listing the items to make up the order; checking prices and quantities of items on order sheet; and distributing order sheets to respective departments to be filled. May check with credit department to determine credit rating of customer, acknowledge receipt of orders from customers, foll up orders to see that they have been filled, keep file of orders received, and check shipping CLERK, PAYROLL
sheets. Domputes wages of company employees and enters the necessary data on the payroll posting calculated data on payroll sheet, showing information such as workerts name words; and days, time, rate, deductions for insurance, and total wages due. May make out paychecks and assist paymaster in making up and distributing pay envelopes. May use a calculating machine.

COMPTOMETER OPERATOR
Primary duty is to operate a Comptometer to perform mathematical computations. This job is not to be confused with that of statistical or other type of clerk, which may involve freother duties.

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

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

OFFICE BOY OR GIRL
Performs various routine duties such as running errands, operating minor office ma-
chines such as sealers or mailers, opening and distributing mail, and other minor clerical work

SERETARY
Assigned as personal secretary, normally to one individual. Maintains a close and highly responsive relationship to the day-to-day work activities of the supervisor. Works fairly inde-
pendently receiving a minimum of detailed supervision and guidance. Performs varied clerical nd secretarial duties, usually including most of the following: (a) Receives telephone calls
personal callers, and incoming mail, answers routine inquiries, and
routes the technical inquiries to the proper persons: (b) establishes, maintains, and revises the supervisor's files; (c) maintains the supervisor's calendar and makes appointments as instructed; (d) relays messages from super visor to subordinates; (e) reviews correspondence, memorandums, and reports prepared by others stenographic and typing work.

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

## Exclusions

Not all positions that are titled "secretary" possess the above characteristics. Examples of positions which are excluded from the definition are as follows: (a) Positions which do not meet the "personal" secretary concept described above; (b) stenographers not fully trained in secretarial
type duties: (c) stenographers serving as office assistants to a group of professional, technical or managerial persons; (d) secretary positions in which the duties are either substantially mor routine or substantially more complex and responsible than those characterized in the definition and (e) assistant type positions which involve more difficult or more responsible technical, admin
istrative, supervisory, or specialized clerical duties which are not typical of secretarial work

NOTE: The term "corporate officer," used in the level definitions following, refers to company activities. The title "vice president, " though normally indicative of this role, does not in all cases identify such positions. Vice presidents whose primary responsibility is to act per sonally on individual cases or transactions (e.g., approve or deny individual loan or credit actions; administer individual trust accounts; directly supervise a clerical staff) are not considered to be

## Class A

president of a company that employs, in , over 100 but fewer than 5,000 persons; or
of a company that to a corporate officer (other than the chairman of the board or president c. Secretary (immediately below the a majo egment or subsidiary of a company that employs, in all, over 25,000 persons.

## Class B

a. Secretary to the chairman of the board or president of a company that employs, in fewer than 100 persons; or b. Secretary to a corporate officer (other than the chairman of the board or president)
of a company that employs, in all, over 100 but fewer than 5,000 persons; or
c. Secretary to the head (immediately below the officer level) over either a major corporate-wide functional activity (e.g., marketing, research, operations, industrial relatorns, etc.) or a major geographic or organizational segment (e.g., a regional headquarters;
a major division') of a company that employs, in all, over 5,000 but fewer than 25,000 a major divisi
employees; or

SECRETARY-Continued
d. Secretary to the head of an individual plant, factory, etc. (or other equivalent level official) that employs, in all, over 5,000 persons; or
e. Secretary to the head of a large and important organizational segment (e.g., a middle nanagement supervisor of an organizational segment often involving as many as several

## Class C

a. Secretary to an executive or managerial person whose responsibility is not equivalent ormally numbers at least several in the definition for class B, but whose subordinate staff egments which are often, in turn, further subdivided. In some companies, this level includes wide range or or
b. Secretary to the head of an individual plant, factory, etc. (or other equivalent level

## Class D

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

## STENOGRAPHER, GENERAL

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

## STENOGRAPHER, SENIOR

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

OR
Performs stenographic duties requiring significantly greater independence and responsibility than stenographers, general as evidenced by the following: Work requires high defree of procedures and of the specific business operations, organization, policies, procedures, files, workflow, etc. Uses this knowledge in performing stenographic duties and responsible clerical tasks such as, maintaining followup files; assembling material for reports, memorandums, letters, answering routine questions, etc. Does not include transcribing-machine work.

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

Class B. Operates a single- or multiple-position telephone switchboard handling incoming, May perform limited telephone information service. ("Limited" telephone information service occurs if the functions of the establishment serviced are readily understandable for telephone information purposes, or if the requests are routine, e.g., giving extension numbers when

SWITCHBOARD OPERATOR-RECEPTIONIST
In addition to performing duties of operator on a single-position or monitor-type switchboard, acts as receptionist and may also type or perform routine clerical work as part of regular duties. This typing or clerical work may take the major part of this worker's time while at
switchboard.

TABULATING-MACHINE OPERATOR
Class A. Operates a variety of tabulating or electrical accounting machines, typically
including such machines as the tabulator, calculator, interpreter, collator, and others 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,
s 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-

Class B. 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 stud, or parts of a longer and more
complex report. Such reports and studies areusually of a recurring nature where the pro-
cedures are well established. May also include the training of new employees in the basic operation of the machine.

TABULATING-MACHINE OPERATOR-Continued
Class C. Operates simple tabulating, or electrical accounting machines such as the wiring from diagrams and some filing work. The work typically involves portions of a work TRANSCRIBING-MACHINE OPERATOR, GENERAL Primary duty is to transcribe dictation involving a normal routine vocabulary from
transcribing-machine records. May also type from written copy and do simple clerical work.
Workers transcribing dictation involving a varied technical or specialized vocabulary such as legal Workers transcribing dictation involving a varied technical or specialized vocabulary such as legal
briefs or reports on scientific research are not included. A worker who takes dictation in short hand or by Stenotype or similar machine is classified as a stenographer, general.

## TYPIST

Uses a typewriter to make copie's of various material or to make out bills after calculations have been made by another person. May include typing of stencils, mats, or similar mate-
rials 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.
invollass A. Pombining material or more of the following: Typing material in final form when it syllabication, punctuation, etc., of technical or unusual words or foreign language material; balance in spacing. May type routine form letters varying details to suit circumstances,

Class B. Performs one or more of the following: Copy typing from rough or clear drafts; or copying more complex tables already setup and spaced properly.

PROFESSIONAL AND TECHNICAL

COMPUTER OPERATOR
Monitors and operates the control console of a digital computer to process data according to operating instructions, usually prepared by a programer. Work includes most of the following: items (tape reels, cards, etc.); switches necessary auxiliary equipment into circuit, and starts special conditions; reviews errors made during operation and determines cause or refers problem to supervisor or programer; and maintains operating records. May test and assist in correcting rogram.

For wage study purposes, computer operators are classified as follows:
Class A. Operates independently, or under only general direction, a computer running introduced; scheduling requirements are of critical importance to minimize downtime; the programs are of complex design so that identification of error source often requires a working knowledge of the total program, and alternate programs may not be available. May giv Class B. Operates independently, or under only general direction, a computer running
programs with most of the following characteristics: Most of the programs are established
production runs. typically run on a regularly recurring basis; there is little or no testing production runs, typically run on a regularly recurring basis; there is little or no testing
of new programs required; alternate programs are provided in case original program needs of new programs required; alternate programs are provided in case original program needs
major change or cannot be corrected within a reasonale time. In common error situations,
diagnoses cause and takes corrective action. This usually involves applying previously prodiagnoses cause and takes corrective action. This usually involves applying previously pro-
gramed corrective steps, or using standard correction techniques.

OR
Operates under direct supervision a computer running programs or segments of programs with the characteristics described for class A. May assist a higher level operator by independently performing less difficult tasks assigned, and performing diffic
detailed instructions and with frequent review of operations performed.

Class C. Works on routine programs under close supervision. Is expected to develop orking knowledge of the computer equipment used and ability to detect problems involved in
unning routine programs. Usually has received some formal training in computer operation anning routine programs. Usually has received some fo

## COMPUTER PROGRAMER, BUSINESS

Converts statements of business problems, typically prepared by a systems analyst, into a sequence of detailed instructions which are required to solve the problems by automatic data processing equipment. Working from charts or diagrams, the programer develops the precise
instructions which, when entered into the computer system in coded language, cause the manipuof computer capabilities, mathematics, logic employed by most of the following: Applies knowledge of computer capabilities, mathematics, logic employed by computers, and particular subject matter
involved to analyze charts and diagrams of the problem to be programed. Develops sequence of program steps, writes detailed flow charts to show order in which data will be processed; prepares instructions for operating personnel during production run; analyzes, reviews, and alters programs to increase operating efficiency or adapt to new requirements; maintains records of program development and revisions. (NOTE: Workers performing both systems analysis and pro-)

Does not include employees primarily responsible for the management or supervision of
other electronic data processing (EDP) employees, or programers primarily concerned with scientific and/or engineering problems.

For wage study purposes, programers are classified as follows:
Class A. Works independently or under only general direction on complex problems which require competence in all phases of programing concepts and practices. Working from diaaccomplished, and the relationships between various steps of the problem solving routine; plans the full range of programing actions needed to efficiently utilize the computer system

At this level, programing is difficult because computer equipment must be organized to A wide variety and extensive number of internal processing actions must occur. This requires such actions as development of common operations which can be reused, establishment of linkage points between operations, adjustments to data when program requirements exceed to form a highly integrated program.

May provide functional direction to lower level programers who are assigned to assist.

COMPUTER PROGRAMER, BUSINESS-Continued
Class B. Works independently or under only general direction on relatively simple programs, or on simple segments of complex programs. Programs (or segments simple
process information to produce data in two or three varied sequences or formats. Reports and listings are produced by refining, adapting, arraying, or making minor additions to or deletions from input data which are readily available. While numerous records may be processed, the data have been refined in prior actions so that the accuracy and sequencing routine record-keeping type operations.

OR
Works on complex programs (as described for class A) under close direction of a higher level programer or supervisor. May assist higher level programer by independently per forming less difficult taske assigned, and performing more difficult tasks under fairly clos

May guide or instruct lower level programers
Class C. Makes practical applications of programing practices and concepts usually learned in formal training courses. Assignments are designed to develop competence in the application of standard procedures to routine problems. Receives close supervision on new
aspects of assignments; and work is reviewed to verify its accuracy and conformance with required procedures.

COMPUTER SYSTEMS ANALYST, BUSINESS
Analyzes business problems to formulate procedures for solving them by use of electronic data processing equipment. Develops a complete description of all specifications needed to enable programers to prepare required digital computer programs. Work involves most of the following: o achieve satisfactory results; specifies number and types of records, files, and documents t eresentation to manaions to be performed by personnel and computers in sufficient detail data flow charts); coordinates the development of test problems and participates in trial runs of perations. (NOTE: Workers performing both systems analysis and programing should be classified as systems analysts if this is the skill used to determine their pay.)

Does not include employees primarily responsible for the management or supervision of ther electronic data processing (ED

> For wage study purposes, systems analysts are classified as follows

Class A.
Works independently or under only general direction on complex problems of input data and multiple-use requirements of output data. (For example, develops an inte grated production scheduling, inventory control, cost analysis, and sales analysis record in which every item of each type is automatically processed through the full system of records
and appropriate followup actions are initiated by the computer.) Confers with persons concerned to determine the data processing problems and advises subject-matter personnel on the implications of new or revised systems of data processing operations. Makes recom mendations, if needed, for approval of major systems installations or changes and fo obtaining equipment.
May provide functional direction to lower level systems analysts who are assigned to
assist.
Class B. Works independently or under only general direction on problems that are relatively uncomplicated to analyze, plan, program, and operate. Problems are of limited
complexity because sources of input data are homogeneous and the output data are closely
related. (For example, develops systems for maintaining depositor accounts in a bank,

COMPUTER SYSTEMS ANALYST, BUSINESS-Continued
maintaining accounts receivable in a retail establishment, or maintaining inventory accounts n a manufacturing or wholesale data processing systems to be applied. OR
Works on a segment of a complex data processing scheme or system, as described for ons and to insure proper alinement with the overall system.
Class C. Works under immediate supervision, carrying out analyses as assigned, usually
a
single n the application of procedures and skills required for systems analysis work. For example, may assist a higher level systems analyst by preparing the detailed specifications required by programers from information developed by the higher level analyst.
DRAFTSMAN
Class A. Plans the graphic presentation of complex items having distinctive design eatures that differ significantly from established drafting precedents. Works in close supeffect of each change on the details of form, function, and positional relationships of comonents and parts. Works with a minimum of supervisory assistance. Completed work is reviewed by design originator for consistency with prior engineering determina
either prepare drawings, or direct their preparation by lower level draftsmen.
Class B. Performs nonroutine and complex drafting assignments that require the appli-
olve such work as: Prepares working drawings of subassemblies with irregular shatinvolve such work as: Prepares working drawings of subassemblies with irregular shapes,
multiple functions, and precise positional relationships between components; prepares architectural drawings for construction of a building including detail drawings of foundations, wall ections, floor plans, and roof. Uses accepted formulas and manuals in making necessary tresses, etc. Receives initial instructions, requirements, and advice from supervisor, Completed work is checked for technical adequacy.

Class C. Prepares detail drawings of single units or parts for engineering, construction, manufacturing, or repair purposes. Types of drawings prepared include isometric projections (depicting three diminsions in accurate scale) and sectional views to clarify positioning of components and convey needec information. Consolidates details from a number of sources and adjusts or transposes scale as required. Suggested methods of approach, applicable
precedents, and advice on source materials are given with initial assignments. Instructions are less complete when assignments recur. Work may be spot-checked during progress. DRAFTSMAN-TRACER

Copies plans and drawings prepared by others by placing tracing cloth or paper over drawings and tracing with pen or pencil. (Does not include tracing limited to plans primarily and/or
Prepares simple or repetitive drawings of easily visualized items. Work is closely supervised Prepares simple
during progress.
NURSE, INDUSTRIAL (Registered)
A registered nurse who gives nursing service under general medical direction to ill or injured employees or other persons who become ill or suffer an accident on the premises of a
factory or other establishment. Duties involve a combination of the following: Giving first aid
 of patients treated; preparing accident reports for compensation or other purposes; assisting in ing out programs involving health education, accicident prevention, evaluation of plant environment,
or other activities affecting the health, welfare, and safety of all personnel.

MAINTENANCE AND POWERPLANT
CARPENTER, MAINTENANCE
Performs the carpentry duties necessary to construct and maintain in good repair building oodwork and er made of wood in an establishment. Work involves most of the following: Planning and laying out of work from blueprints, drawings, models, or verbal instructions using a variety

CARPENTER, MAINTENANCE-Continued
of carpenter's handtools, portable power tools, and standard measuring instruments; making for the work. In general, the work of the maintenance carpenter requires materials necessary experience usually acquired through a formal apprenticeship or equivalent training and experience.

ELECTRICIAN, MAINTENANCE
Performs a variety of electrical trade functions such as the installation, maintenance, or repair of equipment for the generation, distribution, or utilization of electric energy in an
establishment. Work involves most of the following: Installing or repairing any of a variety of electrical equipment such as generators, transformers, switchboards, controllers, circuit break ers, motors, heating units, conduit systems, or other transmission equipment; working from blueprints, drawings, layouts, or other specifications; locating and diagnosing trouble in the
electrical system or equipment; working standard computations relating to load requirements of wiring or electrical equipment; and using a variety of electrician's handtools and measuring and testing instruments. In general, the work of the maintenance electrician requires rounded train-
ing and experience usually acquired through a formal apprenticeship or equivalent training and ing and expe

ENGINEER, STATIONARY
Operates and maintains and may also supervise the operation of stationary engines and equipment (mechanical or electrical) to supply the establishment in which employed with power,
heat, refrigeration, or air-conditioning. Work involves: Operating and maintaining equipment such as steam engines, air compressors, generators, motors, turbines, ventilating and refrig.
erating equipment, steam boilers and boiler-fed water pumps; making equipment repairs; and erating equipment, steam boilers and boiler-fed water pumps; making equipment repairs; and
keeping a record of operation of machinery, temperature, and fuel consumption. May also supervise these operations. Head or chief engineers in establishments employing more than one engineer are excluded
FIREMAN, STATIONARY BOILER
Fires stationary boilers to furnish the establishment in which employed with heat, power steam. Feeds fuels to fire by hand or operates a mechanical stoker, or gas or oil burner
and checks water and safety valves. May clean, oil, or assist in repairing boilerroom equipment HELPER, MAINTENANCE TRADES

Assists one or more workers in the skilled maintenance trades, by performing specific
general duties of lesser skill, such as cleaning working area, machine, and equipment; assisting journeyman by holding materials or helper is permitted to perform varies from trade to trade: In some trades the helper is conined to supplying, lifting, and holding materials and tools and cleaning working areas; and in thers he is permitted to perform specialized machine op MACHINE-TOOL OPERATOR, TOOLROOM

Specializes in the operation of one or more types of machine tools, such as jig borers cylindrical or surface grinders, engine lathes, or milling machines, in the construction of
machine-shop tools, gages, jigs, fixtures, or dies. Work involves most of the following: Plan machine-shop tools, gages, jigs, fixtures, or dies. Work involves most of the following: Plan-
ning and performing difficult machining operations; processing items requiring complicated setups
or a high degree of accuracy; using a variety of precision measuring instruments; raedigh degree of accuracy; using a variety of precision measuring instruments; selecting feeds,
speed, tooling, and operation sequence; and making necessary adjustments during operation to achieve requisite tolerances or dimensions. May be required to recognize when tools need dressing, to dress tools, and to select proper coolants and cutting and lubricating oils. For cross-
industry wage study purposes, machine-tool operators, toolroom, in tool and die jobbing shops industry wage study purposes, machin.
MACHINIST, MAINTENANCE
Produces replacement parts and new parts in making repairs of metal parts of mechan-
ical equipment operated in an establishment. Work involves $\frac{\text { most of the following: Interpreting }}{}$ written instructions and specifications; planning and laying out of work; using a variety of ma-
chinist's handtools and precision measuring instruments; setting up and operating standard machine tools; shaping of metal parts to close tolerances; making standard shop computations relating to dimensions of work, tooling, feeds, and speeds of machining; knowledge of the working properties of the common metals; selecting standard materials, parts, and equipment required for his work;
and fitting and assembling parts into mechanical equipment. In general, the machinist's work and fitting and assembling parts into mechanical equipment. In general, the machinist 's work
normally requires a rounded training in machine-shop practice usually acquired through a formal apprenticeship or equivalent training and experience.

MECHANIC, AUTOMOTIVE (Maintenance)
Repairs automobiles, buses, motortrucks, and tractors of an establishment. Work in Repairs automobies, buses, motortrucks, and tractors of an establishment. Work in-
volves most of the following:
Examining automotive equipment to diagnose source of trouble; wrenches, gages, drills, or specialized equipment in disassembling or fitting parts; replacing
broken or defective parts from stock; grinding and adjusting valves; reassembling and installing

MECHANIC, AUTOMOTIVE (Maintenance)-Continued
the various assemblies in the vehicle and making necessary adjustments; and alining wheels, adjusting brakes and lights, or tightening body bolts. In general, the work of the automotive
mechanic requires rounded training and experience usually acquired through a formal appren ticeship or equivalent training and experience.

## MECHANIC, MAINTENANCE

Repairs machinery or mechanical equipment of an establishment. Work involves most of the following: Examining machines and mechanical equipment to diagnose source of trouble; of handtools in scraping and fitting parts; replacing broken or defective parts with items obtained from stock; ordering the production of a replacement part by a machine shop or sending of the machine to a machine shop for major repairs; preparing written specifications for major repairs or for necessary adjustments for operation. In general, the work of a maintenance mechanic re quires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience. Excluded from this classification are workers whose primary
duties involve setting up or adjusting machines.
MILLWRIGHT
Installs new machines or heavy equipment, and dismantles and installs machines or heavy equipment when changes in the plant layout are required. Work involves most of the fola variety of handtools and rigging; making standard shop computations relating to stresses,
strength of materials, and centers of gravity; alining and balancing of equipment; selecting standstrength of materials, and centers of gravity; alining and balancing of equipment; selecting stand-
ard tools, equipment, and parts to be used; and installing and maintaining in good order transmission equipment such as drives and speed reducers. In general, the millwright's work normally requires a rounded training and experience in the trade acquired through a formal oiler

Lubricates, with oil or grease, the moving parts or wearing surfaces of mechanical equipment of an establishmen
PAINTER, MAINTENANCE
Paints and redecorates walls, woodwork, and fixtures of an establishment. Work in-
the following: Knowledge of surface peculiarities and types of paint required for different volves the following: Knowledge of surface peculiarities and types of paint required for differer in nail holes and interstices; and applying paint with spray gun or brush. May mix colors, oils, white lead, and other paint ingredients to obtain proper color or consistency. In general, the work of the maintenance painter requires rounded training and ex
a formal apprenticeship or equivalent training and experience.
PIPEFITTER, MAINTENANCE
Installs or repairs water, steam, gas, or other types of pipe and pipefittings in an establishment. Work involves most of the following: Laying out of work and measuring to locate position of pipe from drawings or other written specifications; cutting various sizes of pipe ing pipe with stocks and dies; bending pipe by hand-driven or or orer-driven machinesine; threadpipe with couplings and fastening pipe to hangers; making standard shop computations relating to pressures, flow, and size of pipe requiredi and making standard tests to determine whether finished pipes meet specifications. In general, the work of the maintenance pipefitter requires
rounded training and experience usually acquired through a formal apprenticeship or equivalent rounded training and experience usually acquired through a formal apprenticeship or equivalent
training and experience. Workers primarily engaged in installing and repairing building sanitation or heating systems are excluded.

## PLUMBER, MAINTENANCE

Keeps the plumbing system of an establishment in good order. Work involves: Knowledge of sanitary codes regarding installation of vents and traps in plumbing system; installing or repairing pipes and fixtures; and opening clogged drains with a plunger or plumber's snake. In
general, the work of the maintenance plumber requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.
SHEET-METAL WORKER, MAINTENANCE
Fabricates, installs, and maintains in good repair the sheet-metal equipment and fixures (such as machine guards, grease pans, shelves, lockers, tanks, ventilators, chutes, ducts, out all types of sheet-metal maintenance work from most of the following: Planning and models, or other specifications;

SHEET-METAL WORKER, MAINTENANCE-Continued
handtools in cutting, bending, forming, shaping, fitting, and assembling; and installing sheetmetal articles as required. In general, the work of the maintenance sheet-metal worker requires
rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience. TOOL AND DIE MAKER
(Die maker; jig maker; tool maker; fixture maker; gage maker)
Constructs and repairs machine-shop tools, gages, jigs, fixtures or dies for forgings, punching, and other metal-forming work. Work involves most of the following: $\begin{gathered}\text { Planning and } \\ \text { laying out of work from models, blueprints, drawings, or }\end{gathered}$ other oral and written specifications

TOOL AND DIE MAKER-Continued
using a variety of tool and die maker's handtools and precision measuring instruments; understanding of the working properties of common metals and alloys; setting up and operating of of work, speeds, feeds, and tooling of machines; heat-treating of metal parts during fabrication as well as of finished tools and dies to achieve required qualities; working to close tolerances;
fitting and assembling of parts to fitting and assembling of parts to prescribed tolerances and allowances; and selecting appropriate materials, tools, and processes. In general, the tool and die maker's work requires a rounded
training in machine-shop and toolroom practice usually acquired through a formal apprenticeship or equivalent training and experience.
For cross-industry wage study purposes, tool and die makers in tool and die jobbing
shops are excluded from this classification.

## CUSTODIAL AND MATERIAL MOVEMENT

GUARD AND WATCHMAN
Guard. Performs routine police duties, either at fixed post or on tour, maintaining rder, using arms or force where necessary. Includes gatemen who are stationed at gate and check on identity of employees and other persons entering.

Watchman. Makes rounds of premises periodically in protecting property against fire, theft, and illegal entry.
JANITOR, PORTER, OR CLEANER
(Sweeper; charwoman; janitress)

Cleans and keeps in an orderly condition factory working areas and washrooms, or premises of an chips, trash, and other refuse; dusting equipment, furniture, or fixtures; polishing metal fixtures or trimmings providing supplies and minor maintenance services; and cleaning lavatories, show-
ers, and restrooms. Workers who specialize in window washing are excluded.

LABORER, MATERIAL HANDLING
(Loader and unloader; handler and stacker; shelver; trucker; stockman or stock helper; ware (Loader and unloader; handier an
houseman or warehouse helper)

A worker employed in a warehouse, manufacturing plant, store, or other establishment whose duties involve one or more of the following: Loading and unloading various materials an or placing materials or merchandise in proper storage location; and transporting materials or merchandi
excluded.

ORDER FILLER
(Order picker; stock selector; warehouse stockman)
Fills shipping or transfer orders for finished goods from stored merchandise in accordance with specins and indicating items filled or omitted keep records of outgoing orders adition sition additional stock or report short supplies to supervisor, and perform other related duties. PACKER, SHIPPING

Prepares finished products for shipment or storage by placing them in shipping containers, the specific operations performed being dependent upon the type, size, and number of
units to be packed, the type of container employed, and method of shipment. Work requires the placing of items in shipping containers and may involve one or more of the following: Knowl-
edge of various items of stock in order to verify content; selection of appropriate type and size of container; inserting enclosures in container; using excelsior or other material to prevent ofrakage or damage; closing and sealing container; and applying labels or entering identifying
data on container. Packers who also make wooden boxes or crates are excluded.

SHIPPING AND RECEIVING CLERK
Prepares merchandise for shipment, or receives and is responsible for incoming shipments of merchandise or other materials. Shipping work involves: A knowledge of shipping
procedures, practices, routes, available means of transportation, and rate; and preparing recprocedures, practices, routes, avalable means of transportation, and rate; and preparing rec-
ords of the goods shipped, making up bills of lading, posting weight and shipping charges, and
keeping a file of shipping records. May direct or assist in preparing the merchandise for shipment. Receiving work involves: Verifying or directing others in verifying the correctness of
 shipments against bills of lading, invoices, or other records; checking for shortages and rejecting
damaged goods; routing merchandise or materials to proper departments; and maintaining neces-
sary records and files.

For wage study purposes, workers are classified as follows:
Receiving clerk
Shipping clerk
Shipping and receiving clerk
TRUCKDRIVER
Drives a truck within a city or industrial area to transport materials, merchandise equipment, or men between various types of establishments such as: Manufacturing plants, freight customers' houses or places of business. May also load or unload truck with or without helpers, make minor mechanical repairs, an
over-the-road drivers are excluded.

For wage study purposes, truckdrivers are classified by size and type of equipment,
as follows: (Tractor-trailer should be rated on the basis of trailer capacity.)

Truckdriver (combination of sizes histed separately)
ruckdriver, light (under $1^{1 / 2}$ tons)
Truckdriver, heavy (over 4 tons, trailer 4 tons)
Truckdriver, heavy (over 4 tons, trailer type)
TRUCKER, POWER
Operates a manually controlled gasoline- or electric-powered truck or tractor to transport good
establishment.

[^1]
## Available On Request-

The following areas are surveyed periodically for use in administering the Service Contract Act of 1965 . Copies of public releases are available at no cost while supplies last from any of the BLS regional offices shown on the inside front cover.

Abilene, Tex.
Alaska
Albany, Ga.
Alexandria, La.
Alpena, Standish, and Tawas City, Mich.
marillo, Tex
Amarilo, Tex.
Ann Arbor, Mic
Asheville, N.C.
Atlantic City, N.J.
Augusta, Ga.
Austin, Tex.
Bakersfield, Calif
Baton Rouge, La
Billings, Mont
Biloxi, Gulfport, and Pascagoula, Miss.
Bridgeport, Norwalk, and Stamford, Conn
Charleston, S.C.
Cheyenne, Wyo.
Clarksville, Tenn., and Hopkinsville, Ky.
Colorado Springs, Colo
Columbia, S.C.
Columbus, Ga.-Ala.
Crane, Ind.
rane, Ind.
Decatur, Ill.
Dothan, Ala.
Duluth-Superior, Minn.-Wis.
Durham, N.C.
El Paso, Tex.
Eugene, Oreg.
Fargo-Moorhead, N. Dak.-Minn.
Fayetteville, N.C.
Fitchburg-Leominster, Mass.
ort Smith, Ark.-Okla
Frederick-Hagerstown, Md.-Pa.-W. Va.
Great Falls, Mont.
Greensboro-Winston Salem-High Point, N.C
Harrisburg, Pa.
Hartford, Conn.
Huntsville, Ala.

Knoxville, Tenn.
Laredo, Tex.
Las Vegas, Nev.
Lexington, Ky.
Lower Eastern Shore, Md.-Va
ynchburg, Va
Macon, Ga.
Madison, Wis
Marquette, Escanaba, Sault Ste. Marie, Mich.
Meridian, Miss.
Middlesex, Monmouth, Ocean and Somerset
Cos., N.J.
Mobile, Ala., and Pensacola, Fla
Montgomery, Ala.
Nashville, Tenn.
New London-Groton-Norwich, Conn
Northeastern Maine
Ogden, Utah
Orlando, Fla.
Oxnard-Ventura, Calif
Panama City, Fla.
Pine Bluff, Ark.
Pine Bluff, Ark.
Pueblo, Colo.
Reno, Nev.
Sacramento, Calif
Sacramento,
Salinas-Monterey, Calif
Salinas-Monterey, Ca
Santa Barbara, Calif.
Santa Barbara,
Shreveport, La.
Springfield-Chicopee-Holyoke, Mass.-Conn.
Stockton, Calif
Tacoma, Wash
Topeka, Kans.
Tucson, Ariz.
Valdosta, Ga.
Vallejo-Napa, Calif.
Wichita Falls, Tex.
Wilmington, Del. - N.J. -Md

The eleventh annual report on salaries for accountants, auditors, chief accountants, attorneys, job analysts, directors of personnel, uyers, chemists, engineers, engineering technicians, draftsmen, and clerical employees. Order as BLS Bulletin 1693 , National Uurvey of Professional, Administrative, Technical, and Clerical Pay, June 1970, \$1.00 a copy, from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402, or any of its regional sales offices.

## Area Wage Surveys

A list of the latest available bulletins is presented below. A directory of area wage studies including more limited studies conducted at the request of the Wage and Hour Division of the Department of Labor is available on request. Bulletins may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402, or from any of the BLS regional sales offices shown on the inside front cover.

|  | Bulletin number |  |
| :--- | :--- | :---: |
| and price |  |  |


| Area | Bulletin number and price |
| :---: | :---: |
| Muskegon-Muskegon Heights, Mich., June $1970{ }^{1}$ | 1660-85, 35 cents |
| Newark and Jersey City, N.J., Jan. 197 | 1685-47, 40 cents |
| New Haven, Conn., Jan. 1971. | 1685-35, 30 cents |
| New Orleans, La., Jan. 1971 | 1685-36, 40 cents |
| New York, N.Y., Apr. $1970^{1}$ | 1660-89, 75 cents |
| Norfolk-Portsmouth and Newport News- |  |
| Hampton, Va., Jan. 1971 ${ }^{1}$ | 1685-46, 35 cents |
| Oklahoma City, Okla., July 1970 | 1685-5, 30 cents |
| Omaha, Nebr.-Iowa, Sept. $1970^{1}$ | 1685-14, 35 cents |
| Patersor-Clifton-Passaic, N.J., June 1970 | 1660-87, 45 cents |
| Philadelphia, Pa.-N.J., Nov. | 1685-34, 50 cents |
| Phoenix, Ariz., Mar. 1970 | 1660-70, 35 cents |
| Pittsburgh, Pa., Jan. 1971 | 1685-49, 50 cents |
| Portland, Maine, Nov. 1970 | 1685-19, 30 cents |
| Portland, Oreg.-Wash., May 1970 ${ }^{1}$ | 1660-77, 40 cents |
| Providence-Pawtucket-Warwick, R.I.-Mass. |  |
| May 197 | 1660-72, 30 cents |
| Raleigh, N.C., Aug. 1970 | 1685-12, 35 cents |
| Richmond, Va., M | 1685-62, 30 cents |
| Rochester, N.Y. (office occupations only), <br> Aug. 1970 $\qquad$ | 1685-7, 30 cents |
| Rockford, Ill., May $1970^{1}$ | 1660-75, 35 cents |
| St. Louis, Mo.-Ill., Mar. 19 | 1685-65, 50 cents |
| Salt Lake City, Utah, Nov. 1970 | 1685-26, 35 cents |
| San Antonio, Tex., May 1970 | 1660-71. 30 cents |
| San Bernardino-Riverside-Ontario, Calif., |  |
| Dec. $1970{ }^{1}$ | 1685-42, 40 cents |
| San Diego, Calif., Nov. 1970 | 1685-20, 30 cents |
| San Francisco-Oakland, Calif., O | 1685-23, 40 cents |
| San Jose, Calif., Aug. 197 | 1685-13, 30 cents |
| Savannah, Ga., May 1971 | 1685-72, 30 cents |
| Scranton, Pa., July $1970{ }^{1}$ | 1685-3, 35 cents |
| Seattle-Everett, Wash., Jan. 197 | 1685-52, 35 cents |
| Sioux Falls, S. Dak., Dec. 1970 | 1685-38, 35 cents |
| South Bend, Ind., Mar. 197 | 1685-61, 30 cents |
| Spokane, Wash., June 1970 ${ }^{1}$ | 1660-86, 35 cents |
| Syracuse, N.Y., July 1 | 1685-8, 30 cents |
| Tampa-St. Petersburg, Fla., No | 1685-17, 30 cents |
| Toledo, Ohio-Mich., Apr. $1971{ }^{1}$ | 1685-74, 40 cents |
| Trenton, N.J., Sept. $1970{ }^{1}$ | 1685-15, 35 cents |
| Utica-Rome, N.Y., July 19 | 1685-9, 30 cents |
| Washington, D.C.-Md.-Va., Apr. | 1685-56, 40 cents |
| W aterbury, Conn., Mar. 1971 | 1685-55, 30 cents |
| Waterloo, Iowa, Nov. 1970 | 1685-32, 35 cents |
| Wichita, Kans., Apr. 1971 | 1685-64, 30 cents |
| Worcester, Mass., May 197 | 1685-73, 30 cents |
| York, Pa., Feb. 1971 | 1685-50, 30 cents |
| Youngstown-Warren, Ohio, Nov. 1970 | 1685-24, 30 cents |

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[^0]:    See footnotes at end of tables

[^1]:    For wage study purposes, workers are classified by type of truck, as follows
    Trucker, power (forklift)
    rucker, power (other than forklift)

