

L 2.3:3010-3

# Area Wage Survey

## Newark, New Jersey, Metropolitan Area, January 1981



U.S. Department of Labor  
Bureau of Labor Statistics

Bulletin 3010-3



SOUTHWEST MISSOURI STATE  
UNIVERSITY LIBRARY  
U.S. DEPOSITORY COPY

MAY 21 1981

*52*

---

## Preface

This bulletin provides results of a January 1981 survey of occupational earnings in the Newark, New Jersey, Standard Metropolitan Statistical Area. The survey was made as part of the Bureau of Labor Statistics' annual area wage survey program. It was conducted by the Bureau's regional office in New York, N.Y., under the general direction of Anthony J. Ferrara, Assistant Regional Commissioner for Operations. The survey could not have been accomplished without the cooperation of the many firms whose wage and salary data provided the basis for the statistical information in this bulletin. The Bureau wishes to express sincere appreciation for the cooperation received.

Unless specifically identified as copyright, material in this publication is in the public domain and may, with appropriate credit, be reproduced without permission.

### **Note:**

A report on occupational earnings and supplementary wage benefits in the Newark area is available for the moving and storage industry (January 1981). Also available are listings of union wage rates for building trades, printing trades, local-transit operating employees and local truckdrivers and helpers. Free copies of these are available from the Bureau's regional offices. (See back cover for addresses.)

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, GPO Bookstores, or BLS Regional Offices listed on back cover. Price \$2.25. Make checks payable to Superintendent of Documents, G.P.O.

# Area Wage Survey

# Newark, New Jersey, Metropolitan Area, January 1981



U.S. Department of Labor  
Raymond J. Donovan, Secretary

Bureau of Labor Statistics  
Janet L. Norwood,  
Commissioner

May 1981

Bulletin 3010-3

## Contents

	<i>Page</i>		<i>Page</i>
Introduction .....	2	Tables—Continued	
Tables:		A-11. Pay relationships in establishments with paired material movement and custodial occupations .....	16
Earnings, all establishments:		Earnings, large establishments:	
A- 1. Weekly earnings of office workers .....	3	A-12. Weekly earnings of office workers .....	17
A- 2. Weekly earnings of professional and technical workers .....	6	A-13. Weekly earnings of professional and technical workers .....	19
A- 3. Average weekly earnings of office, professional, and technical workers, by sex .....	8	A-14. Average weekly earnings of office, professional, and technical workers, by sex .....	21
A- 4. Hourly earnings of maintenance, toolroom, and powerplant workers. ....	10	A-15. Hourly earnings of maintenance, toolroom, and powerplant workers .....	23
A- 5. Hourly earnings of material movement and custodial workers .....	11	A-16. Hourly earnings of material movement and custodial workers .....	24
A- 6. Average hourly earnings of maintenance, toolroom, powerplant, material movement, and custodial workers, by sex .....	13	A-17. Average hourly earnings of maintenance, toolroom, powerplant, material movement, and custodial workers, by sex .....	25
A- 7. Indexes of earnings and percent increases for selected occupational groups .....	14	Appendixes:	
A- 8. Pay relationships in establishments with paired office clerical occupations .....	14	A. Scope and method of survey .....	27
A- 9. Pay relationships in establishments with paired professional and technical occupations .....	15	B. Occupational descriptions .....	30
A-10. Pay relationships in establishments with paired maintenance, toolroom, and powerplant occupations .....	16	C. Job conversion table .....	42

# Introduction

This area is 1 of 71 in which the U.S. Department of Labor's Bureau of Labor Statistics conducts surveys of occupational earnings and related benefits. (See list of areas on inside back cover.) In each area, earnings data for selected occupations (A-series tables) are collected annually. Information on establishment practices and supplementary wage benefits (B-series tables) is obtained every third year. This report has no B-series tables.

Each year after all individual area wage surveys have been completed, two summary reports are issued. The first brings together data for each metropolitan area surveyed; the second presents national and regional estimates, projected from individual metropolitan area data, for all Standard Metropolitan Statistical Areas in the United States, excluding Alaska and Hawaii.

A major consideration in the area wage survey program is the need to describe the level and movement of wages in a variety of labor markets, through the analysis of (1) the level and distribution of wages by occupation, and (2) the movement of wages by occupational category and skill level. The program develops information that may be used for many purposes, including wage and salary administration, collective bargaining, and assistance in determining plant location. Survey results also are used by the U.S. Department of Labor to make wage determinations under the Service Contract Act of 1965.

## A-series tables

Tables A-1 through A-6 provide estimates of straight-time weekly or hourly earnings for workers in occupations common to a variety of manufacturing and nonmanufacturing industries. Where possible, occupations with related duties (e.g. accounting clerks and payroll clerks) are clustered to facilitate comparison. The occupations are defined in appendix B. For the 31 largest survey areas, tables A-12 through A-17 provide similar data for establishments employing 500 workers or more.

Beginning in 1981, multilevel jobs are designated numerically instead of alphabetically. A job conversion list is provided in appendix C.

Table A-7 provides indexes and percent changes in average hourly earnings for office clerical workers, electronic data processing workers, industrial nurses, skilled maintenance trades workers, and unskilled plant workers. Where possible, data are presented for all industries and for manufacturing and nonmanufacturing separately. Data are not presented for skilled maintenance workers in nonmanufacturing because the number of workers employed in this occupational group in nonmanufacturing is too small to warrant separate presentation. This table provides a measure of wage trends after elimination of changes in average earnings caused by employment shifts among establishments as well as turnover of establishments included in survey samples. For further details, see appendix A.

Tables A-8 through A-11 provide measures of pay relationships in establishments. These measures may differ considerably from the pay relationships of overall area averages published in tables A-1 through A-6. See appendix A for details.

## Appendixes

Appendix A describes the methods and concepts used in the area wage survey program. It provides information on the scope of the area survey, the area's industrial composition in manufacturing, and labor-management agreement coverage.

Appendix B provides job descriptions used by Bureau field representatives to classify workers by occupation.

Appendix C is an alphabetic to numeric conversion list for all multilevel jobs in the survey.

Table A-1. Weekly earnings of office workers in Newark, N.J., January 1981

Occupation and industry division	Number of workers	Average weekly hours <sup>1</sup> (standard)	Weekly earnings (in dollars) <sup>2</sup>			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean <sup>3</sup>	Median <sup>3</sup>	Middle range <sup>3</sup>	120 and under 130	130-140	140-150	150-160	160-170	170-180	180-190	190-200	200-220	220-240	240-260	260-280	280-300	300-320	320-340	340-360	360-380	380-400	400-440	440-480	480 and over
Secretaries.....	6,559	38.0	286.50	274.00	233.50- 331.00	-	-	1	13	14	53	109	165	660	890	819	771	616	572	447	414	287	338	225	115	50
Manufacturing.....	3,695	39.0	289.50	275.00	239.00- 328.00	-	-	-	-	-	5	16	47	336	538	536	498	363	345	204	204	133	252	136	61	21
Nonmanufacturing.....	2,864	37.5	283.00	274.00	225.00- 332.50	-	-	1	13	14	48	93	118	324	352	283	273	253	227	243	210	154	86	89	54	29
Transportation and utilities.....	473	37.0	357.00	358.50	314.50- 395.50	-	-	-	-	-	-	-	-	6	7	7	6	50	74	31	82	61	59	54	20	16
Secretaries I.....	1,413	38.5	253.50	235.00	210.50- 267.50	-	-	-	2	12	33	67	78	301	272	211	156	80	4	-	-	1	195	1	-	-
Manufacturing.....	880	39.0	269.00	239.50	218.00- 276.50	-	-	-	-	-	4	28	220	193	138	81	20	-	-	-	-	1	195	-	-	-
Nonmanufacturing.....	533	38.0	229.00	225.00	195.00- 262.50	-	-	-	2	12	33	63	50	81	79	73	75	60	4	-	-	-	-	1	-	-
Secretaries II.....	1,331	38.0	267.00	258.00	224.00- 315.00	-	-	-	11	1	12	31	71	159	211	177	103	117	162	175	65	18	13	5	-	-
Manufacturing.....	649	38.5	271.50	264.50	236.00- 306.00	-	-	-	-	-	5	6	18	45	105	128	72	84	77	35	53	13	6	2	-	-
Nonmanufacturing.....	682	37.5	263.00	250.50	212.00- 319.50	-	-	-	11	1	7	25	53	114	106	49	31	33	85	140	12	5	7	3	-	-
Transportation and utilities.....	83	37.5	329.50	317.00	315.50- 345.00	-	-	-	-	-	-	-	-	-	-	2	-	10	36	11	12	2	7	3	-	-
Secretaries III.....	2,096	38.5	293.50	279.00	244.00- 332.50	-	-	-	-	-	7	3	16	143	294	256	338	218	218	112	158	120	31	157	23	2
Manufacturing.....	1,316	39.0	293.50	278.50	250.00- 321.50	-	-	-	-	-	-	-	1	67	163	177	267	149	150	79	71	46	18	124	4	-
Nonmanufacturing.....	780	37.5	293.50	281.00	233.00- 358.00	-	-	-	-	-	7	3	15	76	131	79	71	69	68	33	87	74	13	33	19	2
Transportation and utilities.....	109	38.0	347.00	310.00	295.00- 427.00	-	-	-	-	-	-	-	-	5	2	-	-	30	27	1	1	2	3	27	10	1
Secretaries IV.....	1,254	38.5	313.00	302.50	262.00- 348.50	-	-	1	-	1	-	8	-	31	98	154	151	155	146	119	157	72	31	26	75	29
Manufacturing.....	725	39.0	315.50	303.50	263.00- 348.50	-	-	-	-	-	-	6	-	4	64	93	75	87	95	76	73	55	21	7	53	16
Nonmanufacturing.....	529	37.5	309.00	298.00	260.00- 347.50	-	-	-	1	-	2	-	-	27	34	61	76	68	51	43	84	17	10	19	22	13
Transportation and utilities.....	111	38.0	350.50	342.00	320.00- 358.50	-	-	-	-	-	-	-	-	1	5	2	4	8	7	6	52	8	2	2	7	7
Secretaries V.....	313	37.5	351.50	355.00	305.50- 387.00	-	-	-	-	-	-	-	-	8	13	1	15	38	37	29	17	64	28	29	15	19
Manufacturing.....	125	38.0	332.00	320.00	294.00- 360.00	-	-	-	-	-	-	-	-	-	13	-	3	23	23	14	7	18	12	3	4	5
Nonmanufacturing.....	188	37.0	365.00	373.50	318.00- 400.00	-	-	-	-	-	-	-	-	8	-	1	12	15	14	15	10	46	16	26	11	14
Transportation and utilities.....	72	36.5	399.00	373.50	373.50- 429.50	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4	-	37	7	14	1	* 8
Stenographers.....	854	38.0	257.00	263.00	206.00- 300.00	-	-	7	23	29	29	75	36	56	38	120	119	112	101	61	5	36	3	4	-	-
Manufacturing.....	275	39.5	272.00	269.00	229.50- 303.50	-	-	-	-	2	1	24	19	18	16	27	37	50	24	22	-	35	-	-	-	-
Nonmanufacturing.....	579	37.5	250.00	255.00	196.00- 299.00	-	-	7	23	27	28	51	17	38	22	93	82	62	77	39	5	1	3	4	-	-
Transportation and utilities.....	180	36.5	293.00	301.50	273.50- 314.50	-	-	-	-	-	2	1	3	5	12	15	21	31	66	13	4	-	3	4	-	-
Stenographers I.....	575	38.5	249.00	258.50	195.00- 300.00	-	-	6	23	22	20	62	31	48	28	51	80	62	85	47	2	1	3	4	-	-
Manufacturing.....	155	39.5	252.50	263.50	200.00- 299.50	-	-	-	-	2	1	20	17	12	8	11	28	17	18	21	-	-	-	-	-	-
Nonmanufacturing.....	420	38.0	248.00	255.00	185.00- 300.00	-	-	6	23	20	19	42	14	36	20	40	52	45	67	26	2	1	3	4	-	-
Stenographers II.....	279	38.0	273.00	269.00	246.00- 299.00	-	-	1	-	7	9	13	5	8	10	69	39	50	16	14	3	35	-	-	-	-
Manufacturing.....	120	39.0	296.50	294.50	253.00- 372.50	-	-	-	-	-	-	4	2	6	8	16	9	33	6	1	-	35	-	-	-	-
Nonmanufacturing.....	159	37.0	255.00	254.50	246.00- 281.00	-	-	1	-	7	9	9	3	2	2	53	30	17	10	13	3	-	-	-	-	-
Transportation and utilities.....	35	37.0	307.50	317.00	293.00- 331.00	-	-	-	-	-	-	-	-	-	1	2	3	3	10	13	3	-	-	-	-	-
Transcribing-machine typists.....	151	37.0	217.00	198.00	175.00- 240.00	-	-	2	14	4	30	12	15	9	18	25	5	1	1	11	-	4	-	-	-	-
Nonmanufacturing.....	120	37.0	213.00	198.00	175.00- 240.00	-	-	2	14	4	17	12	15	7	12	23	1	1	1	11	-	-	-	-	-	-
Typists.....	2,527	37.0	190.50	180.00	164.00- 211.50	13	48	196	196	403	394	240	225	318	237	124	33	16	59	7	-	5	5	2	1	5
Manufacturing.....	513	38.5	204.00	199.50	183.00- 223.00	-	17	2	12	21	63	59	88	113	65	50	8	7	3	4	-	-	-	-	1	-
Nonmanufacturing.....	2,014	37.0	187.00	175.00	161.50- 202.00	13	31	194	184	382	331	181	137	205	172	74	25	9	56	3	-	5	5	2	-	5
Typists I.....	1,557	37.0	176.00	170.00	160.00- 182.00	13	45	150	163	364	342	189	86	94	40	41	16	4	-	-	-	2	3	-	-	5
Manufacturing.....	263	39.0	193.50	189.00	172.00- 215.00	-	17	2	10	17	49	45	30	44	14	29	6	-	-	-	-	-	-	-	-	-
Nonmanufacturing.....	1,294	37.0	172.00	168.00	158.00- 178.50	13	28	148	153	347	293	144	56	50	26	12	10	4	-	-	-	2	3	-	-	5
Typists II.....	970	37.0	214.50	208.00	191.00- 233.50	-	3	46	33	39	52	51	139	224	197	83	17	12	59	7	-	3	2	2	1	-
Manufacturing.....	250	38.0	215.00	205.50	195.00- 230.50	-	-	-	2	4	14	14	58	69	51	21	2	7	3	4	-	-	-	-	1	-
Nonmanufacturing.....	720	37.0	214.50	211.50	186.00- 235.00	-	3	46	31	35	38	37	81	155	146	62	15	5	56	3	-	3	2	2	-	-

See footnotes at end of tables.

**Table A-1. Weekly earnings of office workers in Newark, N.J., January 1981 —Continued**

Occupation and industry division	Number of workers	Average weekly hours <sup>1</sup> (stand-ard)	Weekly earnings (in dollars) <sup>1</sup>			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean <sup>2</sup>	Median <sup>2</sup>	Middle range <sup>2</sup>	120 and under 130	130-140	140-150	150-160	160-170	170-180	180-190	190-200	200-220	220-240	240-260	260-280	280-300	300-320	320-340	340-360	360-380	380-400	400-440	440-480	480 and over
File clerks.....	857	37.0	169.00	156.00	140.00- 190.50	53	114	181	109	83	46	55	26	115	44	11	3	4	2	6	-	-	5	-	-	-
Manufacturing.....	82	38.5	184.00	160.00	152.00- 200.00	-	15	3	20	10	6	2	3	9	6	1	-	2	1	-	-	-	4	-	-	-
Nonmanufacturing.....	775	36.5	167.50	156.00	140.00- 188.50	53	99	178	89	73	40	53	23	106	38	10	3	2	1	6	-	-	1	-	-	-
Transportation and utilities.....	60	37.5	221.50	221.50	156.00- 256.50	-	-	1	18	-	-	2	3	4	9	10	3	2	1	6	-	-	1	-	-	-
File clerks I.....	552	37.0	155.00	149.00	138.50- 161.50	47	104	159	89	55	28	18	8	17	14	8	2	1	1	-	-	-	1	-	-	-
Manufacturing.....	65	38.5	163.50	159.00	147.00- 172.00	-	15	3	19	10	4	-	3	9	2	-	-	-	-	-	-	-	-	-	-	-
Nonmanufacturing.....	487	37.0	154.00	147.00	138.50- 161.00	47	89	156	70	45	24	18	5	8	12	8	2	1	1	-	-	-	1	-	-	-
Transportation and utilities.....	49	37.5	205.00	204.00	156.00- 242.00	-	-	1	18	-	-	2	3	4	8	8	2	1	1	-	-	-	1	-	-	-
File clerks II.....	161	36.5	173.00	176.00	157.00- 188.00	6	10	22	12	28	17	33	6	14	12	1	-	-	-	-	-	-	-	-	-	-
Nonmanufacturing.....	155	36.5	173.00	176.00	157.00- 188.00	6	10	22	11	28	15	31	6	14	11	1	-	-	-	-	-	-	-	-	-	-
Messengers.....	425	38.0	184.50	169.00	160.00- 202.00	9	27	23	63	95	29	15	25	79	19	18	8	4	-	10	-	-	1	-	-	-
Manufacturing.....	121	38.5	197.50	165.00	160.00- 231.50	-	1	-	46	19	7	4	5	6	5	9	8	1	-	10	-	-	-	-	-	-
Nonmanufacturing.....	304	37.5	179.50	170.00	160.00- 200.00	9	26	23	17	76	22	11	20	73	14	9	-	3	-	-	-	-	1	-	-	-
Switchboard operators.....	394	38.5	216.00	196.00	176.50- 246.00	-	4	5	51	23	22	83	23	58	18	25	6	7	47	3	2	4	10	3	-	-
Manufacturing.....	84	39.0	227.00	213.50	178.50- 252.00	-	-	-	17	-	6	4	5	13	5	19	1	3	4	-	-	-	7	-	-	-
Nonmanufacturing.....	310	38.0	213.00	182.50	176.00- 228.00	-	4	5	34	23	16	79	18	45	13	6	5	4	43	3	2	4	3	3	-	-
Transportation and utilities.....	64	39.0	292.50	307.50	275.00- 307.50	-	-	-	-	-	-	1	3	4	4	3	4	2	34	1	1	4	3	-	-	-
Switchboard operator-receptionists.....	585	38.0	199.00	197.00	176.50- 220.00	14	-	-	28	35	76	74	109	102	101	22	5	12	2	5	-	-	-	-	-	-
Manufacturing.....	308	38.0	204.00	200.00	184.00- 225.00	13	-	-	13	31	13	31	31	76	64	17	4	10	2	3	-	-	-	-	-	-
Nonmanufacturing.....	277	38.5	193.00	192.00	175.00- 200.00	1	-	-	15	4	63	43	78	26	37	5	1	2	-	2	-	-	-	-	-	-
Transportation and utilities.....	30	39.5	217.50	200.00	198.00- 237.00	-	-	-	-	5	-	-	9	6	4	1	1	2	-	2	-	-	-	-	-	-
Order clerks.....	982	38.0	226.00	220.00	193.50- 250.00	-	2	2	1	15	111	38	89	224	107	201	71	83	30	1	5	-	2	-	-	-
Manufacturing.....	724	37.5	228.00	225.00	194.50- 259.00	-	-	-	-	11	107	38	37	130	93	127	71	72	30	1	5	-	2	-	-	-
Nonmanufacturing.....	258	39.5	219.00	214.00	194.00- 247.50	-	2	2	1	4	4	-	52	94	14	74	-	11	-	-	-	-	-	-	-	-
Order clerks I.....	673	38.0	212.00	214.00	190.00- 231.00	-	2	2	1	9	99	35	82	205	77	111	34	8	6	-	1	-	1	-	-	-
Manufacturing.....	486	37.0	214.50	213.50	183.50- 242.00	-	-	-	-	5	95	35	30	111	63	97	34	8	6	-	1	-	1	-	-	-
Nonmanufacturing.....	187	39.5	206.00	214.00	192.00- 214.00	-	2	2	1	4	4	-	52	94	14	14	-	-	-	-	-	-	-	-	-	-
Order clerks II.....	309	38.5	255.50	252.00	240.00- 283.50	-	-	-	-	6	12	3	7	19	30	90	37	75	24	1	4	-	1	-	-	-
Manufacturing.....	238	38.0	256.50	265.50	232.50- 283.50	-	-	-	-	6	12	3	7	19	30	30	37	64	24	1	4	-	1	-	-	-
Accounting clerks.....	4,116	37.5	235.00	221.50	190.50- 270.00	-	14	68	93	178	317	298	335	684	542	422	237	205	219	327	70	60	27	15	5	-
Manufacturing.....	1,469	38.5	229.00	219.00	191.00- 256.50	-	13	-	12	55	118	120	177	244	223	169	109	88	30	48	32	10	15	3	3	-
Nonmanufacturing.....	2,647	37.0	238.50	223.00	190.00- 285.00	-	1	68	81	123	199	178	158	440	319	253	128	117	189	279	38	50	12	12	2	-
Accounting clerks I.....	352	37.5	184.00	180.00	159.50- 197.00	-	-	51	53	46	24	46	59	21	15	18	11	8	-	-	-	-	-	-	-	-
Manufacturing.....	122	38.5	206.50	199.00	176.00- 233.00	-	-	-	9	14	8	9	21	19	14	16	4	8	-	-	-	-	-	-	-	-
Nonmanufacturing.....	230	37.0	172.50	165.50	152.00- 188.00	-	-	51	44	32	16	37	38	2	1	2	7	-	-	-	-	-	-	-	-	-
Accounting clerks II.....	1,604	38.0	218.50	204.50	180.00- 240.00	-	14	16	26	124	215	184	159	333	126	92	54	25	156	18	7	53	2	-	-	-
Manufacturing.....	627	38.5	210.00	199.50	180.00- 227.00	-	13	-	3	36	92	80	97	140	34	46	32	13	18	16	3	4	-	-	-	-
Nonmanufacturing.....	977	37.5	224.50	206.00	179.50- 250.00	-	1	16	23	88	123	104	62	193	92	46	22	12	138	2	4	49	2	-	-	-
Accounting clerks III.....	1,706	37.5	250.50	235.00	208.00- 299.00	-	-	1	14	8	78	67	111	308	318	236	82	69	46	298	49	6	12	1	2	-
Manufacturing.....	547	38.5	242.50	230.00	209.00- 263.00	-	-	-	-	5	18	31	59	68	125	92	44	35	9	24	23	6	7	1	-	-
Nonmanufacturing.....	1,159	37.0	254.00	237.00	208.00- 333.00	-	-	1	14	3	60	36	52	240	193	144	38	34	37	274	26	-	5	-	2	-
Accounting clerks IV.....	450	37.5	274.50	270.00	241.00- 292.50	-	-	-	-	-	-	-	1	6	21	82	75	90	16	11	14	1	13	14	3	-
Manufacturing.....	169	38.5	272.00	270.00	231.00- 293.50	-	-	-	-	-	-	-	-	16	49	14	29	32	2	8	6	-	8	2	3	-
Nonmanufacturing.....	281	37.0	276.00	270.00	250.00- 290.50	-	-	-	-	-	-	-	1	6	5	33	61	61	71	14	3	8	1	5	12	-
Transportation and utilities.....	36	39.5	317.50	285.00	267.00- 405.00	-	-	-	-	-	-	-	-	-	-	8	4	9	1	1	2	-	-	11	-	-

See footnotes at end of tables.

**Table A-1. Weekly earnings of office workers in Newark, N.J., January 1981 —Continued**

Occupation and industry division	Number of workers	Average weekly hours <sup>1</sup> (stand-ard)	Weekly earnings (in dollars) <sup>1</sup>			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean <sup>2</sup>	Median <sup>2</sup>	Middle range <sup>2</sup>	120 and under 130	130 — 140	140 — 150	150 — 160	160 — 170	170 — 180	180 — 190	190 — 200	200 — 220	220 — 240	240 — 260	260 — 280	280 — 300	300 — 320	320 — 340	340 — 360	360 — 380	380 — 400	400 — 440	440 — 480	480 and over
Payroll clerks .....	406	38.0	238.50	220.00	198.50- 262.50	-	-	2	1	18	29	18	39	93	53	43	34	19	11	22	3	6	5	8	1	1
Manufacturing .....	234	39.0	245.50	224.50	211.00- 263.50	-	-	-	-	6	9	-	18	71	42	24	20	7	7	14	-	5	1	8	1	1
Nonmanufacturing .....	172	37.0	228.50	210.00	184.00- 260.00	-	-	2	1	12	20	18	21	22	11	19	14	12	4	8	3	1	4	-	-	-
Transportation and utilities .....	45	37.5	278.50	277.00	244.50- 299.50	-	-	-	-	-	-	3	3	5	-	5	10	9	-	2	3	1	4	-	-	-
Key entry operators .....	1,603	38.0	219.00	210.00	180.00- 245.00	-	2	112	56	96	126	158	119	270	229	129	106	52	41	35	6	50	11	3	2	-
Manufacturing .....	607	38.5	239.50	224.50	205.00- 271.00	-	-	-	2	10	54	37	22	135	94	72	81	26	21	21	3	23	4	-	2	-
Nonmanufacturing .....	996	37.5	206.00	193.00	169.50- 227.00	-	2	112	54	86	72	121	97	135	135	57	25	26	20	14	3	27	7	3	-	-
Key entry operators I .....	1,083	38.0	203.50	193.00	171.50- 225.00	-	2	100	49	93	115	140	96	167	118	76	75	14	10	1	1	26	-	-	-	-
Manufacturing .....	418	38.5	228.50	218.50	190.00- 257.50	-	-	-	2	10	54	34	19	96	61	45	62	9	1	1	1	23	-	-	-	-
Nonmanufacturing .....	665	38.0	187.50	183.50	161.00- 202.50	-	2	100	47	83	61	106	77	71	57	31	13	5	9	-	-	3	-	-	-	-
Key entry operators II .....	520	38.0	251.00	234.50	211.00- 288.50	-	-	12	7	3	11	18	23	103	111	53	31	38	31	34	5	24	11	3	2	-
Manufacturing .....	189	38.5	263.00	255.50	220.00- 301.00	-	-	-	-	-	-	3	3	39	33	27	19	17	20	20	2	-	4	-	2	-
Nonmanufacturing .....	331	37.5	244.00	227.00	210.00- 272.50	-	-	12	7	3	11	15	20	64	78	26	12	21	11	14	3	24	7	3	-	-

\* Workers were distributed as follows: 5 at \$480.00 to \$520.00; and 3 at \$520.00 to \$560.00. Also see footnotes at end of tables.

**Table A-2. Weekly earnings of professional and technical workers in Newark, N.J., January 1981**

Occupation and industry division	Number of workers	Average weekly hours <sup>1</sup> (standard)	Weekly earnings (in dollars) <sup>2</sup>			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean <sup>2</sup>	Median <sup>2</sup>	Middle range <sup>2</sup>	120 and under 140	140-160	160-180	180-200	200-220	220-240	240-260	260-280	280-300	300-320	320-340	340-360	360-380	380-400	400-440	440-480	480-520	520-560	560-600	600-640	640 and over
Computer systems analysts (business).....	1,567	37.5	490.50	487.50	415.00- 557.00	-	-	-	-	6	-	4	-	17	7	25	46	76	86	256	212	262	188	161	91	130
Manufacturing.....	481	39.0	484.00	481.00	415.00- 535.50	-	-	-	-	-	-	-	-	1	5	13	17	18	14	78	88	82	83	39	24	19
Nonmanufacturing.....	1,086	36.5	493.50	490.50	414.50- 576.00	-	-	-	-	6	-	4	-	16	2	12	29	58	72	178	124	180	105	122	67	* 111
Computer systems analysts (business) I.....	169	37.5	382.00	375.00	344.50- 410.50	-	-	-	-	6	-	-	-	5	7	22	27	24	20	31	10	9	2	5	1	-
Manufacturing.....	65	39.5	371.50	361.00	338.00- 401.00	-	-	-	-	-	-	-	-	1	5	13	13	12	3	14	2	-	1	1	-	-
Nonmanufacturing.....	104	36.0	388.50	381.00	346.00- 427.50	-	-	-	-	6	-	-	-	4	2	9	14	12	17	17	8	9	2	4	-	-
Computer systems analysts (business) II.....	787	37.0	469.50	464.50	408.00- 520.50	-	-	-	-	-	-	4	-	12	-	3	19	52	66	169	114	149	72	85	28	14
Manufacturing.....	202	39.0	467.00	470.00	418.00- 501.00	-	-	-	-	-	-	-	-	-	-	4	6	6	11	47	54	44	23	10	3	-
Nonmanufacturing.....	585	36.5	470.50	456.50	404.00- 530.00	-	-	-	-	-	-	4	-	12	-	3	15	46	55	122	60	105	49	75	25	14
Computer systems analysts (business) III.....	611	37.5	547.50	537.50	483.00- 612.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56	88	104	114	71	62	** 116
Manufacturing.....	214	39.0	534.50	533.00	483.00- 575.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	32	38	60	28	20	19
Nonmanufacturing.....	397	36.5	554.50	548.00	481.00- 631.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	56	66	54	43	42	97
Computer programmers (business).....	1,319	37.0	371.00	349.00	308.00- 416.50	-	-	-	-	6	34	97	138	171	133	170	95	80	128	46	134	38	34	14	1	-
Manufacturing.....	275	38.5	403.50	403.00	345.50- 458.50	-	-	-	-	5	6	2	12	11	16	36	27	20	61	18	37	5	17	2	-	-
Nonmanufacturing.....	1,044	37.0	362.00	339.00	302.00- 397.50	-	-	-	-	1	28	95	126	160	117	134	68	60	67	28	97	33	17	12	1	-
Computer programmers (business) I.....	324	37.0	329.50	303.00	283.00- 350.00	-	-	-	-	1	24	42	84	60	17	31	9	2	18	-	31	4	1	-	-	-
Nonmanufacturing.....	289	37.0	328.00	302.00	282.50- 345.50	-	-	-	-	1	18	42	78	58	15	24	8	2	7	-	31	4	1	-	-	-
Computer programmers (business) II.....	543	37.5	371.50	356.00	327.00- 405.00	-	-	-	-	5	10	9	22	52	94	89	60	44	82	16	43	12	5	-	-	-
Manufacturing.....	150	38.5	389.50	394.00	345.00- 428.50	-	-	-	-	5	-	2	6	9	14	14	14	14	41	4	25	2	-	-	-	-
Nonmanufacturing.....	393	37.5	364.50	350.00	326.00- 390.00	-	-	-	-	-	10	7	16	43	80	75	46	30	41	12	18	10	5	-	-	-
Computer programmers (business) III.....	452	37.0	399.50	374.00	315.00- 491.50	-	-	-	-	-	-	46	32	59	22	50	26	34	28	30	60	22	28	14	1	-
Manufacturing.....	90	38.5	451.50	449.00	374.00- 508.00	-	-	-	-	-	-	-	-	-	-	15	12	6	9	14	12	3	17	2	-	-
Nonmanufacturing.....	362	36.5	386.50	355.00	309.00- 482.00	-	-	-	-	-	-	46	32	59	22	35	14	28	19	16	48	19	11	12	1	-
Transportation and utilities.....	101	35.0	413.50	382.00	356.00- 499.00	-	-	-	-	-	-	-	-	12	-	20	11	18	2	5	27	3	2	1	-	-
Computer operators.....	1,021	38.0	293.00	281.00	238.00- 333.00	-	-	36	33	73	121	136	104	123	62	132	59	23	23	32	32	17	12	3	-	-
Manufacturing.....	418	38.5	291.00	279.50	240.00- 327.00	-	-	2	4	29	57	76	44	54	40	25	32	9	17	15	9	2	3	-	-	-
Nonmanufacturing.....	603	37.0	294.00	284.50	236.50- 333.00	-	-	34	29	44	64	60	60	69	22	107	27	14	6	17	23	15	9	3	-	-
Computer operators I.....	238	37.0	262.50	242.50	204.50- 333.00	-	-	32	14	38	26	27	9	10	2	68	-	-	3	-	6	3	-	-	-	-
Manufacturing.....	68	38.5	235.50	228.00	205.00- 241.00	-	-	2	4	19	24	8	3	3	1	1	-	-	3	-	-	-	-	-	-	-
Nonmanufacturing.....	170	36.0	273.50	274.50	200.50- 333.00	-	-	30	10	19	2	19	6	7	1	67	-	-	-	6	3	-	-	-	-	-
Computer operators II.....	513	38.0	283.50	270.00	238.00- 317.00	-	-	4	19	30	86	94	64	68	21	34	46	14	9	6	4	5	9	-	-	-
Manufacturing.....	230	38.5	288.50	273.00	247.00- 320.50	-	-	-	-	6	29	65	29	32	11	14	22	7	6	3	1	2	3	-	-	-
Nonmanufacturing.....	283	38.0	279.50	262.00	233.00- 314.00	-	-	4	19	24	57	29	35	36	10	20	24	7	3	3	3	3	6	-	-	-
Computer operators III.....	270	38.0	337.50	313.00	286.50- 388.00	-	-	-	-	5	9	15	31	45	39	30	13	9	11	26	22	9	3	3	-	-
Manufacturing.....	120	39.0	328.00	306.50	292.50- 361.00	-	-	-	-	4	4	3	12	19	28	10	10	2	8	12	8	-	-	-	-	-
Nonmanufacturing.....	150	37.5	345.50	321.50	281.00- 413.00	-	-	-	-	1	5	12	19	26	11	20	3	7	3	14	14	9	3	3	-	-
Transportation and utilities.....	32	35.5	426.50	428.50	398.00- 485.50	-	-	-	-	-	-	-	-	-	1	2	2	1	2	10	5	9	-	-	-	-
Peripheral equipment operators.....	51	38.0	254.50	262.00	190.00- 314.50	-	7	6	-	4	1	7	3	3	12	2	6	-	-	-	-	-	-	-	-	-
Computer data librarians.....	54	38.0	259.50	241.00	211.50- 309.00	-	-	4	7	6	2	13	3	4	5	3	2	4	1	-	-	-	-	-	-	-

See footnotes at end of tables.

**Table A-2. Weekly earnings of professional and technical workers in Newark, N.J., January 1981 —Continued**

Occupation and industry division	Number of workers	Average weekly hours <sup>1</sup> (standard)	Weekly earnings (in dollars) <sup>1</sup>			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean <sup>2</sup>	Median <sup>2</sup>	Middle range <sup>2</sup>	120 and under 140	140-160	160-180	180-200	200-220	220-240	240-260	260-280	280-300	300-320	320-340	340-360	360-380	380-400	400-440	440-480	480-520	520-560	560-600	600-640	640 and over
Drafters.....	1,494	38.5	325.50	313.00	259.00- 394.00	-	18	39	65	70	118	79	112	146	145	109	84	95	71	182	63	43	18	22	13	2
Manufacturing .....	882	38.5	293.00	282.00	232.00- 349.50	-	18	39	56	58	99	49	85	110	74	43	50	60	20	79	31	11	-	-	-	-
Nonmanufacturing .....	612	38.0	372.50	360.50	305.00- 426.50	-	-	-	9	12	19	30	27	36	71	66	34	35	51	103	32	32	18	22	13	2
Drafters II .....	202	38.0	204.00	197.00	178.00- 226.50	-	18	39	50	35	33	18	-	3	5	-	1	-	-	-	-	-	-	-	-	-
Drafters III .....	358	38.0	280.50	284.00	244.00- 310.00	-	-	-	-	23	53	54	32	86	30	40	27	13	-	-	-	-	-	-	-	-
Manufacturing .....	236	38.5	269.50	262.50	238.00- 288.00	-	-	-	-	19	52	40	15	61	18	15	9	7	-	-	-	-	-	-	-	-
Nonmanufacturing .....	122	38.0	301.50	302.50	278.50- 329.00	-	-	-	-	4	1	14	17	25	12	25	18	6	-	-	-	-	-	-	-	-
Drafters IV .....	514	38.5	343.50	331.00	281.00- 399.00	-	-	-	-	-	18	7	80	54	67	50	20	44	50	90	21	13	-	-	-	-
Manufacturing .....	220	39.0	298.50	281.00	269.00- 319.00	-	-	-	-	-	14	2	70	46	38	11	10	16	7	6	-	-	-	-	-	-
Nonmanufacturing .....	294	38.5	377.50	390.50	329.00- 415.50	-	-	-	-	4	5	10	8	29	39	10	28	43	84	21	13	-	-	-	-	-
Transportation and utilities .....	90	37.5	405.50	405.00	360.00- 461.50	-	-	-	-	-	-	-	9	-	9	4	1	2	3	30	19	13	-	-	-	-
Drafters V .....	379	38.5	420.50	403.00	358.00- 458.50	-	-	-	-	-	-	-	-	3	43	19	36	38	21	92	42	30	18	22	13	2
Manufacturing .....	232	39.0	391.00	398.50	346.00- 431.00	-	-	-	-	-	-	-	-	3	17	17	30	37	13	73	31	11	-	-	-	-
Nonmanufacturing .....	147	37.5	467.00	480.00	390.00- 559.00	-	-	-	-	-	-	-	-	-	26	2	6	1	8	19	11	19	18	22	13	2
Electronics technicians.....	671	39.5	404.00	464.00	323.50- 464.00	5	10	-	10	5	15	1	58	25	29	20	9	20	23	9	417	15	-	-	-	-
Manufacturing .....	201	39.5	289.50	280.00	260.00- 320.00	5	10	-	10	5	14	-	55	20	24	12	2	16	18	6	4	-	-	-	-	-
Electronics technicians I.....	104	39.0	246.50	262.00	200.00- 289.50	5	10	-	10	5	15	1	29	12	14	-	-	-	3	-	-	-	-	-	-	-
Electronics technicians II: Manufacturing .....	89	39.5	323.50	320.00	273.00- 372.00	-	-	-	-	-	-	-	26	8	10	12	2	14	14	3	-	-	-	-	-	-
Electronics technicians III.....	52	38.5	430.00	453.00	372.00- 493.00	-	-	-	-	-	-	-	-	2	5	3	2	2	4	3	16	15	-	-	-	-
Registered industrial nurses .....	160	38.5	334.50	317.00	292.50- 374.00	-	-	-	-	2	2	10	15	21	33	7	14	21	13	12	8	2	-	-	-	-
Manufacturing .....	101	39.5	335.00	333.00	292.50- 368.50	-	-	-	-	-	-	7	9	15	18	6	14	17	5	4	4	2	-	-	-	-
Nonmanufacturing .....	59	37.5	334.00	308.00	290.50- 391.00	-	-	-	-	2	2	3	6	6	15	1	-	4	8	8	4	-	-	-	-	-

\* Workers were distributed as follows: 83 at \$640.00 to \$680.00; 10 at \$680.00 to \$720.00; 13 at \$720.00 to \$760.00; and 5 at \$760.00 to \$800.00.

\* Workers were distributed as follows: 86 at \$640.00 to \$680.00; 15 at \$680.00 to \$720.00; 10 at \$720.00 to \$760.00; and 5 at \$760.00 to \$800.00.

Also see footnotes at end of tables.

**Table A-3. Average weekly earnings of office, professional, and technical workers, by sex, in Newark, N.J., January 1981**

Sex, <sup>2</sup> occupation, and industry division	Number of workers	Average (mean <sup>2</sup> )		Sex, <sup>2</sup> occupation, and industry division	Number of workers	Average (mean <sup>2</sup> )		Sex, <sup>2</sup> occupation, and industry division	Number of workers	Average (mean <sup>2</sup> )	
		Weekly hours <sup>1</sup> (standard)	Weekly earnings (in dollars) <sup>1</sup>			Weekly hours <sup>1</sup> (standard)	Weekly earnings (in dollars) <sup>1</sup>			Weekly hours <sup>1</sup> (standard)	Weekly earnings (in dollars) <sup>1</sup>
Office occupations - men				Stenographers II .....	260	38.0	271.00	Accounting clerks III .....	1,524	37.5	249.00
Messengers.....	232	38.0	179.50	Manufacturing.....	120	39.0	296.50	Manufacturing.....	436	38.5	237.50
Nonmanufacturing.....	184	37.5	173.00	Transcribing-machine typists.....	135	37.0	206.00	Nonmanufacturing.....	1,088	37.0	254.00
Order clerks.....	287	39.0	240.00	Nonmanufacturing.....	104	36.5	198.00	Accounting clerks IV.....	366	37.5	271.00
Manufacturing.....	121	38.0	255.50	Typists.....	2,320	37.0	186.00	Manufacturing.....	133	38.5	271.00
Order clerks I.....	138	39.0	209.50	Manufacturing.....	512	38.5	204.00	Nonmanufacturing.....	233	37.0	270.50
Order clerks II.....	149	39.0	268.00	Nonmanufacturing.....	1,808	37.0	181.00	Transportation and utilities.....	29	39.5	299.00
Manufacturing.....	78	38.0	281.00	Typists I.....	1,531	37.0	175.50	Payroll clerks.....	366	38.0	236.00
Accounting clerks.....	394	38.0	261.00	Manufacturing.....	262	39.0	193.50	Manufacturing.....	216	38.5	242.50
Manufacturing.....	173	37.5	259.00	Nonmanufacturing.....	1,269	37.0	172.00	Nonmanufacturing.....	150	37.0	227.50
Nonmanufacturing.....	221	38.0	262.50	Typists II:				Transportation and utilities.....	37	37.0	283.50
Transportation and utilities.....	67	38.5	326.50	Manufacturing.....	250	38.0	215.00	Key entry operators.....	1,567	38.0	218.50
Accounting clerks II.....	125	38.5	242.00	File clerks.....	816	37.0	168.00	Manufacturing.....	597	38.5	240.50
Accounting clerks III.....	182	37.5	262.00	Manufacturing.....	82	38.5	184.00	Nonmanufacturing.....	970	37.5	205.00
Manufacturing.....	111	37.5	263.00	Nonmanufacturing.....	734	36.5	166.00	Key entry operators I.....	1,069	38.0	203.50
Nonmanufacturing.....	71	38.0	260.00	File clerks I.....	525	37.0	154.50	Manufacturing.....	408	38.5	230.00
Accounting clerks IV.....	84	37.5	290.00	Manufacturing.....	65	38.5	163.50	Nonmanufacturing.....	661	38.0	187.50
Office occupations - women				Nonmanufacturing.....	460	37.0	153.00	Key entry operators II.....	498	38.0	250.50
Secretaries.....	6,485	38.0	286.00	Transportation and utilities.....	41	38.0	202.50	Manufacturing.....	189	38.5	263.00
Manufacturing.....	3,695	39.0	289.50	File clerks II.....	157	36.5	173.50	Nonmanufacturing.....	309	37.5	243.00
Nonmanufacturing.....	2,790	37.5	281.00	Nonmanufacturing.....	151	36.5	173.00	Professional and technical occupations - men			
Transportation and utilities.....	406	37.0	354.50	Messengers.....	180	38.0	192.50	Computer systems analysts (business).....	1,155	37.5	500.00
Secretaries I.....	1,413	38.5	253.50	Nonmanufacturing.....	120	37.5	189.50	Manufacturing.....	362	39.0	497.50
Manufacturing.....	880	39.0	269.00	Switchboard operators.....	367	38.5	214.00	Nonmanufacturing.....	793	36.5	501.00
Nonmanufacturing.....	533	38.0	229.00	Manufacturing.....	84	39.0	227.00	Computer systems analysts (business) I.....	107	37.5	384.50
Secretaries II.....	1,328	38.0	266.50	Nonmanufacturing.....	283	38.0	210.00	Nonmanufacturing.....	70	36.5	385.00
Manufacturing.....	649	38.5	271.50	Switchboard operator-receptionists.....	581	38.0	198.00	Computer systems analysts (business) II.....	578	37.0	478.50
Nonmanufacturing.....	679	37.5	262.50	Manufacturing.....	308	38.0	204.00	Manufacturing.....	154	39.0	477.00
Transportation and utilities.....	81	37.5	327.50	Nonmanufacturing.....	273	38.5	191.50	Nonmanufacturing.....	424	36.5	479.00
Secretaries III.....	2,093	38.5	293.50	Transportation and utilities.....	26	40.0	206.50	Computer systems analysts (business) III.....	470	37.5	552.50
Manufacturing.....	1,316	39.0	293.50	Order clerks.....	695	37.5	220.00	Manufacturing.....	171	39.0	541.00
Nonmanufacturing.....	777	37.5	292.50	Manufacturing.....	603	37.5	223.00	Nonmanufacturing.....	299	36.5	559.00
Transportation and utilities.....	106	38.0	344.00	Order clerks I.....	535	37.5	213.00	Computer programmers (business).....	841	37.0	381.00
Secretaries IV.....	1,224	38.5	311.50	Manufacturing.....	443	37.0	215.00	Manufacturing.....	190	38.0	418.00
Manufacturing.....	725	39.0	315.50	Order clerks II.....	160	38.0	244.00	Nonmanufacturing.....	651	37.0	370.50
Nonmanufacturing.....	499	37.5	305.50	Manufacturing.....	160	38.0	244.00	Computer programmers (business) I.....	174	37.0	343.00
Secretaries V.....	282	37.5	349.50	Accounting clerks.....	3,697	37.5	232.50	Nonmanufacturing.....	157	37.0	341.50
Manufacturing.....	125	38.0	332.00	Manufacturing.....	1,296	38.5	225.00	Computer programmers (business) II.....	343	37.5	376.00
Nonmanufacturing.....	157	37.0	363.00	Nonmanufacturing.....	2,401	37.0	236.50	Manufacturing.....	101	38.0	409.00
Stenographers.....	831	38.0	255.50	Accounting clerks I.....	348	37.5	184.00	Nonmanufacturing.....	242	37.5	365.00
Manufacturing.....	275	39.5	272.00	Manufacturing.....	120	38.5	207.50				
Nonmanufacturing.....	556	37.5	247.50	Nonmanufacturing.....	228	37.0	172.00				
Stenographers I.....	571	38.5	248.50	Accounting clerks II.....	1,455	37.5	216.50				
Manufacturing.....	155	39.5	252.50	Manufacturing.....	603	38.5	209.00				
Nonmanufacturing.....	416	38.0	247.00	Nonmanufacturing.....	852	37.0	222.00				

See footnotes at end of tables.

Table A-3. Average weekly earnings of office, professional, and technical workers, by sex, in Newark, N.J., January 1981 —Continued

Sex, <sup>3</sup> occupation, and industry division	Number of workers	Average (mean <sup>2</sup> )		Sex, <sup>3</sup> occupation, and industry division	Number of workers	Average (mean <sup>2</sup> )		Sex, <sup>3</sup> occupation, and industry division	Number of workers	Average (mean <sup>2</sup> )	
		Weekly hours <sup>1</sup> (standard)	Weekly earnings (in dollars) <sup>1</sup>			Weekly hours <sup>1</sup> (standard)	Weekly earnings (in dollars) <sup>1</sup>			Weekly hours <sup>1</sup> (standard)	Weekly earnings (in dollars) <sup>1</sup>
Computer programmers (business) III .....	324	37.0	407.00	Drafters V.....	370	38.5	422.00	Computer programmers (business) I .....	150	37.0	314.00
Manufacturing.....	72	38.5	454.50	Manufacturing.....	224	39.0	393.50	Nonmanufacturing.....	132	37.0	312.50
Nonmanufacturing.....	252	36.5	393.50	Nonmanufacturing.....	146	37.5	466.50				
Transportation and utilities.....	60	35.0	414.00					Computer programmers (business) II .....	196	37.5	364.50
Computer operators .....	714	38.0	300.00	Electronics technicians .....	625	39.5	405.00	Nonmanufacturing.....	151	37.5	364.00
Manufacturing.....	271	39.0	303.00	Manufacturing.....	186	39.0	292.50				
Nonmanufacturing.....	443	37.5	298.00	Electronics technicians I .....	97	38.5	251.50	Computer programmers (business) III .....	119	36.5	381.50
Transportation and utilities.....	70	35.5	355.00	Manufacturing.....	81	39.5	323.50	Nonmanufacturing.....	110	36.0	370.50
Computer operators I .....	121	37.0	246.00	Electronics technicians II: Manufacturing.....	51	38.5	429.00	Computer operators .....	307	37.0	276.50
Nonmanufacturing.....	92	37.0	249.50	Professional and technical occupations - women				Manufacturing.....	147	38.0	269.00
Computer operators II .....	358	38.5	293.00					Nonmanufacturing.....	160	36.5	283.00
Manufacturing.....	141	39.0	299.00	Computer systems analysts (business) .....	374	37.0	467.00	Computer operators II .....	155	37.5	261.50
Nonmanufacturing.....	217	38.0	288.50	Nonmanufacturing.....	287	36.5	473.50	Manufacturing.....	89	38.0	271.00
Computer operators III .....	235	38.0	338.50	Computer systems analysts (business) I .....	53	37.0	374.00	Nonmanufacturing.....	66	37.0	248.50
Manufacturing.....	101	39.0	327.50	Computer systems analysts (business) II .....	193	37.0	446.50	Drafters .....	169	39.0	283.50
Nonmanufacturing.....	134	37.5	347.00	Nonmanufacturing.....	161	36.5	447.00	Manufacturing.....	82	39.0	265.50
Drafters .....	1,325	38.5	331.00	Computer systems analysts (business) III .....	128	37.0	536.00	Nonmanufacturing.....	87	39.0	300.50
Manufacturing.....	800	38.5	295.50	Nonmanufacturing.....	98	36.5	541.00	Drafters III.....	87	38.5	268.50
Nonmanufacturing.....	525	38.0	384.50	Computer programmers (business) .....	465	37.0	352.50	Manufacturing.....	54	39.0	257.50
Drafters II .....	194	38.0	201.50	Manufacturing.....	72	38.0	374.50	Nonmanufacturing.....	59	37.5	334.00
Drafters III.....	271	38.0	284.50	Nonmanufacturing.....	393	37.0	348.50	Registered industrial nurses .....	158	38.5	334.50
Manufacturing.....	182	38.0	273.50				Manufacturing.....	99	39.5	335.00	
Nonmanufacturing.....	89	37.5	307.50				Nonmanufacturing.....	59	37.5	334.00	
Drafters IV.....	462	38.5	346.00								
Manufacturing.....	206	39.0	299.00								
Nonmanufacturing.....	256	38.5	384.00								
Transportation and utilities.....	81	37.0	420.00								

See footnotes at end of tables.

**Table A-4. Hourly earnings of maintenance, toolroom, and powerplant workers in Newark, N.J., January 1981**

Occupation and industry division	Number of workers	Hourly earnings (in dollars) <sup>a</sup>			Number of workers receiving straight-time hourly earnings (in dollars) of —																						
		Mean <sup>2</sup>	Median <sup>2</sup>	Middle range <sup>2</sup>	5.40 and under 5.60	5.60-5.80	5.80-6.00	6.00-6.40	6.40-6.80	6.80-7.20	7.20-7.60	7.60-8.00	8.00-8.40	8.40-8.80	8.80-9.20	9.20-9.60	9.60-10.00	10.00-10.40	10.40-10.80	10.80-11.20	11.20-11.60	11.60-12.00	12.00-12.40	12.40-12.80	12.80-13.40	13.40-14.00	14.00 and over
Maintenance carpenters.....	250	9.64	9.23	8.33-10.88	-	-	-	-	-	2	8	16	43	16	25	35	13	7	-	48	-	24	10	-	3	-	-
Manufacturing .....	165	9.28	8.77	8.31-10.21	-	-	-	-	-	2	8	16	43	16	13	9	13	6	-	12	-	21	6	-	-	-	-
Nonmanufacturing .....	85	10.33	10.88	9.23-10.88	-	-	-	-	-	-	-	-	-	-	12	26	-	1	-	36	-	3	4	-	3	-	-
Maintenance electricians.....	870	10.10	9.77	8.47-11.11	-	-	-	-	-	-	20	46	136	57	109	36	68	26	50	125	3	39	6	89	5	39	16
Manufacturing .....	722	9.90	9.18	8.31-10.80	-	-	-	-	-	-	20	46	136	57	107	29	62	13	23	63	-	34	-	85	-	31	16
Nonmanufacturing .....	148	11.07	11.11	10.52-11.15	-	-	-	-	-	-	-	-	-	-	2	7	6	13	27	62	3	5	6	4	5	8	-
Transportation and utilities .....	74	10.68	11.11	10.43-11.11	-	-	-	-	-	-	-	-	-	-	-	6	-	10	20	38	-	-	-	-	-	-	-
Maintenance painters .....	161	9.47	9.00	8.21-10.70	-	2	-	-	-	-	1	2	55	13	20	4	11	8	5	13	5	7	15	-	-	-	-
Manufacturing .....	127	9.26	8.64	8.21- 9.99	-	2	-	-	-	-	1	2	55	12	13	-	11	4	-	5	5	7	15	-	-	-	-
Maintenance machinists.....	446	9.96	10.00	8.70-10.82	-	-	-	-	6	-	19	22	12	57	48	8	49	88	3	32	7	6	84	3	1	1	-
Manufacturing .....	396	9.83	9.77	8.61-10.80	-	-	-	-	6	-	19	22	12	57	48	6	44	76	-	22	-	1	83	-	-	-	-
Nonmanufacturing .....	50	11.01	10.97	10.39-11.45	-	-	-	-	-	-	-	-	-	-	-	2	5	12	3	10	7	5	1	3	1	1	-
Maintenance mechanics (machinery) .....	1,465	9.42	8.93	8.31-10.80	-	9	-	11	21	25	113	72	255	145	195	34	65	45	25	256	2	-	43	142	-	7	-
Manufacturing .....	1,312	9.37	8.87	8.31-10.80	-	9	-	5	9	25	113	72	243	144	180	28	48	23	9	220	2	-	43	139	-	-	-
Nonmanufacturing .....	153	9.83	10.16	9.05-10.88	-	-	-	6	12	-	-	-	12	1	15	6	17	22	16	36	-	-	-	3	-	7	-
Maintenance mechanics (motor vehicles) .....	696	10.28	10.16	8.68-12.14	-	-	-	16	-	4	22	12	21	113	67	27	14	53	45	54	31	11	185	-	21	-	-
Manufacturing .....	174	9.13	8.68	8.60- 8.68	-	-	-	-	-	-	-	12	16	108	9	2	-	-	-	-	-	4	23	-	-	-	-
Nonmanufacturing .....	522	10.66	10.99	9.34-12.15	-	-	-	16	-	4	22	-	5	5	58	25	14	53	45	54	31	7	162	-	21	-	-
Transportation and utilities .....	375	11.24	11.76	10.16-12.15	-	-	-	-	-	-	-	-	1	1	20	25	2	53	45	35	5	5	162	-	21	-	-
Maintenance pipefitters .....	555	10.38	10.55	8.87-11.63	-	-	-	-	-	-	25	3	41	30	70	18	67	15	33	68	8	86	54	3	1	33	-
Manufacturing .....	443	10.26	9.90	8.87-11.63	-	-	-	-	-	-	25	3	31	30	66	17	57	8	12	44	-	75	49	-	-	26	-
Nonmanufacturing .....	112	10.82	10.88	10.28-11.35	-	-	-	-	-	-	-	-	10	-	4	1	10	7	21	24	8	11	5	3	1	7	-
Transportation and utilities .....	29	9.73	10.55	8.32-10.55	-	-	-	-	-	-	-	-	8	-	4	1	-	1	12	3	-	-	-	-	-	-	-
Maintenance sheet-metal workers... ..	115	9.74	9.28	8.31-10.88	-	-	-	-	-	-	2	7	31	8	9	2	16	1	-	12	-	7	20	-	-	-	-
Manufacturing .....	101	9.55	9.15	8.31-10.00	-	-	-	-	-	-	2	7	31	8	9	2	16	1	-	-	-	7	18	-	-	-	-
Millwrights .....	242	10.45	10.88	8.31-12.33	-	-	-	-	-	4	20	16	28	2	12	-	8	13	1	20	-	30	88	-	-	-	-
Manufacturing .....	229	10.44	11.63	8.31-12.33	-	-	-	-	-	4	20	16	28	2	11	-	8	12	1	9	-	30	88	-	-	-	-
Maintenance trades helpers .....	203	7.07	7.09	6.17- 7.83	6	5	2	62	2	35	36	32	12	-	6	5	-	-	-	-	-	-	-	-	-	-	-
Manufacturing .....	147	6.90	7.09	6.17- 7.59	-	5	-	60	-	30	32	12	2	-	6	-	-	-	-	-	-	-	-	-	-	-	-
Machine-tool operators (toolroom)... ..	206	11.04	12.42	9.18-12.42	-	-	-	-	-	-	5	-	-	2	67	-	12	-	-	-	-	-	-	120	-	-	-
Manufacturing .....	206	11.04	12.42	9.18-12.42	-	-	-	-	-	-	5	-	-	2	67	-	12	-	-	-	-	-	-	120	-	-	-
Tool and die makers .....	765	10.02	9.77	8.91-10.80	-	-	-	-	-	-	12	37	45	18	160	56	82	84	58	22	101	-	-	90	-	-	-
Manufacturing .....	684	9.87	9.77	8.91-10.55	-	-	-	-	-	-	12	37	45	18	160	56	82	84	58	22	20	-	-	90	-	-	-
Stationary engineers .....	388	10.78	11.00	9.66-11.64	-	-	-	-	-	16	-	20	16	22	16	7	20	8	40	42	26	61	5	51	16	22	-
Manufacturing .....	234	10.56	10.79	8.84-12.54	-	-	-	-	-	-	-	20	15	21	12	5	18	8	18	42	-	10	5	51	7	2	-
Nonmanufacturing .....	154	11.12	11.60	10.43-11.60	-	-	-	-	-	16	-	-	1	1	4	2	2	-	22	-	26	51	-	-	9	20	-
Boiler tenders .....	175	9.33	8.65	7.88-10.99	-	4	-	-	-	12	3	29	27	22	2	7	1	23	-	15	-	11	-	12	3	4	-
Manufacturing .....	138	8.85	8.23	7.85-10.20	-	4	-	-	-	12	2	28	25	22	2	4	-	23	-	-	-	4	-	12	-	-	-

See footnotes at end of tables.

**Table A-5. Hourly earnings of material movement and custodial workers in Newark, N.J., January 1981**

Occupation and industry division	Number of workers	Hourly earnings (in dollars)*			Number of workers receiving straight-time hourly earnings (in dollars) of —																							
		Mean <sup>2</sup>	Median <sup>2</sup>	Middle range <sup>2</sup>	3.20	3.40	3.60	3.80	4.00	4.40	4.80	5.20	5.60	6.00	6.40	6.80	7.20	7.60	8.00	8.40	8.80	9.20	9.80	10.40	11.00	11.60	12.20	and over
					and under 3.40	3.60	3.80	4.00	4.40	4.80	5.20	5.60	6.00	6.40	6.80	7.20	7.60	8.00	8.40	8.80	9.20	9.80	10.40	11.00	11.60	12.20	and over	
Truckdrivers .....	4,324	10.09	11.50	8.27-11.89	-	-	-	-	51	66	28	329	100	63	50	138	108	119	265	126	19	87	11	267	801	1531	165	
Manufacturing .....	727	9.05	8.28	6.93- 9.52	-	-	-	-	39	20	10	23	19	7	35	47	12	31	144	119	18	78	9	6	2	24	* 84	
Nonmanufacturing .....	3,597	10.30	11.50	8.35-11.89	-	-	-	-	12	46	18	306	81	56	15	91	96	88	121	7	1	9	2	261	799	1507	81	
Transportation and utilities .....	1,965	11.59	11.65	11.50-12.05	-	-	-	-	-	5	-	5	2	1	2	-	-	4	67	4	-	7	-	-	689	1098	81	
Truckdrivers, light truck .....	499	6.22	5.43	4.90- 7.99	-	-	-	-	51	65	28	168	21	1	19	2	7	12	40	1	7	77	-	-	-	-	-	
Manufacturing .....	181	7.01	6.57	4.50- 9.52	-	-	-	-	39	20	10	-	19	-	10	-	-	1	-	-	7	75	-	-	-	-	-	
Nonmanufacturing .....	318	5.76	5.43	5.29- 5.57	-	-	-	-	12	45	18	168	2	1	9	2	7	11	40	1	-	2	-	-	-	-	-	
Truckdrivers, medium truck .....	898	10.85	12.05	6.92-12.05	-	-	-	-	-	1	-	73	20	22	17	95	8	7	15	16	5	3	3	-	43	486	84	
Manufacturing .....	215	11.97	10.36	6.92-19.57	-	-	-	-	-	-	-	23	-	7	17	11	8	4	15	15	4	1	3	-	1	22	** 84	
Truckdrivers, heavy truck .....	1,115	10.09	11.40	8.68-11.89	-	-	-	-	-	-	-	88	59	22	9	4	7	44	44	84	-	-	-	171	144	439	-	
Nonmanufacturing .....	1,027	10.23	11.40	8.35-11.89	-	-	-	-	-	-	-	88	59	22	5	4	7	44	44	-	-	-	-	171	144	439	-	
Truckdrivers, tractor-trailer .....	1,677	10.84	11.50	10.99-11.82	-	-	-	-	-	-	-	-	-	18	5	29	86	56	127	22	7	2	2	90	546	606	81	
Manufacturing .....	214	8.08	8.28	7.65- 8.28	-	-	-	-	-	-	-	-	-	-	4	28	4	26	120	20	7	2	-	1	2	-	-	
Nonmanufacturing .....	1,463	11.24	11.51	11.50-11.82	-	-	-	-	-	-	-	-	-	18	1	1	82	30	7	2	-	-	2	90	545	604	81	
Transportation and utilities .....	1,100	11.70	11.65	11.50-11.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	545	474	81	
Shippers .....	201	6.53	6.49	5.71- 6.89	-	-	-	-	-	-	15	8	43	20	54	25	10	5	8	6	3	2	-	2	-	-	-	
Manufacturing .....	189	6.52	6.45	5.71- 6.89	-	-	-	-	-	-	15	8	43	20	42	25	10	5	8	6	3	2	-	2	-	-	-	
Receivers .....	206	7.69	7.97	6.25- 9.14	-	2	-	-	10	2	15	4	6	18	3	26	11	6	42	8	9	1	18	10	15	-	-	
Manufacturing .....	109	8.16	7.65	6.40- 9.14	-	-	-	-	-	-	-	4	5	17	2	11	11	6	10	8	9	1	-	10	15	-	-	
Nonmanufacturing .....	97	7.16	8.01	5.00- 8.01	-	2	-	-	10	2	15	-	1	1	1	15	-	-	32	-	-	-	18	-	-	-	-	
Shippers and receivers .....	382	7.01	6.93	5.97- 8.09	-	-	-	-	-	12	47	16	24	33	16	65	47	22	38	20	21	4	12	5	-	-	-	
Manufacturing .....	293	6.97	7.03	5.97- 8.09	-	-	-	-	-	12	46	-	18	31	14	27	46	20	34	18	21	-	6	-	-	-	-	
Nonmanufacturing .....	89	7.14	6.85	5.63- 7.74	-	-	-	-	-	-	1	16	6	2	2	38	1	2	4	2	-	4	6	5	-	-	-	
Warehousemen .....	2,427	8.77	9.53	6.68-10.86	6	-	-	6	-	101	73	89	118	76	146	190	55	124	79	32	71	114	6	1087	54	-	-	
Manufacturing .....	1,082	7.68	7.19	6.54- 8.90	6	-	-	6	-	27	21	59	86	65	105	178	45	123	79	1	67	2	6	152	54	-	-	
Order fillers .....	743	5.47	5.27	4.79- 6.25	-	67	48	5	53	15	63	185	79	56	17	107	-	28	-	1	19	-	-	-	-	-	-	
Manufacturing .....	268	6.24	6.65	5.25- 7.10	-	-	-	-	-	5	60	37	9	7	17	105	-	28	-	-	-	-	-	-	-	-	-	
Nonmanufacturing .....	475	5.04	5.27	3.96- 5.75	-	67	48	5	53	10	3	148	70	49	-	2	-	-	-	1	19	-	-	-	-	-	-	
Shipping packers .....	696	5.49	5.38	4.25- 6.36	-	54	11	29	117	40	59	49	76	94	17	56	41	29	12	6	-	1	5	-	-	-	-	
Manufacturing .....	548	5.90	5.75	4.98- 6.95	-	-	9	29	30	39	56	48	76	94	17	56	41	29	12	6	-	1	5	-	-	-	-	
Material handling laborers .....	2,690	6.46	5.58	3.73- 8.69	48	42	624	65	187	161	136	114	27	127	117	156	20	124	3	100	-	217	10	79	68	265	-	
Manufacturing .....	1,029	5.98	6.07	4.68- 6.99	12	32	42	32	77	76	108	90	24	117	113	105	13	78	-	99	-	-	10	1	-	-	-	
Nonmanufacturing .....	1,661	6.75	4.75	3.65- 9.69	36	10	582	33	110	85	28	24	3	10	4	51	7	46	3	1	-	217	-	78	68	265	-	
Transportation and utilities .....	641	10.72	11.20	9.69-11.69	-	-	-	-	-	-	-	-	-	-	-	-	1	8	3	1	-	217	-	78	68	265	-	
Forklift operators .....	1,158	7.72	7.47	5.97-10.05	-	-	9	6	74	52	43	66	47	36	64	145	37	67	109	109	-	-	69	77	148	-	-	
Manufacturing .....	935	7.29	7.19	5.74- 8.42	-	-	6	6	60	42	42	61	41	28	60	129	37	66	102	109	-	-	69	77	-	-	-	
Guards .....	3,813	4.24	3.60	3.35- 4.35	1380	508	376	142	492	277	159	65	10	10	69	43	44	52	3	72	-	18	54	39	-	-	-	
Manufacturing .....	361	7.37	7.47	5.03- 9.84	-	-	7	-	-	27	70	8	2	2	34	25	36	42	2	-	-	15	52	39	-	-	-	
Nonmanufacturing .....	3,452	3.92	3.50	3.35- 4.17	1380	508	369	142	492	250	89	57	8	8	35	18	8	10	1	72	-	3	2	-	-	-	-	
Guards I .....	3,592	4.15	3.50	3.35- 4.25	1380	503	367	140	404	246	136	64	9	10	66	40	43	52	3	72	-	18	-	39	-	-	-	
Manufacturing .....	309	6.93	6.93	5.03- 7.81	-	-	7	-	-	27	70	8	2	2	34	25	36	42	2	-	-	15	-	39	-	-	-	
Nonmanufacturing .....	3,283	3.89	3.50	3.35- 4.10	1380	503	360	140	404	219	66	56	7	8	32	15	7	10	1	72	-	3	-	-	-	-	-	
Guards II .....	221	5.75	4.53	4.00- 6.84	-	5	9	2	88	31	23	1	1	-	3	3	1	-	-	-	-	-	54	-	-	-	-	

See footnotes at end of tables.

**Table A-5. Hourly earnings of material movement and custodial workers in Newark, N.J., January 1981 —Continued**

Occupation and industry division	Number of workers	Hourly earnings (in dollars) <sup>a</sup>			Number of workers receiving straight-time hourly earnings (in dollars) of —																						
		Mean <sup>b</sup>	Median <sup>b</sup>	Middle range <sup>b</sup>	3.20 and under 3.40	3.40-3.60	3.60-3.80	3.80-4.00	4.00-4.40	4.40-4.80	4.80-5.20	5.20-5.60	5.60-6.00	6.00-6.40	6.40-6.80	6.80-7.20	7.20-7.60	7.60-8.00	8.00-8.40	8.40-8.80	8.80-9.20	9.20-9.80	9.80-10.40	10.40-11.00	11.00-11.60	11.60-12.20	12.20 and over
Janitors, porters, and cleaners .....	7,332	4.67	3.70	3.35- 5.50	2660	789	489	68	630	234	445	233	287	163	243	249	127	214	116	16	6	197	104	16	19	27	-
Manufacturing .....	1,667	6.83	6.63	5.60- 7.93	-	10	12	23	64	34	149	119	224	137	172	174	89	50	115	15	-	141	104	16	19	-	-
Nonmanufacturing .....	5,665	4.04	3.40	3.35- 4.01	2660	779	477	45	566	200	296	114	63	26	71	75	38	164	1	1	6	56	-	-	-	27	-
Transportation and utilities .....	338	7.75	7.75	6.89- 7.80	-	-	-	-	6	2	6	8	5	9	49	-	38	164	1	1	6	16	-	-	-	27	-

<sup>a</sup> Workers were distributed as follows: 12 at \$12.20 to \$12.80; 2 at \$12.80 to \$13.40; 1 at \$13.40 to \$14.00; 3 at \$14.60 to \$15.20; 2 at \$15.20 to \$15.80; and 64 at \$15.80 and over.

<sup>b</sup> \* Workers were distributed as follows: 12 at \$12.20 to \$12.80; 2 at \$12.80 to \$13.40; 1 at \$13.40 to \$14.00; 3 at \$14.60 to \$15.20; 2 at \$15.20 to \$15.80; and 64 at \$15.80 and over.

Also see footnotes at end of tables.

**Table A-6. Average hourly earnings of maintenance, toolroom, powerplant, material movement, and custodial workers, by sex, in Newark, N.J., January 1981**

Sex, <sup>a</sup> occupation, and industry division	Number of workers	Average (mean <sup>b</sup> ) hourly earnings (in dollars) <sup>a</sup>	Sex, <sup>a</sup> occupation, and industry division	Number of workers	Average (mean <sup>b</sup> ) hourly earnings (in dollars) <sup>a</sup>	Sex, <sup>a</sup> occupation, and industry division	Number of workers	Average (mean <sup>b</sup> ) hourly earnings (in dollars) <sup>a</sup>
Maintenance, toolroom, and powerplant occupations - men			Tool and die makers.....	765	10.02	Order fillers.....	609	5.72
Maintenance carpenters.....	250	9.64	Manufacturing.....	684	9.87	Manufacturing.....	255	6.21
Manufacturing.....	165	9.28	Stationary engineers.....	384	10.80	Shipping packers.....	510	5.69
Nonmanufacturing.....	85	10.33	Manufacturing.....	234	10.56	Manufacturing.....	437	6.01
Maintenance electricians.....	868	10.10	Nonmanufacturing.....	150	11.17	Material handling laborers.....	2,312	6.84
Manufacturing.....	722	9.90	Boiler tenders.....	171	9.36	Manufacturing.....	992	5.95
Nonmanufacturing.....	146	11.08	Manufacturing.....	136	8.85	Nonmanufacturing.....	1,320	7.51
Transportation and utilities.....	74	10.68				Transportation and utilities.....	641	10.72
Maintenance painters.....	161	9.47	Material movement and custodial occupations - men			Forklift operators.....	1,144	7.71
Manufacturing.....	127	9.26	Truckdrivers.....	4,267	10.09	Manufacturing.....	924	7.28
Maintenance machinists.....	446	9.96	Manufacturing.....	727	9.05	Guards.....	3,590	4.22
Manufacturing.....	396	9.83	Nonmanufacturing.....	3,540	10.30	Manufacturing.....	333	7.37
Nonmanufacturing.....	50	11.01	Transportation and utilities.....	1,916	11.63	Nonmanufacturing.....	3,257	3.90
Maintenance mechanics (machinery).....	1,465	9.42	Truckdrivers, light truck.....	478	6.18	Guards I.....	3,380	4.13
Manufacturing.....	1,312	9.37	Manufacturing.....	181	7.01	Manufacturing.....	288	6.96
Nonmanufacturing.....	153	9.83	Nonmanufacturing.....	297	5.68	Nonmanufacturing.....	3,092	3.87
Maintenance mechanics (motor vehicles).....	679	10.28	Truckdrivers, medium truck.....	862	10.82	Guards II.....	210	5.62
Manufacturing.....	174	9.13	Manufacturing.....	215	11.97	Janitors, porters, and cleaners.....	4,850	4.93
Nonmanufacturing.....	505	10.68	Truckdrivers, heavy truck.....	1,115	10.09	Manufacturing.....	1,393	6.75
Transportation and utilities.....	358	11.30	Nonmanufacturing.....	1,027	10.23	Nonmanufacturing.....	3,457	4.19
Maintenance pipefitters.....	554	10.38	Truckdrivers, tractor-trailer.....	1,677	10.84	Transportation and utilities.....	257	7.84
Manufacturing.....	443	10.26	Manufacturing.....	214	8.08	Material movement and custodial occupations - women		
Nonmanufacturing.....	111	10.82	Nonmanufacturing.....	1,463	11.24	Shipping packers.....	186	4.92
Transportation and utilities.....	29	9.73	Transportation and utilities.....	1,100	11.70	Manufacturing.....	111	5.48
Maintenance sheet-metal workers.....	115	9.74	Shippers.....	177	6.56	Guards.....	221	4.58
Manufacturing.....	101	9.55	Manufacturing.....	166	6.55	Nonmanufacturing.....	193	4.18
Millwrights.....	242	10.45	Receivers:			Guards I.....	212	4.41
Manufacturing.....	229	10.44	Manufacturing.....	89	8.21	Nonmanufacturing.....	191	4.18
Maintenance trades helpers.....	203	7.07	Shippers and receivers.....	362	7.00	Janitors, porters, and cleaners.....	2,462	4.16
Manufacturing.....	147	6.90	Manufacturing.....	285	6.95	Manufacturing.....	274	7.26
Machine-tool operators (toolroom).....	206	11.04	Nonmanufacturing.....	77	7.17	Nonmanufacturing.....	2,188	3.77
Manufacturing.....	206	11.04	Warehousemen.....	2,387	8.81			
			Manufacturing.....	1,044	7.74			

See footnotes at end of tables.

**Table A-7. Indexes of earnings and percent increases for selected occupational groups, Newark, N.J., selected periods**

Period <sup>a</sup>	All industries					Manufacturing					Nonmanufacturing			
	Office clerical	Electronic data processing	Industrial nurses	Skilled maintenance	Unskilled plant	Office clerical	Electronic data processing	Industrial nurses	Skilled maintenance	Unskilled plant	Office clerical	Electronic data processing	Industrial nurses	Unskilled plant
Indexes (January 1977 = 100):														
January 1980.....	124.7	124.8	129.0	126.9	127.7	127.4	123.2	130.7	127.4	130.4	122.5	125.7	(*)	126.3
January 1981.....	136.2	135.0	139.6	138.3	139.4	138.2	135.0	139.3	137.8	145.4	134.4	135.2	(*)	136.4
Percent increases:														
January 1975 to January 1976.....	7.5	7.0	7.9	8.7	6.8	6.4	4.0	7.1	7.7	9.2	8.6	8.2	(*)	5.5
January 1976 to January 1977.....	6.0	5.1	7.7	8.0	6.2	6.5	5.3	7.7	8.0	6.6	5.6	5.0	(*)	5.9
January 1977 to January 1978.....	7.3	8.4	8.8	8.3	8.3	8.4	7.6	9.6	8.3	10.8	6.5	8.9	(*)	7.0
January 1978 to January 1979.....	7.3	6.9	9.2	8.2	7.7	7.9	6.6	9.1	8.4	7.4	6.8	7.0	(*)	7.8
January 1979 to January 1980.....	8.3	7.7	8.6	8.3	9.5	8.9	7.4	9.3	8.5	9.6	7.7	7.9	(*)	9.5
January 1980 to January 1981.....	9.2	8.2	8.2	9.0	9.2	8.5	9.6	6.6	8.2	11.5	9.7	7.6	10.9	8.0

See footnotes at end of tables.

**Table A-8. Pay relationships in establishments with paired office clerical occupations, Newark, N.J., January 1981**

Occupation for which earnings are compared	Occupation for which average earnings equal 100																							
	Secretaries					Stenographers		Transcribing-machine typists	Typists		File clerks		Messengers	Switchboard operators	Switchboard operator-receptionists	Order clerks		Accounting clerks				Payroll clerks	Key entry operators	
	I	II	III	IV	V	I	II		I	II	I	II				I	II	I	II	I	II		III	IV
Secretaries I.....	100	88	85	77	61	126	107	111	128	117	130	152	135	105	110	99	90	123	109	100	91	93	115	101
Secretaries II.....	113	100	87	78	67	118	121	104	128	118	143	133	154	112	111	122	108	123	112	101	90	100	119	106
Secretaries III.....	118	115	100	84	73	138	125	131	150	134	173	138	159	121	130	129	112	153	122	111	103	111	129	110
Secretaries IV.....	130	128	118	100	84	157	139	141	166	156	187	162	180	141	131	131	121	157	140	124	110	120	145	129
Secretaries V.....	165	150	137	120	100	174	158	141	166	178	217	198	219	162	145	144	132	202	155	135	121	145	177	154
Stenographers I.....	79	85	73	64	58	100	86	(*)	111	93	121	111	124	95	105	(*)	88	107	93	83	78	90	106	85
Stenographers II.....	93	82	80	72	63	116	100	101	121	115	(*)	(*)	134	96	(*)	(*)	(*)	103	92	75	96	109	98	
Transcribing-machine typists.....	90	97	77	71	71	(*)	99	100	127	109	138	112	108	105	93	94	(*)	122	100	88	73	85	105	96
Typists I.....	78	78	67	60	60	90	83	78	100	81	115	101	107	87	93	91	71	(*)	86	76	65	78	92	76
Typists II.....	85	85	75	64	56	108	87	91	123	100	134	117	121	95	95	97	87	117	100	89	76	88	108	93
File clerks I.....	77	70	58	53	46	83	(*)	73	87	75	100	81	98	76	79	79	63	(*)	75	68	57	72	82	68
File clerks II.....	66	75	72	62	50	90	(*)	89	99	86	124	100	92	85	76	(*)	(*)	99	81	72	(*)	68	97	76
Messengers.....	74	65	63	55	46	81	74	92	93	83	102	109	100	75	75	(*)	69	91	77	68	64	73	90	73
Switchboard operators.....	95	89	83	71	62	105	104	95	115	105	131	117	134	100	(*)	97	88	101	94	89	75	89	107	95
Switchboard operator-receptionists.....	91	90	77	77	69	96	(*)	108	107	106	126	132	133	(*)	100	96	83	122	104	89	79	94	104	94
Order clerks I.....	101	82	78	77	70	(*)	(*)	107	110	103	126	(*)	(*)	103	104	100	86	107	110	96	84	92	111	91
Order clerks II.....	111	93	89	83	75	114	(*)	(*)	140	114	159	(*)	146	113	120	116	100	(*)	131	110	102	114	133	97
Accounting clerks I.....	82	81	65	64	50	93	(*)	82	(*)	86	(*)	101	110	99	82	93	(*)	100	83	77	(*)	77	96	79
Accounting clerks II.....	91	90	82	71	64	107	97	100	116	100	133	124	131	107	96	91	77	120	100	86	74	93	108	94
Accounting clerks III.....	100	99	90	81	74	120	109	114	131	113	148	139	148	112	113	104	91	129	117	100	85	110	125	105
Accounting clerks IV.....	110	111	97	91	83	128	134	137	153	131	174	(*)	156	134	127	119	98	(*)	135	118	100	116	136	117
Payroll clerks.....	107	100	90	83	69	111	105	117	128	113	140	147	136	112	107	109	87	130	107	91	86	100	114	104
Key entry operators I.....	87	84	77	69	56	94	92	96	109	92	121	103	112	93	96	90	75	104	93	80	74	88	100	81
Key entry operators II.....	99	94	91	78	65	117	102	104	132	108	146	132	136	106	107	110	103	127	106	95	86	96	123	100

NOTE: This matrix table shows the average (mean) relationship of earnings in establishments between any two occupations compared. Earnings for an occupation in the table stub are expressed as a percent of the earnings for an occupation in the column heading at the point where the data lines for the two intersect. For example, reading across the Secretaries II row, the 113 in the Secretaries I column indicates that Secretaries II average 113 percent of (or 13 percent

more than) the earnings of Secretaries I.

See appendix A for method of computation.

Also see footnotes at end of tables.

**Table A-9. Pay relationships in establishments with paired professional and technical occupations, Newark, N.J., January 1981**

Occupation for which earnings are compared	Occupation for which average earnings equal 100																	
	Computer systems analysts (business)			Computer programmers (business)			Computer operators			Peripheral equipment operators	Computer data librarians	Drafters				Electronics technicians		Registered industrial nurses
	I	II	III	I	II	III	I	II	III			II	III	IV	V	I	III	
Computer systems analysts (business) I .....	100	78	67	(*)	116	107	138	126	115	(*)	135	(*)	139	105	(*)	(*)	86	117
Computer systems analysts (business) II .....	128	100	84	139	124	116	182	163	142	(*)	169	(*)	166	144	111	(*)	94	145
Computer systems analysts (business) III .....	149	119	100	166	148	136	208	190	165	(*)	191	(*)	190	165	121	(*)	117	169
Computer programmers (business) I .....	(*)	72	60	100	83	75	135	112	95	(*)	139	(*)	107	(*)	71	(*)	(*)	96
Computer programmers (business) II .....	86	81	68	120	100	86	150	133	111	152	145	(*)	123	93	77	(*)	(*)	109
Computer programmers (business) III .....	93	86	74	134	117	100	158	141	118	180	119	(*)	142	107	78	(*)	93	124
Computer operators I .....	72	55	48	74	67	63	100	85	71	(*)	95	(*)	81	71	57	(*)	58	76
Computer operators II .....	79	61	53	89	75	71	117	100	84	125	107	112	103	81	64	(*)	69	88
Computer operators III .....	87	71	61	106	90	85	141	119	100	137	128	(*)	119	91	73	(*)	79	104
Peripheral equipment operators .....	(*)	(*)	(*)	(*)	66	55	(*)	80	73	100	92	(*)	(*)	(*)	(*)	(*)	(*)	78
Computer data librarians .....	74	59	52	72	69	84	105	94	78	108	100	(*)	(*)	(*)	(*)	(*)	(*)	91
Drafters II .....	(*)	(*)	(*)	(*)	(*)	(*)	(*)	89	(*)	(*)	(*)	100	77	71	55	(*)	(*)	82
Drafters III .....	72	60	53	93	81	70	124	97	84	(*)	(*)	129	100	79	63	(*)	(*)	80
Drafters IV .....	95	69	61	(*)	108	93	142	124	110	(*)	(*)	140	126	100	80	(*)	91	109
Drafters V .....	(*)	90	83	141	130	128	177	155	137	(*)	(*)	182	158	126	100	(*)	99	138
Electronics technicians I .....	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	100	(*)	(*)
Electronics technicians III .....	116	107	86	(*)	(*)	107	173	146	126	(*)	(*)	(*)	(*)	110	101	(*)	100	121
Registered industrial nurses .....	85	69	59	104	91	81	132	113	96	128	110	121	125	92	72	(*)	82	100

See table A-8 for description of these pay relationships and appendix A for method of computation. Also see footnotes at end of tables.

**Table A-10. Pay relationships in establishments with paired maintenance, toolroom, and powerplant occupations, Newark, N.J., January 1981**

Occupation for which earnings are compared	Occupation for which average earnings equal 100													
	Carpenters	Electricians	Painters	Machinists	Mechanics		Pipefitters	Sheet-metal workers	Millwrights	Trades helpers	Machine-tool operators (toolroom)	Tool and die makers	Stationary engineers	Boiler tenders
					Machinery	Motor vehicles								
Maintenance carpenters.....	100	98	102	98	100	104	99	99	99	125	(*)	96	89	99
Maintenance electricians.....	102	100	104	102	103	104	102	101	101	127	101	99	95	103
Maintenance painters.....	98	97	100	96	97	99	97	97	98	128	97	93	86	97
Maintenance machinists.....	102	98	104	100	101	100	98	99	101	122	(*)	96	96	102
Maintenance mechanics (machinery).....	100	97	103	99	100	100	100	100	100	132	(*)	97	89	93
Maintenance mechanics (motor vehicles).....	96	96	101	100	100	100	100	100	100	133	(*)	98	92	103
Maintenance pipefitters.....	101	98	103	102	100	100	100	100	100	130	99	97	95	101
Maintenance sheet-metal workers.....	101	99	103	101	100	100	100	100	100	125	(*)	97	92	104
Millwrights.....	101	99	102	99	100	100	100	100	100	(*)	(*)	93	92	102
Maintenance trades helpers.....	80	79	78	82	76	75	77	80	(*)	100	(*)	(*)	74	83
Machine-tool operators (toolroom).....	(*)	99	103	(*)	(*)	(*)	101	(*)	(*)	(*)	100	96	(*)	(*)
Tool and die makers.....	104	101	107	104	103	102	103	103	108	(*)	104	100	100	114
Stationary engineers.....	113	105	116	104	112	109	106	109	109	135	(*)	100	100	115
Boiler tenders.....	101	97	103	98	108	97	99	96	98	120	(*)	88	87	100

See table A-8 for description of these pay relationships and appendix A for method of computation. Also see footnotes at end of tables.

**Table A-11. Pay relationships in establishments with paired material movement and custodial occupations, Newark, N.J., January 1981**

Occupation for which earnings are compared	Occupation for which average earnings equal 100														
	Truckdrivers				Shippers	Receivers	Shippers and receivers	Warehousemen	Order fillers	Shipping packers	Material handling laborers	Forklift operators	Guards		Janitors, porters, and cleaners
	Light truck	Medium truck	Heavy truck	Tractor-trailer									I	II	
Truckdrivers, light truck.....	100	(*)	(*)	(*)	(*)	(*)	97	92	(*)	(*)	(*)	(*)	119	(*)	117
Truckdrivers, medium truck.....	(*)	100	(*)	(*)	131	137	108	127	135	125	119	113	127	(*)	119
Truckdrivers, heavy truck.....	(*)	(*)	100	97	(*)	(*)	(*)	(*)	(*)	(*)	104	110	(*)	(*)	160
Truckdrivers, tractor-trailer.....	(*)	(*)	103	100	108	114	100	128	(*)	133	115	105	186	(*)	154
Shippers.....	(*)	76	(*)	92	100	90	83	95	(*)	107	113	102	125	(*)	108
Receivers.....	(*)	73	(*)	87	111	100	122	101	137	113	116	105	118	(*)	113
Shippers and receivers.....	103	93	(*)	100	121	82	100	(*)	(*)	121	121	103	120	(*)	114
Warehousemen.....	108	79	(*)	78	105	99	(*)	100	100	112	124	98	116	(*)	112
Order fillers.....	(*)	74	(*)	(*)	(*)	73	(*)	100	100	97	111	95	(*)	(*)	111
Shipping packers.....	(*)	80	(*)	75	93	89	83	89	104	100	107	98	111	(*)	111
Material handling laborers.....	(*)	84	96	87	89	86	82	80	90	93	100	93	104	(*)	111
Forklift operators.....	(*)	88	91	95	98	95	97	102	105	102	108	100	113	(*)	110
Guards I.....	84	79	(*)	54	80	85	84	86	(*)	90	96	88	100	(*)	105
Guards II.....	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	100	114
Janitors, porters, and cleaners.....	85	84	62	65	93	88	88	89	90	90	90	91	95	88	100

See table A-8 for description of these pay relationships and appendix A for method of computation. Also see footnotes at end of tables.

**Table A-12. Weekly earnings of office workers in establishments employing 500 workers or more in Newark, N.J., January 1981**

Occupation and industry division	Number of workers	Average weekly hours <sup>1</sup> (standard)	Weekly earnings (in dollars) <sup>1</sup>			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean <sup>2</sup>	Median <sup>2</sup>	Middle range <sup>2</sup>	120 and under 130	130 — 140	140 — 150	150 — 160	160 — 170	170 — 180	180 — 190	190 — 200	200 — 220	220 — 240	240 — 260	260 — 280	280 — 300	300 — 320	320 — 340	340 — 360	360 — 380	380 — 400	400 — 440	440 — 480	480 and over
Secretaries.....	5,105	38.5	294.00	283.00	240.00- 340.00	-	-	1	3	14	48	92	115	425	577	583	605	489	480	395	352	249	322	217	97	41
Manufacturing .....	2,911	39.0	296.00	283.00	245.00- 337.00	-	-	-	-	-	-	10	22	236	368	368	396	324	297	188	158	104	243	136	49	12
Nonmanufacturing .....	2,194	37.5	291.00	283.00	231.00- 342.00	-	-	1	3	14	48	82	93	189	209	215	209	165	183	207	194	145	79	81	48	29
Transportation and utilities .....	397	36.5	369.50	368.00	333.00- 395.50	-	-	-	-	-	-	-	-	1	5	5	6	12	45	31	82	61	59	54	20	16
Secretaries I.....	1,192	38.5	257.50	235.50	210.00- 276.50	-	-	-	2	12	33	66	60	242	227	156	118	75	4	-	-	1	195	1	-	-
Manufacturing .....	690	39.0	278.00	239.50	218.00- 397.00	-	-	-	-	-	-	4	16	169	161	86	43	15	-	-	-	1	195	-	-	-
Nonmanufacturing .....	502	38.0	229.50	226.00	195.00- 265.00	-	-	-	2	12	33	62	44	73	66	70	75	60	4	-	-	-	-	1	-	-
Secretaries II.....	942	38.0	275.00	275.00	234.00- 317.00	-	-	-	1	1	7	21	40	72	132	130	81	95	146	155	36	7	13	5	-	-
Manufacturing .....	427	38.5	276.00	273.00	243.00- 308.00	-	-	-	-	-	-	6	6	19	62	82	51	76	61	27	24	5	6	2	-	-
Nonmanufacturing .....	515	37.5	274.50	278.00	224.00- 325.50	-	-	-	1	1	7	15	34	53	70	48	30	19	85	128	12	2	7	3	-	-
Transportation and utilities .....	74	37.0	334.50	317.50	317.00- 349.50	-	-	-	-	-	-	-	-	-	-	2	-	1	36	11	12	2	7	3	-	-
Secretaries III.....	1,642	38.5	299.50	287.00	250.00- 346.00	-	-	-	-	-	7	3	15	103	175	203	259	169	178	93	141	105	15	154	20	2
Manufacturing .....	1,125	39.0	296.50	282.00	255.00- 321.50	-	-	-	-	-	-	-	-	44	120	153	229	146	137	71	54	37	9	124	1	-
Nonmanufacturing .....	517	37.5	305.50	313.50	235.00- 358.00	-	-	-	-	-	7	3	15	59	55	50	30	23	41	22	87	68	6	30	19	2
Secretaries IV.....	1,021	38.5	322.00	312.00	275.00- 356.00	-	-	1	-	1	-	2	-	8	41	91	140	139	129	109	145	72	31	26	66	20
Manufacturing .....	600	39.0	323.50	316.50	283.00- 352.00	-	-	-	-	-	-	-	-	4	25	47	70	81	90	76	73	55	21	7	44	7
Nonmanufacturing .....	421	37.5	319.50	308.00	267.00- 358.50	-	-	1	-	1	-	2	-	4	16	44	70	58	39	33	72	17	10	19	22	13
Transportation and utilities .....	109	38.0	351.00	342.00	320.00- 358.50	-	-	-	-	-	-	-	-	1	5	2	4	8	5	6	52	8	2	2	7	7
Secretaries V.....	207	38.0	377.50	373.50	333.00- 400.00	-	-	-	-	-	-	-	-	-	-	1	5	9	18	29	13	52	28	24	9	19
Manufacturing .....	69	39.5	362.00	345.00	316.50- 395.00	-	-	-	-	-	-	-	-	-	-	-	3	6	9	14	7	6	12	3	4	5
Nonmanufacturing .....	138	37.0	385.00	373.50	355.50- 400.50	-	-	-	-	-	-	-	-	-	-	1	2	3	9	15	6	46	16	21	5	* 14
Transportation and utilities .....	72	36.5	399.00	373.50	373.50- 429.50	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4	-	37	7	14	1	8
Stenographers.....	701	38.0	257.50	260.50	203.00- 300.00	-	-	7	18	29	29	45	36	44	33	100	92	97	83	40	5	36	3	4	-	-
Manufacturing .....	177	39.5	267.00	257.00	202.50- 299.00	-	-	-	-	2	1	18	19	18	11	21	10	35	6	1	-	35	-	-	-	-
Nonmanufacturing .....	524	37.5	254.50	261.00	204.00- 300.00	-	-	7	18	27	28	27	17	26	22	79	82	62	77	39	5	1	3	4	-	-
Transportation and utilities .....	180	36.5	293.00	301.50	273.50- 314.50	-	-	-	-	-	2	1	3	5	12	15	21	31	66	13	4	-	3	4	-	-
Stenographers I.....	427	38.5	247.50	252.50	194.00- 300.00	-	-	6	18	22	20	32	31	36	28	31	53	47	67	26	2	1	3	4	-	-
Manufacturing .....	62	39.5	207.50	200.00	190.00- 220.50	-	-	-	-	2	1	14	17	12	8	5	1	2	-	-	-	-	-	-	-	-
Nonmanufacturing .....	365	38.0	254.50	263.50	197.50- 310.00	-	-	6	18	20	19	18	14	24	20	26	52	45	67	26	2	1	3	4	-	-
Stenographers II.....	274	38.0	274.00	269.00	246.00- 299.50	-	-	1	-	7	9	13	5	8	5	69	39	50	16	14	3	35	-	-	-	-
Manufacturing .....	115	39.0	299.50	299.00	256.00- 372.50	-	-	-	-	-	4	2	6	3	16	9	33	6	1	-	35	-	-	-	-	-
Nonmanufacturing .....	159	37.0	255.00	254.50	246.00- 281.00	-	-	1	-	7	9	9	3	2	53	30	17	10	13	3	-	-	-	-	-	-
Transportation and utilities .....	35	37.0	307.50	317.00	293.00- 331.00	-	-	-	-	-	-	-	-	-	1	2	3	3	3	10	13	3	-	-	-	-
Transcribing-machine typists.....	70	37.5	233.00	212.00	178.50- 279.00	-	-	2	4	4	10	6	3	9	7	3	5	1	1	11	-	4	-	-	-	-
Typists.....	1,067	37.5	205.50	195.00	170.50- 228.00	2	23	72	76	76	138	94	116	144	118	75	33	16	59	7	-	5	5	2	1	5
Manufacturing .....	319	39.0	203.50	195.00	175.00- 219.00	-	4	2	12	21	58	46	51	25	32	8	7	3	4	-	-	-	-	-	1	-
Nonmanufacturing .....	748	37.0	206.00	196.00	165.50- 228.00	2	19	70	64	55	80	48	71	93	93	43	25	9	56	3	-	5	5	2	-	5
Typists I.....	462	38.0	192.50	177.00	164.50- 205.00	2	20	26	48	49	97	55	31	44	21	39	16	4	-	-	-	2	3	-	-	5
Manufacturing .....	196	39.0	196.50	187.50	172.00- 217.50	-	4	2	10	17	44	32	18	22	14	27	6	-	-	-	-	-	-	-	-	-
Nonmanufacturing .....	266	37.5	190.00	172.50	156.50- 197.00	2	16	24	38	32	53	23	13	22	7	12	10	4	-	-	-	2	3	-	-	5
Typists II.....	605	37.5	215.00	206.50	181.00- 233.00	-	3	46	28	27	41	39	85	100	97	36	17	12	59	7	-	3	2	2	1	-
Manufacturing .....	123	39.5	215.00	202.50	186.00- 225.50	-	-	-	2	4	14	14	27	29	11	5	2	7	3	4	-	-	-	-	-	-
Nonmanufacturing .....	482	37.0	215.00	211.50	178.00- 237.50	-	3	46	26	23	27	25	58	71	86	31	15	5	56	3	-	3	2	2	-	-
File clerks.....	378	37.0	190.50	184.50	156.00- 210.00	4	23	50	21	35	35	31	18	104	30	7	3	4	2	6	-	-	5	-	-	-
Manufacturing .....	331	36.5	188.00	183.00	155.50- 208.00	4	23	47	13	31	29	29	17	95	24	6	3	2	1	6	-	-	1	-	-	-
Transportation and utilities .....	38	36.0	250.00	237.50	219.00- 279.00	-	-	1	-	-	-	-	-	2	3	4	9	6	3	2	1	6	-	-	-	-
Nonmanufacturing .....	178	37.0	169.50	153.00	142.50- 184.00	3	21	50	21	18	17	5	6	17	11	4	2	1	1	-	-	-	1	-	-	-
Transportation and utilities .....	147	36.5	168.00	152.50	142.50- 180.00	3	21	47	13	14	13	5	5	8	9	4	2	1	1	-	-	-	1	-	-	-

See footnotes at end of tables.

Table A-12. Weekly earnings of office workers in establishments employing 500 workers or more in Newark, N.J., January 1981—Continued

Occupation and industry division	Number of workers	Average weekly hours <sup>1</sup> (standard)	Weekly earnings (in dollars) <sup>2</sup>			Number of workers receiving straight-time weekly earnings (in dollars) of —																					
			Mean <sup>3</sup>	Median <sup>3</sup>	Middle range <sup>3</sup>	120 and under 130	130-140	140-150	150-160	160-170	170-180	180-190	190-200	200-220	220-240	240-260	260-280	280-300	300-320	320-340	340-360	360-380	380-400	400-440	440-480	480 and over	
						9	12	18	35	69	20	12	22	76	19	18	8	4	-	10	-	-	1	-	-	-	-
Messengers .....	333	38.0	191.50	186.00	164.00- 210.00	9	12	18	35	69	20	12	22	76	19	18	8	4	-	10	-	-	1	-	-	-	-
Manufacturing .....	83	39.0	211.50	181.00	158.00- 257.50	-	1	-	22	14	4	1	2	6	5	9	8	1	-	10	-	-	-	-	-	-	-
Nonmanufacturing .....	250	37.5	185.00	186.00	167.00- 202.50	9	11	18	13	55	16	11	20	70	14	9	-	3	-	-	-	-	1	-	-	-	
Switchboard operators .....	185	39.0	251.50	241.00	196.00- 307.50	-	-	5	1	7	9	14	14	30	12	14	6	7	47	3	2	4	10	-	-	-	
Manufacturing .....	52	39.5	250.00	225.50	204.00- 287.00	-	-	-	-	2	4	5	13	5	8	1	3	4	-	-	-	-	7	-	-	-	
Nonmanufacturing .....	133	38.5	252.50	245.50	195.50- 307.50	-	-	5	1	7	7	10	9	17	7	6	5	4	43	3	2	4	3	-	-	-	
Transportation and utilities .....	64	39.0	292.50	307.50	275.00- 307.50	-	-	-	-	-	-	1	3	4	4	3	4	2	34	1	1	4	3	-	-	-	
Switchboard operator-receptionists .....	66	38.5	219.00	205.00	200.00- 230.00	-	-	-	-	3	4	5	28	15	2	5	-	2	2	-	-	-	-	-	-	-	
Order clerks .....	220	39.0	232.00	230.00	200.00- 264.50	-	2	2	1	4	10	19	13	44	41	21	38	15	2	1	5	-	2	-	-	-	
Manufacturing .....	207	38.5	236.50	231.00	207.50- 264.50	-	-	-	-	6	19	13	44	41	21	36	15	2	1	5	-	2	-	-	-	-	
Order clerks I .....	129	38.5	215.00	210.00	189.50- 238.00	-	2	2	1	4	10	16	12	39	11	11	15	4	-	1	-	1	-	-	-	-	
Manufacturing .....	116	38.0	221.50	211.50	192.50- 248.00	-	-	-	-	6	16	12	39	11	11	15	4	-	-	1	-	1	-	-	-	-	
Order clerks II .....	91	39.5	256.00	244.00	234.50- 270.50	-	-	-	-	-	-	3	1	5	30	10	23	11	2	1	4	-	1	-	-	-	
Manufacturing .....	91	39.5	256.00	244.00	234.50- 270.50	-	-	-	-	-	-	3	1	5	30	10	23	11	2	1	4	-	1	-	-	-	
Accounting clerks .....	2,056	37.5	260.50	254.50	210.00- 310.00	-	1	18	40	76	89	107	85	246	211	199	164	140	213	302	61	60	24	15	5	-	
Manufacturing .....	530	39.0	249.00	231.50	207.00- 284.50	-	-	-	6	15	21	26	29	98	97	51	45	42	26	23	10	12	3	3	-	-	
Nonmanufacturing .....	1,526	36.5	265.00	265.00	211.50- 333.00	-	1	18	34	61	68	81	56	148	114	148	119	98	187	279	38	50	12	12	2	-	
Accounting clerks I .....	125	38.0	185.00	172.00	162.00- 201.00	-	-	16	11	34	15	11	6	10	7	6	7	2	-	-	-	-	-	-	-	-	
Accounting clerks II .....	833	37.5	238.50	218.00	186.00- 305.50	-	1	1	25	39	67	86	68	150	89	37	33	19	152	4	7	53	2	-	-	-	
Manufacturing .....	191	39.0	227.00	213.00	191.50- 252.50	-	-	2	6	16	19	24	41	28	14	11	7	14	2	3	4	-	-	-	-	-	
Nonmanufacturing .....	642	37.0	242.00	218.00	185.00- 310.00	-	1	1	23	33	51	67	44	109	61	23	22	12	138	2	4	49	2	-	-	-	
Accounting clerks III .....	813	37.0	285.50	292.00	238.00- 333.00	-	-	1	4	3	7	9	10	77	99	106	56	49	44	287	40	6	12	1	2	-	
Manufacturing .....	214	39.5	263.00	244.00	224.50- 292.00	-	-	-	-	-	-	3	3	40	53	23	27	15	9	13	14	6	7	1	-	-	
Nonmanufacturing .....	599	36.0	293.50	329.50	250.00- 333.00	-	-	1	4	3	7	6	7	37	46	83	29	34	35	274	26	-	5	-	2	-	
Accounting clerks IV .....	281	38.0	289.00	279.50	256.50- 299.00	-	-	-	-	-	-	1	1	8	15	49	68	70	16	11	14	1	10	14	3	-	
Manufacturing .....	77	39.0	294.00	293.50	241.00- 326.50	-	-	-	-	-	-	-	-	8	9	9	7	18	2	8	6	-	5	2	3	-	
Nonmanufacturing .....	204	37.5	287.00	274.00	261.00- 296.00	-	-	-	-	-	-	1	1	-	6	40	61	52	14	3	8	1	5	12	-	-	
Transportation and utilities .....	27	39.5	328.00	320.00	252.00- 405.00	-	-	-	-	-	-	-	-	-	-	8	4	-	1	1	2	-	-	11	-	-	
Payroll clerks .....	200	38.5	256.50	232.50	211.50- 299.50	-	-	2	1	-	5	12	10	52	26	18	13	17	11	9	3	6	5	8	1	1	
Manufacturing .....	115	39.0	266.00	235.00	215.00- 300.00	-	-	-	-	-	3	-	2	34	20	9	12	5	7	7	-	5	1	8	1	1	
Nonmanufacturing .....	85	37.5	243.50	217.00	194.00- 299.50	-	-	2	1	-	2	12	8	18	6	9	1	12	4	2	3	1	4	-	-	-	
Transportation and utilities .....	36	36.5	278.50	299.50	208.00- 324.50	-	-	-	-	-	-	3	3	5	-	5	1	9	-	2	3	1	4	-	-	-	
Key entry operators .....	869	38.0	241.00	228.50	199.50- 272.00	-	2	12	23	29	46	63	43	150	118	110	92	48	35	29	6	50	11	-	2	-	
Manufacturing .....	421	38.5	253.00	245.50	213.00- 277.00	-	-	-	2	3	7	26	16	84	54	57	78	26	21	15	3	23	4	-	2	-	
Nonmanufacturing .....	448	37.0	229.50	219.00	184.00- 253.00	-	2	12	21	26	39	37	27	66	64	53	14	22	14	14	3	27	7	-	-	-	
Key entry operators I .....	483	38.0	229.00	218.50	189.00- 264.50	-	2	-	16	26	35	50	30	86	49	65	72	14	10	1	1	26	-	-	-	-	
Manufacturing .....	259	38.5	245.50	241.00	205.50- 272.00	-	-	2	3	7	23	13	50	29	38	59	9	1	1	1	23	-	-	-	-	-	
Nonmanufacturing .....	224	37.0	210.50	201.00	175.00- 241.50	-	2	-	14	23	28	27	17	36	20	27	13	5	9	-	-	3	-	-	-	-	
Key entry operators II .....	386	38.0	255.50	240.50	213.00- 298.00	-	-	12	7	3	11	13	13	64	69	45	20	34	25	28	5	24	11	-	2	-	
Manufacturing .....	162	38.5	264.50	255.00	220.00- 301.00	-	-	-	-	-	-	3	3	34	25	19	17	20	14	2	4	-	-	-	2	-	
Nonmanufacturing .....	224	37.0	249.00	230.50	206.00- 293.50	-	-	12	7	3	11	10	10	30	44	26	1	17	5	14	3	24	7	-	-	-	

\* Workers were distributed as follows: 9 at \$480.00 to \$520.00; and 5 at \$520.00 to \$560.00. Also see footnotes at end of tables.

**Table A-13. Weekly earnings of professional and technical workers in establishments employing 500 workers or more in Newark, N.J., January 1981**

Occupation and industry division	Number of workers	Average weekly hours <sup>1</sup> (standard)	Weekly earnings (in dollars) <sup>1</sup>			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean <sup>2</sup>	Median <sup>2</sup>	Middle range <sup>2</sup>	120 and under 140	140 - 160	160 - 180	180 - 200	200 - 220	220 - 240	240 - 260	260 - 280	280 - 300	300 - 320	320 - 340	340 - 360	360 - 380	380 - 400	400 - 440	440 - 480	480 - 520	520 - 560	560 - 600	600 - 640	640 and over
Computer systems analysts (business).....	1,340	37.0	493.50	496.00	421.00- 560.50	-	-	-	-	-	-	-	-	5	7	23	44	62	75	212	163	244	169	155	81	100
Manufacturing.....	400	39.0	483.00	483.00	410.00- 535.00	-	-	-	-	-	-	-	-	1	5	11	15	18	8	66	60	80	69	33	20	14
Nonmanufacturing.....	940	36.5	498.00	499.00	423.00- 576.00	-	-	-	-	-	-	-	-	4	2	12	29	44	67	146	103	164	100	122	61	86
Computer systems analysts (business) I.....	153	37.5	387.50	375.00	345.50- 410.50	-	-	-	-	-	-	-	-	5	7	20	25	24	20	27	8	9	2	5	1	-
Manufacturing.....	55	39.5	366.50	348.00	336.00- 389.50	-	-	-	-	-	-	-	-	1	5	11	11	12	3	10	-	-	-	1	1	-
Nonmanufacturing.....	98	36.0	399.50	384.00	350.50- 431.00	-	-	-	-	-	-	-	-	4	2	9	14	12	17	17	8	9	2	4	-	-
Computer systems analysts (business) II.....	663	37.0	475.50	472.50	411.50- 528.00	-	-	-	-	-	-	-	-	-	-	3	19	38	55	134	97	140	66	81	22	8
Manufacturing.....	165	39.0	467.00	470.00	418.50- 500.00	-	-	-	-	-	-	-	-	-	-	4	6	5	39	43	42	17	6	3	-	-
Nonmanufacturing.....	498	36.5	478.50	480.00	409.00- 537.50	-	-	-	-	-	-	-	-	-	-	3	15	32	50	95	54	98	49	75	19	8
Computer systems analysts (business) III.....	524	37.5	546.50	539.00	487.50- 608.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51	58	95	101	69	58	* 92
Manufacturing.....	180	39.0	533.00	532.00	487.00- 574.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	17	38	52	26	16	14
Nonmanufacturing.....	344	36.5	553.50	552.50	487.50- 624.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34	41	57	49	43	42	78
Computer programmers (business).....	1,008	37.0	374.00	351.50	306.00- 427.50	-	-	-	-	1	28	88	113	113	87	124	62	67	93	44	122	32	28	5	1	-
Manufacturing.....	167	38.5	432.50	425.00	366.50- 489.00	-	-	-	-	-	-	-	-	2	6	5	9	15	9	12	36	16	33	5	17	2
Nonmanufacturing.....	841	36.5	362.00	342.00	299.00- 405.00	-	-	-	-	1	28	86	107	108	78	109	53	55	57	28	89	27	11	3	1	-
Computer programmers (business) I.....	259	37.0	337.50	301.50	282.50- 360.00	-	-	-	-	1	18	37	69	28	10	31	9	2	18	-	31	4	1	-	-	-
Nonmanufacturing.....	234	36.5	334.00	298.50	280.50- 354.50	-	-	-	-	1	18	37	63	28	10	24	8	2	7	-	31	4	1	-	-	-
Computer programmers (business) II.....	388	37.5	376.00	361.00	329.00- 416.50	-	-	-	-	-	10	5	12	38	64	64	34	40	57	16	40	6	2	-	-	-
Manufacturing.....	80	39.0	415.50	418.50	362.00- 483.50	-	-	-	-	-	2	-	5	9	4	3	10	16	4	25	2	-	-	-	-	-
Nonmanufacturing.....	308	37.0	366.00	353.50	327.50- 399.50	-	-	-	-	-	10	3	12	33	55	60	31	30	41	12	15	4	2	-	-	-
Computer programmers (business) III.....	361	36.5	397.50	372.50	313.00- 499.00	-	-	-	-	-	-	46	32	47	13	29	19	25	18	28	51	22	25	5	1	-
Manufacturing.....	62	38.5	481.00	474.00	420.00- 570.00	-	-	-	-	-	-	-	-	-	-	4	5	2	9	12	8	3	17	2	-	
Nonmanufacturing.....	299	36.5	380.50	349.00	299.00- 478.00	-	-	-	-	-	-	46	32	47	13	25	14	23	9	16	43	19	8	3	1	
Transportation and utilities.....	101	35.0	413.50	382.00	356.00- 499.00	-	-	-	-	-	-	-	-	12	-	20	11	18	2	5	27	3	2	1	-	
Computer operators.....	693	37.5	295.00	286.00	240.00- 333.00	-	-	12	33	60	68	82	72	67	48	104	46	16	21	32	18	11	3	-	-	-
Manufacturing.....	285	39.0	303.00	292.00	251.00- 354.50	-	-	2	4	16	29	37	40	35	26	17	28	7	15	15	9	2	3	-	-	
Nonmanufacturing.....	408	36.5	289.00	284.00	231.00- 333.00	-	-	10	29	44	39	45	32	32	22	87	18	9	6	17	9	9	-	-	-	
Computer operators I.....	174	36.5	271.50	269.00	205.50- 333.00	-	-	8	14	29	14	17	9	10	2	68	-	-	3	-	-	-	-	-	-	
Computer operators II.....	320	38.0	281.50	263.00	230.50- 328.00	-	-	4	19	30	45	50	39	26	17	18	37	14	9	6	1	2	3	-	-	
Manufacturing.....	144	39.0	303.50	283.50	253.00- 359.50	-	-	-	-	6	13	26	25	15	7	8	22	7	6	3	1	2	3	-	-	
Nonmanufacturing.....	176	37.0	263.00	245.00	214.00- 311.00	-	-	4	19	24	32	24	14	11	10	10	15	7	3	3	-	-	-	-	-	
Computer operators III.....	199	38.0	337.00	312.00	281.00- 407.50	-	-	-	-	1	9	15	24	31	29	18	9	2	9	26	17	9	-	-	-	
Manufacturing.....	94	39.0	332.50	311.00	292.50- 386.00	-	-	-	-	-	4	3	12	17	18	8	6	-	6	12	8	-	-	-	-	
Nonmanufacturing.....	105	37.0	341.00	318.50	275.50- 413.00	-	-	-	-	1	5	12	12	14	11	10	3	2	3	14	9	9	-	-	-	
Transportation and utilities.....	32	35.5	426.50	428.50	398.00- 485.50	-	-	-	-	-	-	-	-	-	1	2	2	1	2	10	5	9	-	-	-	
Peripheral equipment operators.....	51	38.0	254.50	262.00	190.00- 314.50	-	7	6	-	4	1	7	3	3	12	2	6	-	-	-	-	-	-	-	-	
Drafters.....	774	38.5	365.00	357.00	298.00- 417.00	-	-	-	9	25	32	27	22	80	62	94	52	52	55	130	55	24	18	22	13	2
Manufacturing.....	304	39.5	335.00	323.00	285.00- 395.50	-	-	-	-	13	26	10	9	50	30	30	24	22	20	39	31	-	-	-	-	
Nonmanufacturing.....	470	38.0	384.00	378.50	317.50- 437.00	-	-	-	9	12	6	17	13	30	32	64	28	30	35	91	24	24	18	22	13	2

See footnotes at end of tables.

**Table A-13. Weekly earnings of professional and technical workers in establishments employing 500 workers or more in Newark, N.J., January 1981 —Continued**

Occupation and industry division	Number of workers	Average weekly hours <sup>1</sup> (stand-ard)	Weekly earnings (in dollars) <sup>1</sup>			Number of workers receiving straight-time weekly earnings (in dollars) of —																					
			Mean <sup>2</sup>	Median <sup>2</sup>	Middle range <sup>2</sup>	120 and under 140	140 - 160	160 - 180	180 - 200	200 - 220	220 - 240	240 - 260	260 - 280	280 - 300	300 - 320	320 - 340	340 - 360	360 - 380	380 - 400	400 - 440	440 - 480	480 - 520	520 - 560	560 - 600	600 - 640	640 and over	
Drafters III .....	206	38.5	296.50	287.50	282.00- 326.50	-	-	-	-	8	12	15	15	60	28	35	27	6	-	-	-	-	-	-	-	-	-
Manufacturing .....	93	39.0	288.50	286.00	282.00- 305.00	-	-	-	-	4	12	1	2	39	16	10	9	-	-	-	-	-	-	-	-	-	
Nonmanufacturing .....	113	38.0	303.50	311.00	272.50- 331.50	-	-	-	-	4	-	14	13	21	12	25	18	6	-	-	-	-	-	-	-	-	
Drafters IV .....	311	38.5	376.50	383.50	331.00- 412.50	-	-	-	-	-	-	2	7	14	27	50	20	33	42	82	21	13	-	-	-	-	
Manufacturing .....	67	40.0	337.00	332.50	301.50- 365.50	-	-	-	-	-	-	2	7	8	7	11	10	9	7	6	-	-	-	-	-	-	
Nonmanufacturing .....	244	38.0	387.50	394.50	339.50- 419.00	-	-	-	-	-	-	-	-	6	20	39	10	24	35	76	21	13	-	-	-	-	
Drafters V .....	196	38.0	460.00	448.50	402.50- 536.50	-	-	-	-	-	-	-	-	3	6	9	4	13	13	48	34	11	18	22	13	2	
Manufacturing .....	112	40.0	400.50	402.50	367.50- 448.50	-	-	-	-	-	-	-	-	3	6	9	4	13	13	33	31	-	-	-	-	-	
Electronics technicians: Manufacturing .....	60	40.0	363.50	374.50	321.00- 397.00	-	-	-	-	-	4	-	2	2	6	4	2	12	18	6	4	-	-	-	-	-	
Registered industrial nurses .....	121	38.5	344.50	343.00	293.50- 385.50	-	-	-	-	2	2	5	6	21	16	7	11	16	13	12	8	2	-	-	-	-	
Manufacturing .....	80	39.5	342.00	335.00	299.00- 371.00	-	-	-	-	-	-	2	3	15	16	6	11	12	5	4	4	2	-	-	-	-	

\* Workers were distributed as follows: 77 at \$640.00 to \$680.00; 10 at \$680.00 to \$720.00; 4 at \$720.00 to \$760.00; and 1 at \$760.00 to \$800.00.  
Also see footnotes at end of tables.

**Table A-14. Average weekly earnings of office, professional, and technical workers, by sex in establishments employing 500 workers or more in Newark, N.J., January 1981**

Sex, <sup>a</sup> occupation, and industry division	Number of workers	Average (mean <sup>b</sup> )		Sex, <sup>a</sup> occupation, and industry division	Number of workers	Average (mean <sup>b</sup> )		Sex, <sup>a</sup> occupation, and industry division	Number of workers	Average (mean <sup>b</sup> )	
		Weekly hours <sup>c</sup> (standard)	Weekly earnings <sup>d</sup> (in dollars) <sup>e</sup>			Weekly hours <sup>c</sup> (standard)	Weekly earnings <sup>d</sup> (in dollars) <sup>e</sup>			Weekly hours <sup>c</sup> (standard)	Weekly earnings <sup>d</sup> (in dollars) <sup>e</sup>
Office occupations - men				File clerks .....	345	37.0	188.00	Professional and technical occupations - men			
Messengers.....	170	38.0	187.50	Nonmanufacturing.....	298	36.5	185.00	Computer systems analysts (business) .....	964	37.0	503.00
Nonmanufacturing.....	135	38.0	179.00	File clerks I .....	159	37.0	168.50	Manufacturing.....	289	39.0	498.00
Accounting clerks .....	208	38.0	280.50	Nonmanufacturing.....	128	37.0	166.50	Nonmanufacturing.....	675	36.5	505.00
Nonmanufacturing.....	174	38.0	278.00	Messengers.....	150	38.0	198.50	Computer systems analysts (business) I .....	95	37.5	394.00
Transportation and utilities.....	60	38.5	341.50	Nonmanufacturing.....	115	37.5	192.00	Nonmanufacturing.....	64	36.5	401.50
Accounting clerks III .....	74	38.0	281.50	Switchboard operators .....	158	39.0	253.00	Computer systems analysts (business) II .....	474	37.0	484.50
Nonmanufacturing.....	51	37.5	272.00	Manufacturing.....	52	39.5	250.00	Manufacturing.....	119	39.0	479.00
Accounting clerks IV.....	51	38.0	306.50	Switchboard operator-receptionists .....	62	38.5	214.00	Nonmanufacturing.....	355	36.0	486.50
Office occupations - women				Order clerks.....	200	38.5	227.50	Computer systems analysts (business) III .....	395	37.5	551.00
Secretaries .....	5,031	38.5	293.00	Manufacturing.....	187	38.5	232.50	Manufacturing.....	139	39.0	541.50
Manufacturing.....	2,911	39.0	296.00	Order clerks I.....	126	38.5	214.00	Nonmanufacturing.....	256	36.5	556.00
Nonmanufacturing.....	2,120	37.5	289.00	Manufacturing.....	113	38.0	220.50	Computer programmers (business) .....	612	37.0	384.50
Transportation and utilities.....	330	36.5	369.00	Order clerks II.....	74	39.5	250.50	Manufacturing.....	103	38.5	452.50
Secretaries I .....	1,192	38.5	257.50	Manufacturing.....	74	39.5	250.50	Nonmanufacturing.....	509	36.5	370.50
Manufacturing.....	690	39.0	278.00	Accounting clerks .....	1,823	37.5	259.00	Computer programmers (business) I .....	145	37.0	350.00
Nonmanufacturing.....	502	38.0	229.50	Manufacturing.....	496	39.0	246.00	Nonmanufacturing.....	132	36.5	348.00
Secretaries II .....	939	38.0	275.00	Nonmanufacturing.....	1,327	36.5	264.00	Computer programmers (business) II .....	229	37.5	382.50
Manufacturing.....	427	38.5	276.00	Accounting clerks I .....	121	37.5	184.50	Nonmanufacturing.....	183	37.0	370.00
Nonmanufacturing.....	512	37.5	274.00	Accounting clerks II .....	729	37.5	236.00	Computer programmers (business) III .....	238	36.5	407.50
Transportation and utilities.....	72	37.0	332.50	Manufacturing.....	185	39.0	226.50	Nonmanufacturing.....	194	36.5	387.00
Secretaries III .....	1,639	38.5	299.00	Nonmanufacturing.....	544	36.5	239.50	Transportation and utilities.....	60	35.0	414.00
Manufacturing.....	1,125	39.0	296.50	Accounting clerks III .....	739	37.0	286.00	Computer operators .....	480	38.0	300.50
Nonmanufacturing.....	514	37.5	305.00	Manufacturing.....	191	39.5	258.00	Manufacturing.....	206	39.0	311.50
Secretaries IV .....	991	38.5	320.50	Nonmanufacturing.....	548	36.0	295.50	Nonmanufacturing.....	274	37.0	292.50
Manufacturing.....	600	39.0	323.50	Accounting clerks IV.....	230	38.0	285.00	Transportation and utilities.....	65	35.0	361.50
Nonmanufacturing.....	391	37.5	316.50	Manufacturing.....	74	39.0	290.00	Computer operators I .....	72	37.0	246.00
Secretaries V .....	176	38.0	378.00	Nonmanufacturing.....	156	37.5	282.50	Computer operators II .....	228	38.0	288.00
Manufacturing.....	69	39.5	382.00	Payroll clerks.....	170	38.5	256.00	Manufacturing.....	102	39.0	310.50
Stenographers.....	678	38.0	256.00	Manufacturing.....	100	39.5	264.50	Nonmanufacturing.....	126	37.0	269.50
Manufacturing.....	177	39.5	267.00	Nonmanufacturing.....	70	37.0	244.00	Computer operators III .....	180	38.0	339.00
Nonmanufacturing.....	501	37.5	252.00	Transportation and utilities.....	28	36.5	285.50	Manufacturing.....	81	39.0	334.00
Stenographers I .....	423	38.5	246.50	Key entry operators.....	850	38.0	241.00	Nonmanufacturing.....	99	37.0	343.50
Manufacturing.....	62	39.5	207.50	Manufacturing.....	417	38.5	253.00	Drafters .....	671	38.5	375.00
Nonmanufacturing.....	361	38.0	253.50	Nonmanufacturing.....	433	37.0	229.00	Manufacturing.....	262	39.5	342.00
Stenographers II .....	255	38.0	271.50	Key entry operators I .....	475	38.0	229.50	Nonmanufacturing.....	409	37.5	396.50
Manufacturing.....	115	39.0	299.50	Manufacturing.....	255	38.5	246.00	Drafters III.....	145	38.0	303.00
Typists:				Nonmanufacturing.....	220	36.5	210.50	Manufacturing.....	61	38.5	294.50
Manufacturing.....	318	39.5	203.50	Key entry operators II .....	375	38.0	255.50	Nonmanufacturing.....	84	37.5	308.50
Typists I.....	456	38.0	191.00	Manufacturing.....	182	38.5	264.50				
Manufacturing.....	195	39.0	196.00	Nonmanufacturing.....	213	37.0	248.50				
Nonmanufacturing.....	261	37.5	187.50								
Typists II:											
Manufacturing.....	123	39.5	215.00								

See footnotes at end of tables.

**Table A-14. Average weekly earnings of office, professional, and technical workers, by sex in establishments employing 500 workers or more in Newark, N.J., January 1981 — Continued**

Sex, <sup>2</sup> occupation, and industry division	Number of workers	Average (mean <sup>2</sup> )		Sex, <sup>2</sup> occupation, and industry division	Number of workers	Average (mean <sup>2</sup> )		Sex, <sup>2</sup> occupation, and industry division	Number of workers	Average (mean <sup>2</sup> )	
		Weekly hours <sup>1</sup> (stand-ard)	Weekly earnings (in dollars) <sup>1</sup>			Weekly hours <sup>1</sup> (stand-ard)	Weekly earnings (in dollars) <sup>1</sup>			Weekly hours <sup>1</sup> (stand-ard)	Weekly earnings (in dollars) <sup>1</sup>
Drafters IV.....	289	38.5	377.50	Computer systems analysts (business) III.....	116	37.0	539.50	Computer operators.....	213	37.5	281.50
Manufacturing.....	65	40.0	336.00	Nonmanufacturing.....	88	36.5	547.00	Manufacturing.....	79	39.5	280.50
Nonmanufacturing.....	224	38.0	390.00					Nonmanufacturing.....	134	36.0	282.00
Drafters V.....	187	38.0	465.00	Computer programmers (business).....	383	37.0	357.50	Computer operators II.....	92	38.0	265.00
Manufacturing.....	104	40.0	406.00	Nonmanufacturing.....	332	36.5	349.00	Nonmanufacturing.....	50	37.5	248.00
Electronics technicians:				Computer programmers (business) I.....	114	36.5	321.50	Drafters.....	103	39.0	297.00
Manufacturing.....	58	40.0	368.00	Nonmanufacturing.....	102	36.5	316.00	Nonmanufacturing.....	61	39.0	300.50
Professional and technical occupations - women				Computer programmers (business) II.....	155	37.5	368.00	Drafters III.....	61	39.0	282.00
Computer systems analysts (business).....	338	37.0	473.00	Nonmanufacturing.....	125	37.5	360.00	Registered industrial nurses.....	119	38.5	345.00
Nonmanufacturing.....	259	36.0	481.00	Computer programmers (business) III.....	114	36.5	380.00	Manufacturing.....	78	39.0	342.50
Computer systems analysts (business) II.....	173	37.0	456.50	Nonmanufacturing.....	105	36.0	368.50				
Nonmanufacturing.....	143	36.5	459.00								

See footnotes at end of tables.

**Table A-15. Hourly earnings of maintenance, toolroom, and powerplant workers in establishments employing 500 workers or more in Newark, N.J., January 1981**

Occupation and industry division	Number of workers	Hourly earnings (in dollars) <sup>a</sup>			Number of workers receiving straight-time hourly earnings (in dollars) of —																						
		Mean <sup>b</sup>	Median <sup>b</sup>	Middle range <sup>b</sup>	5.40 and under 5.60	5.60-5.80	5.80-6.00	6.00-6.40	6.40-6.80	6.80-7.20	7.20-7.60	7.60-8.00	8.00-8.40	8.40-8.80	8.80-9.20	9.20-9.60	9.60-10.00	10.00-10.40	10.40-10.80	10.80-11.20	11.20-11.60	11.60-12.00	12.00-12.40	12.40-12.80	12.80-13.40	13.40-14.00	14.00 and over
Maintenance carpenters.....	212	9.78	9.23	8.61-10.88	-	-	-	-	-	2	3	-	43	16	24	30	13	7	-	37	-	24	10	-	3	-	-
Manufacturing.....	128	9.41	8.80	8.31-10.04	-	-	-	-	-	2	3	-	43	16	13	4	13	6	-	1	-	21	6	-	-	-	
Nonmanufacturing.....	84	10.34	10.88	9.23-10.88	-	-	-	-	-	-	-	-	-	-	11	26	-	1	-	36	-	3	4	-	3	-	
Maintenance electricians.....	600	10.53	10.43	8.80-12.32	-	-	-	-	-	14	-	87	42	69	15	52	17	39	68	3	39	6	89	5	39	16	
Manufacturing.....	461	10.34	9.69	8.47-12.54	-	-	-	-	-	14	-	87	42	67	8	46	13	12	6	-	34	-	85	-	31	16	
Nonmanufacturing.....	139	11.14	11.11	10.68-11.15	-	-	-	-	-	-	-	-	-	2	7	6	4	27	62	3	5	6	4	5	8	-	
Transportation and utilities.....	65	10.77	11.11	10.54-11.11	-	-	-	-	-	-	-	-	-	-	6	-	1	20	38	-	-	-	-	-	-	-	
Maintenance painters.....	153	9.45	9.00	8.21-10.70	-	2	-	-	-	1	2	55	13	17	4	8	8	5	11	5	7	15	-	-	-	-	
Manufacturing.....	119	9.22	8.37	8.21- 9.69	-	2	-	-	-	1	2	55	12	10	-	8	4	-	3	-	7	15	-	-	-	-	
Maintenance machinists.....	369	10.11	10.21	9.17-11.92	-	-	-	-	-	3	12	12	57	48	8	34	88	3	6	3	6	84	3	1	1	-	
Manufacturing.....	327	10.00	9.90	8.70-12.09	-	-	-	-	-	3	12	12	57	48	6	29	76	-	-	-	1	83	-	-	-	-	
Maintenance mechanics (machinery).....	703	9.85	9.18	8.31-12.09	-	4	-	-	-	4	21	-	229	68	41	14	51	22	25	36	-	-	43	138	-	7	-
Manufacturing.....	594	9.70	8.47	8.31-12.09	-	4	-	-	-	4	21	-	229	67	40	8	34	-	9	-	-	-	43	135	-	-	
Maintenance mechanics (motor vehicles).....	361	11.04	11.63	10.09-12.15	-	-	-	-	-	-	-	17	13	26	18	2	53	45	5	-	4	157	-	21	-	-	
Manufacturing.....	83	10.11	8.80	8.46-12.21	-	-	-	-	-	-	-	16	12	6	2	-	-	-	-	-	4	23	-	-	-	-	
Nonmanufacturing.....	298	11.23	12.15	10.15-12.15	-	-	-	-	-	-	-	1	1	20	16	2	53	45	5	-	-	134	-	21	-	-	
Transportation and utilities.....	298	11.23	12.15	10.15-12.15	-	-	-	-	-	-	-	1	1	20	16	2	53	45	5	-	-	134	-	21	-	-	
Maintenance pipefitters.....	456	10.65	10.68	9.35-11.63	-	-	-	-	-	-	-	41	30	34	18	67	15	33	33	8	86	54	3	1	33	-	
Manufacturing.....	344	10.60	10.21	9.18-11.63	-	-	-	-	-	-	-	31	30	30	17	57	8	12	9	-	75	49	-	-	26	-	
Nonmanufacturing.....	112	10.82	10.88	10.28-11.35	-	-	-	-	-	-	-	10	-	4	1	10	7	21	24	8	11	5	3	1	7	-	
Transportation and utilities.....	29	9.73	10.55	8.32-10.55	-	-	-	-	-	-	-	8	-	4	1	-	1	12	3	-	-	-	-	-	-	-	
Maintenance sheet-metal workers... Manufacturing.....	115	9.74	9.28	8.31-10.88	-	-	-	-	-	2	7	31	8	9	2	16	1	-	12	-	7	20	-	-	-	-	
Manufacturing.....	101	9.55	9.15	8.31-10.00	-	-	-	-	-	2	7	31	8	9	2	16	1	-	-	-	7	18	-	-	-	-	
Millwrights.....	218	10.77	11.63	8.87-12.33	-	-	-	-	-	4	12	-	28	2	12	-	8	13	1	20	-	30	88	-	-	-	
Manufacturing.....	205	10.77	11.63	8.86-12.33	-	-	-	-	-	4	12	-	28	2	11	-	8	12	1	9	-	30	88	-	-	-	
Maintenance trades helpers.....	128	7.27	7.09	6.28- 7.91	-	-	2	32	2	35	12	22	12	-	6	5	-	-	-	-	-	-	-	-	-	-	
Manufacturing.....	78	6.96	7.09	6.17- 7.09	-	-	-	30	-	30	8	2	2	-	6	-	-	-	-	-	-	-	-	-	-	-	
Tool and die makers.....	335	10.78	11.25	9.56-12.56	-	-	-	-	-	-	16	13	-	44	12	24	18	37	-	81	-	-	90	-	-	-	
Manufacturing.....	254	10.63	10.39	9.15-12.56	-	-	-	-	-	-	16	13	-	44	12	24	18	37	-	-	-	-	90	-	-	-	
Stationary engineers.....	229	11.44	11.60	10.42-12.78	-	-	-	-	-	-	4	1	10	11	4	17	8	19	-	17	53	5	51	7	22	-	
Manufacturing.....	118	11.29	12.54	9.69-12.78	-	-	-	-	-	-	4	-	9	7	2	15	8	6	-	-	2	5	51	7	2	-	
Nonmanufacturing.....	111	11.60	11.60	11.45-11.60	-	-	-	-	-	-	-	1	1	4	2	2	-	13	-	17	51	-	-	-	20	-	
Boiler tenders.....	101	9.53	8.65	8.03-11.91	-	4	-	-	-	2	3	5	27	17	2	7	1	3	-	-	-	11	-	12	3	4	
Manufacturing.....	79	9.06	8.50	8.03- 9.45	-	4	-	-	-	2	2	4	25	17	2	4	-	3	-	-	4	-	12	-	-	-	

See footnotes at end of tables.

**Table A-16. Hourly earnings of material movement and custodial workers in establishments employing 500 workers or more in Newark, N.J., January 1981**

Occupation and industry division	Number of workers	Hourly earnings (in dollars) <sup>1</sup>			Number of workers receiving straight-time hourly earnings (in dollars) of —																						
		Mean <sup>2</sup>	Median <sup>2</sup>	Middle range <sup>2</sup>	3.20 and under 3.40	3.40-3.60	3.60-3.80	3.80-4.00	4.00-4.40	4.40-4.80	4.80-5.20	5.20-5.60	5.60-6.00	6.00-6.40	6.40-6.80	6.80-7.20	7.20-7.60	7.60-8.00	8.00-8.40	8.40-8.80	8.80-9.20	9.20-9.80	9.80-10.40	10.40-11.00	11.00-11.60	11.60-12.20	12.20 and over
Truckdrivers.....	1,016	10.87	12.05	7.98-12.05	-	-	-	-	-	6	-	21	7	8	25	35	99	55	85	5	9	15	9	6	2	473	* 156
Manufacturing.....	184	12.64	10.48	7.32-19.75	-	-	-	-	-	-	-	-	-	3	14	28	3	11	10	-	8	6	9	6	2	9	75
Truckdrivers, light truck.....	101	7.50	7.88	6.57- 8.34	-	-	-	-	-	5	-	5	2	1	19	2	7	12	40	1	2	5	-	-	-	-	-
Truckdrivers, tractor-trailer.....	241	9.11	7.71	7.35-12.25	-	-	-	-	-	-	-	-	-	-	1	29	82	36	5	-	2	2	-	-	1	2	81
Receivers.....	92	8.23	8.01	7.47- 9.68	-	2	-	-	1	2	-	3	1	6	3	1	6	6	34	3	-	1	-	8	15	-	-
Manufacturing.....	51	8.93	8.40	7.47-11.04	-	-	-	-	-	-	-	3	-	5	2	-	6	6	2	3	-	1	-	8	15	-	-
Shippers and receivers.....	88	8.16	8.59	6.85- 8.98	-	-	-	-	-	1	1	12	2	2	16	1	2	4	5	21	4	12	5	-	-	-	-
Manufacturing.....	53	7.99	8.98	6.85- 8.98	-	-	-	-	-	-	-	-	-	12	-	-	11	-	3	21	-	6	-	-	-	-	-
Warehousemen:																											
Manufacturing.....	460	8.77	8.08	7.15-10.80	-	-	-	-	-	-	-	50	3	-	3	119	17	18	29	1	12	2	-	152	54	-	-
Order fillers.....	456	5.39	5.27	5.25- 5.75	-	52	33	5	8	10	3	180	79	36	-	2	-	28	-	1	19	-	-	-	-	-	-
Shipping packers.....	127	5.84	5.61	4.98- 7.00	-	24	2	-	3	1	3	13	36	2	2	12	6	9	2	6	-	1	5	-	-	-	-
Manufacturing.....	93	6.62	5.61	5.61- 7.38	-	-	-	-	-	-	-	12	36	2	2	12	6	9	2	6	-	1	5	-	-	-	-
Material handling laborers.....	768	7.50	7.65	6.07- 9.54	36	1	2	13	49	18	54	4	1	53	6	108	20	51	3	100	-	217	10	1	-	21	-
Manufacturing.....	325	7.25	6.99	6.16- 8.49	-	-	-	-	-	-	46	-	-	44	2	97	13	-	99	-	-	-	10	1	-	-	-
Nonmanufacturing.....	443	7.68	9.46	4.61- 9.54	36	1	2	13	49	18	8	4	1	9	4	11	7	38	3	1	-	217	-	-	-	21	-
Forklift operators.....	549	7.36	7.02	5.97- 8.59	-	-	-	-	45	27	25	23	35	18	44	90	37	17	14	44	-	-	53	77	-	-	-
Manufacturing.....	489	7.50	7.08	5.97-10.29	-	-	-	-	40	20	24	18	29	10	40	74	37	16	7	44	-	-	53	77	-	-	-
Nonmanufacturing.....	60	6.18	6.23	5.22- 6.92	-	-	-	-	5	7	1	5	6	8	4	16	-	1	7	-	-	-	-	-	-	-	-
Guards.....	1,148	5.49	4.50	3.92- 7.00	76	82	76	69	252	79	98	47	10	10	49	26	44	52	3	72	-	10	54	39	-	-	-
Manufacturing.....	261	8.03	7.78	6.60-10.15	-	-	-	-	-	-	44	8	2	2	14	13	36	42	2	-	-	7	52	39	-	-	-
Nonmanufacturing.....	887	4.74	4.25	3.75- 5.00	76	82	76	69	252	79	54	39	8	8	35	13	8	10	1	72	-	3	2	-	-	-	-
Guards I.....	1,057	5.29	4.37	3.92- 6.63	76	77	67	67	244	78	95	46	9	10	46	23	43	52	3	72	-	10	-	39	-	-	-
Manufacturing.....	209	7.53	7.48	5.86- 7.91	-	-	-	-	-	-	44	8	2	2	14	13	36	42	2	-	-	7	-	39	-	-	-
Guards II.....	91	7.82	9.84	4.27-10.15	-	5	9	2	8	1	3	1	1	-	3	3	1	-	-	-	-	-	54	-	-	-	-
Janitors, porters, and cleaners.....	2,795	5.91	5.73	3.75- 7.21	456	172	127	18	174	73	181	138	194	129	196	236	110	183	31	16	6	189	104	16	19	27	-
Manufacturing.....	1,102	7.29	6.88	5.93- 8.52	-	-	-	-	8	15	79	66	135	103	125	161	74	19	30	15	-	133	104	16	19	-	-
Nonmanufacturing.....	1,693	5.02	4.00	3.35- 6.53	456	172	127	18	166	58	102	72	59	26	71	75	36	164	1	1	6	56	-	-	-	27	-
Transportation and utilities.....	330	7.82	7.75	7.25- 7.80	-	-	-	-	-	2	6	8	5	9	49	-	36	164	1	1	6	16	-	-	-	27	-

\* Workers were distributed as follows: 84 at \$12.20 to \$12.80; 2 at \$12.80 to \$13.40; 1 at \$13.40 to \$14.00; 3 at \$14.60 to \$15.20; 2 at \$15.20 to \$15.80; and 64 at \$15.80 and over.  
Also see footnotes at end of tables.

**Table A-17. Average hourly earnings of maintenance, toolroom, powerplant, material movement and custodial workers by sex in establishments employing 500 workers or more in Newark, N.J., January 1981**

Sex, <sup>a</sup> occupation, and industry division	Number of workers	Average (mean) <sup>b</sup> hourly earnings (in dollars) <sup>a</sup>	Sex, <sup>a</sup> occupation, and industry division	Number of workers	Average (mean) <sup>b</sup> hourly earnings (in dollars) <sup>a</sup>	Sex, <sup>a</sup> occupation, and industry division	Number of workers	Average (mean) <sup>b</sup> hourly earnings (in dollars) <sup>a</sup>
Maintenance, toolroom, and powerplant occupations - men			Millwrights.....	218	10.77	Material handling laborers.....	677	7.81
Maintenance carpenters.....	212	9.78	Manufacturing.....	205	10.77	Manufacturing.....	297	7.31
Manufacturing.....	128	9.41	Maintenance trades helpers.....	128	7.27	Nonmanufacturing.....	380	8.21
Nonmanufacturing.....	84	10.34	Manufacturing.....	78	6.96	Forklift operators.....	540	7.35
Maintenance electricians.....	598	10.53	Manufacturing.....	395	10.78	Manufacturing.....	483	7.49
Manufacturing.....	461	10.34	Manufacturing.....	254	10.63	Guards.....	1,029	5.50
Nonmanufacturing.....	137	11.15	Stationary engineers.....	225	11.48	Manufacturing.....	233	8.11
Transportation and utilities.....	65	10.77	Manufacturing.....	118	11.29	Nonmanufacturing.....	796	4.74
Maintenance painters.....	153	9.45	Nonmanufacturing.....	107	11.69	Guards I.....	949	5.31
Manufacturing.....	119	9.22	Boiler tenders.....	97	9.59	Manufacturing.....	188	7.65
Maintenance machinists.....	369	10.11	Manufacturing.....	77	9.07	Nonmanufacturing.....	761	4.73
Manufacturing.....	327	10.00	Material movement and custodial occupations - men			Guards II.....	80	7.76
Maintenance mechanics (machinery).....	703	9.85	Truckdrivers.....	959	10.93	Janitors, porters, and cleaners.....	1,962	6.09
Manufacturing.....	594	9.70	Manufacturing.....	184	12.64	Manufacturing.....	863	7.24
Maintenance mechanics (motor vehicles).....	344	11.08	Truckdrivers, light truck.....	80	7.64	Nonmanufacturing.....	1,099	5.18
Manufacturing.....	63	10.11	Truckdrivers, tractor-trailer.....	241	9.11	Transportation and utilities.....	249	7.93
Nonmanufacturing.....	281	11.30	Shippers and receivers.....	73	8.44	Material movement and custodial occupations - women		
Transportation and utilities.....	281	11.30	Manufacturing.....	50	8.11	Janitors, porters, and cleaners.....	813	5.47
Maintenance pipefitters.....	455	10.65	Warehousemen:			Manufacturing.....	239	7.45
Manufacturing.....	344	10.60	Manufacturing.....	445	8.85	Nonmanufacturing.....	574	4.64
Nonmanufacturing.....	111	10.82	Shipping packers.....	87	6.22			
Transportation and utilities.....	29	9.73	Manufacturing.....	74	6.66			
Maintenance sheet-metal workers.....	115	9.74						
Manufacturing.....	101	9.55						

See footnotes at end of tables.

## Footnotes

<sup>1</sup> 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.

<sup>2</sup> 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 workers receive the same or more and half receive the same or less than the rate shown. The middle range is defined by two rates of pay; one-fourth of the workers earn the same or less than the lower of these rates and one-fourth earn the same or more than the higher rate.

<sup>3</sup> Earnings data relate only to workers whose sex identification was provided by the establishment.

<sup>4</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>5</sup> Estimates for periods ending prior to 1976 relate to men only for skilled maintenance and unskilled plant workers. All other estimates relate to men and women.

<sup>6</sup> Data do not meet publication criteria or data not available.

# Appendix A.

## Scope and Method of Survey

In each of the 71 areas<sup>1</sup> currently surveyed, the Bureau obtains wages and related benefits data 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. Government operations and the construction and extractive industries are excluded. Small establishments—generally those with fewer than 50 employees—are excluded because they have few incumbents in the occupations studied. Appendix table 1 shows the number of establishments and workers estimated to be within the scope of this survey, as well as the number actually studied.

Bureau field representatives obtain data by personal visits at 3-year intervals. In each of the two intervening years, information on employment and occupational earnings only is collected by a combination of personal visit, mail questionnaire, and telephone interview from establishments participating in the previous survey.

A sample of the establishments in the scope of the survey is selected for study prior to each personal visit survey. This sample, minus establishments which go out of business or are no longer within the industrial scope of the survey, is retained for the following two annual surveys. In most cases, establishments new to the area are not considered in the scope of the survey until the selection of a sample for a personal visit survey.

The sampling procedures involve detailed stratification of all establishments within the scope of an individual area survey by industry and number of employees. From this stratified universe a probability sample is selected, with each establishment having a predetermined chance of selection. To obtain optimum accuracy at minimum cost, a greater proportion of large than small establishments is selected. When data are combined, each establishment is weighted according to its probability of selection so that unbiased estimates are generated. For example, if one out of four establishments is selected, it is given a weight of 4 to represent itself plus three others. An alternate of the same original probability is chosen in the same industry-size classification if data are not available from the original sample member. If no suitable substitute is available, additional weight is assigned to a sample member that is similar to the missing unit.

### Occupations and earnings

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, toolroom, and powerplant; and (4) material

movement and custodial. Occupational classification is based on a uniform set of job descriptions designed to take account of interestablishment variation in duties within the same job. Occupations selected for study are listed and described in appendix B.

Unless otherwise indicated, 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 the scope of the survey, are not presented in the A-series tables because either (1) data were insufficient to provide meaningful statistical results, or (2) there is possibility of disclosure of individual establishment data. Separate men's and women's earnings data are not presented when the number of workers not identified by sex is 20 percent or more of the men or women identified in an occupation. Earnings data not shown separately for industry divisions are included in data for all industries combined. Likewise, for occupations with more than one level, data are included in the overall classification when a subclassification 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. 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 bonuses are included. Weekly hours for office clerical and professional and technical occupations refer to the standard workweek (rounded to the nearest half hour) for which employees receive regular straight-time salaries (exclusive of pay for overtime at regular and/or premium rates). Average weekly earnings for these occupations are rounded to the nearest half dollar. Most A-series tables provide distributions of workers by earnings; changes in the size of earnings intervals are indicated by heavy vertical lines.

These surveys measure the level of occupational earnings in an area at a particular time. Changes in an occupational average over time reflect, in addition to earnings changes, factors such as changes in proportions of workers employed by high- or low-wage firms, or high-wage workers advancing to better jobs and being 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. Changes in earnings of occupational groups, shown in table A-7, are better indicators of wage trends than are earnings changes for individual jobs within the groups.

Average earnings reflect composite, areawide estimates. Industries and establishments differ in pay level and job staffing, and thus contribute differently to the estimates

for each job. Pay averages may fail to reflect accurately the wage differential among jobs in individual establishments.

Average pay levels for men and women in selected occupations should not be assumed to reflect differences in pay of the sexes within individual establishments. Factors which may contribute to differences include progression within established rate ranges (only the rates paid incumbents are collected) and performance of specific duties within the general survey job descriptions. Job descriptions used to classify employees in these surveys usually are more generalized than those used in individual establishments and allow for minor differences among establishments in 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 occupational structures among establishments differ, 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.

### Wage trends for selected occupational groups

Indexes in table A-7 measure wages at a given time, expressed as a percent of wages during the base period. Subtracting 100 from the index yields the percent change in wages from the base period to the date of the index. The percent increases in table A-7 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 span between surveys was other than 12 months. These computations are based on the assumption that wages increased at a constant rate between surveys.

The indexes and percent increases are based on changes in average hourly earnings of men and women in establishments reporting the trend jobs in both the current and previous year (matched establishments). The data are adjusted to remove the effects on average earnings of employment shifts among establishments and turnover of establishments included in survey samples. The percent increases, however, are still affected by factors other than wage increases. Turnover may affect an establishment average for an occupation when workers are paid under plans providing a range of wage rates for individual jobs. In periods of increased hiring, for example, new employees may enter at the bottom of the range, depressing the average without a change in wage rates.

Occupations used to compute wage trends are:

#### Office clerical

Secretaries  
Stenographers, I and II  
Typists, I and II  
File clerks, I, II, and III  
Messengers

Switchboard operators  
Order clerks, I and II  
Accounting clerks, I, II, III, and IV  
Payroll clerks  
Key entry operators, I and II

#### Electronic data processing

Computer systems analysts, I, II, and III

Computer programmers, I, II, and III  
Computer operators, I, II, and III

### Industrial nurses

#### Registered industrial nurses

#### Skilled maintenance

Carpenters  
Electricians  
Painters  
Machinists

Mechanics (machinery)  
Mechanics (motor vehicle)  
Pipefitters  
Tool and die makers

#### Unskilled plant

Janitors, porters, and cleaners

Material handling laborers

Percent changes for individual areas in the program are computed as follows:

1. Average earnings are computed for each occupation for the 2 years being compared. The averages are derived from earnings in those establishments which are in the survey both years; it is assumed that employment remains unchanged.
2. Each occupation is assigned a weight based on its proportionate employment in the occupational group.
3. These weights are used to compute group averages. Each occupation's average earnings (computed in step 1) are multiplied by its weight. The products are totaled to obtain a group average.
4. The ratio of group averages for 2 consecutive years is computed by dividing the average for the current year by the average for the earlier year. The result—expressed as a percent—less 100 is the percent change.

The index is computed by adding 100 to the most recent percent increase, multiplying the total by the previous year's index number, and dividing the product by 100 to obtain the current index value.

For a more detailed description of the method used to compute these wage trends, see "Improving Area Wage Survey Indexes," *Monthly Labor Review*, January 1973, pp. 52-57.

### Pay relationships in establishments

Tables A-8 through A-11 compare average pay of occupations in individual establishments. These comparisons, expressed as pay relatives (pay for one of the occupations equals 100), yield different results than comparisons of overall survey averages, such as those shown in tables A-1 through A-6. The latter reflect differences in contributions to the survey averages by establishments with disparate pay levels; the pay relative comparisons are not affected by such differences.

The methods of computing and presenting pay relatives have changed since the last survey in this area. The following procedures are now used to compute relatives in tables A-8 through A-11:

1. Establishments employing workers in both of the paired occupations were identified.
2. Pay levels (averages) for the two occupations were weighted by the combined employment of both jobs to reflect each establishment's contribution to the totals used in this comparison.
3. The weighted pay levels of the two jobs were summed separately; each total was divided by the other and the quotients multiplied by 100 to produce the two pay relatives shown for each job pairing.

### 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 at 3-year intervals. These tabulations on minimum entrance salaries for inexperienced office workers; shift differentials; scheduled weekly hours and days; paid holidays; paid vacations; and health, insurance, and pension plans are presented (in the B-series tables) in previous bulletins for this area.

<sup>1</sup> Includes 70 areas surveyed under the Bureau's regular program plus Poughkeepsie-Kingston-Newburgh, N.Y., which is surveyed under contract. In addition, the Bureau conducts more limited area studies in approximately 100 areas at the request of the Employment Standards Administration of the U.S. Department of Labor.

**Appendix table 1. Establishments and workers within scope of survey and number studied in Newark, N.J.,<sup>1</sup> January 1981**

Industry division <sup>2</sup>	Minimum employment in establishments in scope of survey	Number of establishments		Workers in establishments		
		Within scope of survey <sup>3</sup>	Studied	Within scope of survey <sup>4</sup>		Studied
				Number	Percent	
<b>All establishments</b>						
All divisions .....	-	1,172	217	361,620	100	173,645
Manufacturing .....	100	455	89	160,028	44	73,061
Nonmanufacturing .....	-	717	128	201,592	56	100,584
Transportation, communication, and other public utilities <sup>5</sup> .....	100	51	18	41,593	12	35,031
Wholesale trade <sup>6</sup> .....	50	171	22	23,065	6	7,302
Retail trade <sup>6</sup> .....	100	107	15	37,449	10	14,890
Finance, insurance, and real estate <sup>6</sup> .....	50	131	24	45,019	12	21,810
Services <sup>7</sup> .....	50	257	49	54,466	15	21,551
<b>Large establishments</b>						
All divisions .....	-	122	73	189,868	100	146,461
Manufacturing .....	500	67	37	83,745	44	61,083
Nonmanufacturing .....	-	55	36	106,123	56	85,378
Transportation, communication, and other public utilities <sup>5</sup> .....	500	13	10	35,535	19	33,642
Wholesale trade <sup>6</sup> .....	500	6	5	6,088	3	5,255
Retail trade <sup>6</sup> .....	500	11	5	21,846	12	12,704
Finance, insurance, and real estate <sup>6</sup> .....	500	15	10	24,312	13	19,331
Services <sup>7</sup> .....	500	10	6	18,342	10	14,446

<sup>1</sup>The Newark Standard Metropolitan Statistical Area, as defined by the Office of Management and Budget through February 1974, consists of Essex, Morris, Somerset, and Union Counties. The "workers within scope of survey" estimates provide a reasonably accurate description of the size and composition of the labor force included in the survey. Estimates are not intended, however, for comparison with other statistical series to measure employment trends or levels since (1) planning of wage surveys requires establishment data compiled considerably in advance of the payroll period studied, and (2) small establishments are excluded from the scope of the survey.

<sup>2</sup>The 1972 edition of the *Standard Industrial Classification Manual* was used to classify establishments by industry division. All government operations are excluded from the scope of the survey.

<sup>3</sup>Includes all establishments with total employment at or above the minimum limitation. All outlets (within the area) of

nonmanufacturing companies are considered as one establishment when located within the same industry division.

<sup>4</sup>Includes all workers in all establishments with total employment (within the area) at or above the minimum limitation.

<sup>5</sup>Abbreviated to "transportation and utilities" in the A-series tables. Formerly referred to as "public utilities". Taxicabs and services incidental to water transportation are excluded.

<sup>6</sup>Separate data for this division are not presented in the A-series tables, but the division is represented in the 'all industries' and "nonmanufacturing" estimates.

<sup>7</sup>Hotels and motels; laundries and other personal services; business services; automobile repair, rental, and parking; motion pictures; nonprofit membership organizations (excluding religious and charitable organizations); and engineering and architectural services.

# Appendix B. Occupational Descriptions

The primary purpose of preparing job descriptions for the Bureau's wage surveys is to assist its field representatives in classifying into appropriate occupations workers who are employed under a variety of payroll titles and different work arrangements from establishment to establishment and from area to area. This permits grouping 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 representatives are instructed to exclude working supervisors; apprentices; and part-time, temporary, and probationary workers. Handicapped workers whose earnings are reduced because of their handicap are also excluded. Learners, beginners, and trainees, unless specifically included in the job description, are excluded.

## Office

### SECRETARY

Assigned as a personal secretary, normally to one individual. Maintains a close and highly responsive relationship to the day-to-day activities of the supervisor. Works fairly independently receiving a minimum of detailed supervision and guidance. Performs varied clerical and secretarial duties requiring a 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. Assistant-type positions which entail more difficult or more responsible technical, administrative, or supervisory duties which are not typical of secretarial work, e.g., Administrative Assistant, or Executive Assistant;
- e. Positions which do not fit any of the situations listed in the sections below titled "Level of Supervisor," e.g., secretary to the president of a company that employs, in all, over 5,000 persons;
- f. Trainees.

*Classification by level.* Secretary jobs which meet the required characteristics are matched at one of five levels according to (a) the level of the secretary's supervisor within the company's organizational structure and, (b) the level of the secretary's responsibility. The tabulation following the explanations of these two factors indicates the level of the secretary for each combination of the factors.

### *Level of Secretary's Supervisor (LS)*

#### LS-1

- a. Secretary to the supervisor or head of a small organizational unit (e.g., fewer than about 25 or 30 persons); or
- b. Secretary to a nonsupervisory staff specialist, professional employee, administrative officer or assistant, skilled technician or expert. (NOTE: Many companies assign stenographers, rather than secretaries as described above, to this level of supervisory or nonsupervisory worker.)

LS-2

- a. Secretary to an executive or managerial person whose responsibility is not equivalent to one of the specific level situations in the definition for LS-3, but whose organizational unit normally numbers at least several dozen employees and is usually divided into organizational segments which are often, in turn, further subdivided. In some companies, this level includes a wide range of organizational echelons; in others, only one or two; or
- b. Secretary to the head of an individual plant, factory, etc., (or other equivalent level of official) that employs, in all, fewer than 5,000 persons.

LS-3

- a. Secretary to the chairman of the board or president of a company that employs, in all, fewer than 100 persons; or
- b. Secretary to a corporate officer (other than chairman of the board or president) of a company that employs, in all, over 100 but fewer than 5,000 persons; or
- c. Secretary to the head (immediately below the officer level) over either a major corporatewide functional activity (e.g., marketing, research, operations, industrial relations, etc.) or a major geographic or organizational segment (e.g., a regional headquarters; a major division) of a company that employs, in all, over 5,000 but fewer than 25,000 employees; or
- d. Secretary to the head of an individual plant, factory, etc., (or other equivalent level of official) that employs, in all, over 5,000 persons; or
- e. Secretary to the head of a large and important organizational segment (e.g., a middle management supervisor of an organizational segment often involving as many as several hundred persons) of a company that employs, in all, over 25,000 persons.

LS-4

- a. Secretary to the chairman of the board or president of a company that employs, in all, over 100 but fewer than 5,000 persons; or
- b. Secretary to a corporate officer (other than the chairman of the board or president) of a company that employs, in all, over 5,000 but fewer than 25,000 persons; or
- c. Secretary to the head, immediately below the corporate officer level, of a major segment or subsidiary of a company that employs, in all, over 25,000 persons.

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

Level of Secretary's Responsibility(LR)

This factor evaluates the nature of the work relationship between the secretary and the supervisor, and the extent to which the secretary is expected to exercise initiative and judgment. Secretaries should be matched at LR-1 or LR-2 described below according to their level of responsibility.

LR-1

Performs varied secretarial duties including or comparable to most of the following:

- a. Answers telephones, greets personal callers, and opens incoming mail.
- b. Answers telephone requests which have standard answers. May reply to requests by sending a form letter.
- c. Reviews correspondence, memoranda, and reports prepared by others for the supervisor's signature to ensure procedural and typographical accuracy.
- d. Maintains supervisor's calendar and makes appointments as instructed.
- e. Types, takes and transcribes dictation, and files.

LR-2

Performs duties described under LR-1 and, *in addition* performs tasks requiring greater judgment, initiative, and knowledge of office functions including or comparable to most of the following:

- a. Screens telephone and personal callers, determining which can be handled by the supervisor's subordinates or other offices.
- b. Answers requests which require a detailed knowledge of office procedures or collection of information from files or other offices. *May* sign routine correspondence in own or supervisor's name.
- c. Compiles or assists in compiling periodic reports on the basis of general instructions.
- d. Schedules tentative appointments without prior clearance. Assembles necessary background material for scheduled meetings. Makes arrangements for meetings and conferences.
- e. Explains supervisor's requirements to other employees in supervisor's unit. (Also types, takes dictation, and files.)

The following tabulation shows the level of the secretary for each LS and LR combination:

	<i>LR-1</i>	<i>LR-2</i>
LS-1.....	I	II
LS-2.....	II	III
LS-3.....	III	IV
LS-4.....	IV	V

## STENOGRAPHER

Primary duty is to take dictation using shorthand, and to transcribe the dictation. May also type from written copy. May operate from a stenographic pool. May occasionally transcribe from voice recordings (if primary duty is transcribing from recordings, see Transcribing-Machine Typist). *NOTE:* This job is distinguished from that of a secretary in that a secretary normally works in a confidential relationship with only one manager or executive and performs more responsible and discretionary tasks as described in the secretary job definition.

### Stenographer I

Dictation involves a normal routine vocabulary. May maintain files, keep simple records, or perform other relatively routine clerical tasks.

### Stenographer II

Dictation involves a varied technical or specialized vocabulary such as in legal briefs or reports on scientific research. May also set up and maintain files, keep records, etc., *OR*

Performs stenographic duties requiring significantly greater independence and responsibility than Stenographer I, as evidenced by the following: Work requires a high degree of stenographic speed and accuracy; a thorough working knowledge of general business and office procedure and of the specific business operations, organization, policies, procedures, files, workflow, etc. Uses this knowledge in performing stenographic duties and responsible clerical tasks such as maintaining follow-up files; assembling material for reports, memoranda, and letters; composing simple letters from general instructions; reading and routing incoming mail; and answering routine questions, etc.

## TRANSCRIBING-MACHINE TYPIST

Primary duty is to type copy of voice recorded dictation which does *not* involve varied technical or specialized vocabulary such as that used in legal briefs or reports on scientific research. May also type from written copy. May maintain files, keep simple records, or perform other relatively routine clerical tasks. (See Stenographer definition for workers involved with shorthand dictation.)

## 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; or routine typing of forms, insurance policies, etc.; or 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; or 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.

## FILE CLERK

Files, classifies, and retrieves material in an established filing system. May perform clerical and manual tasks required to maintain files. Positions are classified into levels on the basis of the following definitions:

### File Clerk I

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

### File Clerk II

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

### File Clerk III

Classifies and indexes file material such as correspondence, reports, technical documents, etc., in an established filing system containing a number of varied subject matter files. 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.

## MESSENGER

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. Exclude positions that require operation of a motor vehicle as a significant duty.

## SWITCHBOARD OPERATOR

Operates a telephone switchboard or console used with a private branch exchange (PBX) system to relay incoming, outgoing, and intrasystem calls. May provide information to callers, record and transmit messages, keep record of calls placed and toll charges. Besides operating a telephone switchboard or console, *may* also type or perform routine clerical work (typing or routine clerical work may occupy the major portion of the worker's time, and is usually performed while at the switchboard or console). Chief or lead operators in establishments employing more than one operator are excluded. For an operator who also acts as a receptionist, see Switchboard operator-receptionist.

## SWITCHBOARD OPERATOR-RECEPTIONIST

At a single-position telephone switchboard or console, acts both as an operator—see Switchboard operator—and as a receptionist. Receptionist's work involves such duties as greeting visitors; determining nature of visitor's business and providing appropriate information; referring visitor to appropriate person in the organization or contacting that person by telephone and arranging an appointment; keeping a log of visitors.

## **ORDER CLERK**

Receives written or verbal customers' purchase orders for material or merchandise from customers or sales people. Work typically involves some combination of the following duties: Quoting prices; determining availability of ordered items and suggesting substitutes when necessary; advising expected delivery date and method of delivery; recording order and customer information on order sheets; checking order sheets for accuracy and adequacy of information recorded; ascertaining credit rating of customer; furnishing customer with acknowledgement of receipt of order; following up to see that order is delivered by the specified date or to let customer know of a delay in delivery; maintaining order file; checking shipping invoice against original order. *Exclude workers paid on a commission basis or whose duties include any of the following:* Receiving orders for services rather than for material or merchandise; providing customers with consultative advice using knowledge gained from engineering or extensive technical training; emphasizing selling skills; handling material or merchandise as an integral part of the job.

Positions are classified into levels according to the following definitions:

### **Order Clerk I**

Handles orders involving items which have readily identified uses and applications. May refer to a catalog, manufacturer's manual, or similar document to insure that proper item is supplied or to verify price of ordered item.

### **Order Clerk II**

Handles orders that involve making judgments such as choosing which specific product or material from the establishment's product lines will satisfy the customer's needs, or determining the price to be quoted when pricing involves more than merely referring to a price list or making some simple mathematical calculations.

## **ACCOUNTING CLERK**

Performs one or more accounting tasks such as posting to registers and ledgers; balancing and reconciling accounts; verifying the internal consistency, completeness, and mathematical accuracy of accounting documents; assigning prescribed accounting distribution codes; examining and verifying the clerical accuracy of various types of reports, lists, calculations, postings, etc.; preparing journal vouchers; or making entries or adjustments to accounts.

Levels I and II require a basic knowledge of routine clerical methods and office practices and procedures as they relate to the clerical processing and recording of transactions and accounting information. Levels III and IV require a knowledge and understanding of the established and standardized bookkeeping and accounting procedures and techniques used in an accounting system, or a segment of an accounting system, where there are few variations in the types of transactions handled. In addition, some jobs at each level may require a basic knowledge and understanding of the terminology, codes, and processes used in an automated accounting system.

### **Accounting Clerk I**

Performs very simple and routine accounting clerical operations, for example, recognizing and comparing easily identified numbers and codes on similar and repetitive accounting documents, verifying mathematical accuracy, and identifying discrepancies and bringing them to the supervisor's attention. Supervisor gives clear

and detailed instructions for specific assignments. Employee refers to supervisor all matters not covered by instructions. Work is closely controlled and reviewed in detail for accuracy, adequacy, and adherence to instructions.

### **Accounting Clerk II**

Performs one or more routine accounting clerical operations, such as: Examining, verifying, and correcting accounting transactions to ensure completeness and accuracy of data and proper identification of accounts, and checking that expenditures will not exceed obligations in specified accounts; totaling, balancing, and reconciling collection vouchers; posting data to transaction sheets where employee identifies proper accounts and items to be posted; and coding documents in accordance with a chart (listing) of accounts. Employee follows specific and detailed accounting procedures. Completed work is reviewed for accuracy and compliance with procedures.

### **Accounting Clerk III**

Uses a knowledge of double entry bookkeeping in performing one or more of the following: Posts actions to journals, identifying subsidiary accounts affected and debit and credit entries to be made and assigning proper codes; reviews computer printouts against manually maintained journals, detecting and correcting erroneous postings, and preparing documents to adjust accounting classifications and other data; or reviews lists of transactions rejected by an automated system, determining reasons for rejections, and preparing necessary correcting material. On routine assignments, employee selects and applies established procedures and techniques. Detailed instructions are provided for difficult or unusual assignments. Completed work and methods used are reviewed for technical accuracy.

### **Accounting Clerk IV**

Maintains journals or subsidiary ledgers of an accounting system and balances and reconciles accounts. Typical duties include one or both of the following: Reviews invoices and statements (verifying information, ensuring sufficient funds have been obligated, and if questionable, resolving with the submitting unit, determining accounts involved, coding transactions, and processing material through data processing for application in the accounting system); and/or analyzes and reconciles computer printouts with operating unit reports (contacting units and researching causes of discrepancies, and taking action to ensure that accounts balance). Employee resolves problems in recurring assignments in accordance with previous training and experience. Supervisor provides suggestions for handling unusual or nonrecurring transactions. Conformance with requirements and technical soundness of completed work are reviewed by the supervisor or are controlled by mechanisms built into the accounting system.

NOTE: Excluded from level IV are positions responsible for maintaining either a general ledger or a general ledger in combination with subsidiary accounts.

## **PAYROLL CLERK**

Performs the clerical tasks necessary to process payrolls and to maintain payroll records. Work involves *most of the following:* Processing workers' time or production records; adjusting workers' records for changes in wage rates, supplementary benefits, or tax deductions; editing payroll listings against source records; tracing and correcting

errors in listings; and assisting in preparation of periodic summary payroll reports. In a nonautomated payroll system, computes wages. Work may require a practical knowledge of governmental regulations, company payroll policy, or the computer system for processing payrolls.

### **KEY ENTRY OPERATOR**

Operates keyboard-controlled data entry device such as keypunch machine or key-operated magnetic tape or disk encoder to transcribe data into a form suitable for computer processing. Work requires skill in operating an alphanumeric keyboard and an understanding of transcribing procedures and relevant data entry equipment.

Positions are classified into levels on the basis of the following definitions:

#### **Key Entry Operator I**

Work is routine and repetitive. Under close supervision or following specific procedures or detailed instructions, works from various standardized source documents which have been coded and require little or no selecting, coding, or interpreting of data to be entered. Refers to supervisor problems arising from erroneous items, codes, or missing information.

#### **Key Entry Operator II**

Work requires the application of experience and judgment in selecting procedures to be followed and in searching for, interpreting, selecting, or coding items to be entered from a variety of source documents. On occasion may also perform routine work as described for level I.

NOTE: Excluded are operators above level II using the key entry controls to access, read, and evaluate the substance of specific records to take substantive actions, or to make entries requiring a similar level of knowledge.

## **Professional and Technical**

### **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 programmers to prepare required digital computer programs. Work involves *most of the following*: Analyzes subject-matter operations to be automated and identifies conditions and criteria required to achieve satisfactory results; specifies number and types of records, files, and documents to be used; outlines actions to be performed by personnel and computers in sufficient detail for presentation to management and for programming (typically this involves preparation of work and data flow charts); coordinates the development of test problems and participates in trial runs of new and revised systems; and recommends equipment changes to obtain more effective overall operations. (NOTE: Workers performing both systems analysis and programming 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 other electronic data processing employees, or systems analysts primarily concerned with scientific or engineering problems.

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

### **Computer Systems Analyst I**

Works under immediate supervision, carrying out analyses as assigned, usually of a single activity. Assignments are designed to develop and expand practical experience in 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 programmers from information developed by the higher level analyst.

### **Computer Systems Analyst II**

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, maintaining accounts receivable in a retail establishment, or maintaining inventory accounts in a manufacturing or wholesale establishment.) Confers with persons concerned to determine the data processing problems and advises subject-matter personnel on the implications of the data processing systems to be applied. *OR*

Works on a segment of a complex data processing scheme or system, as described for level III. Works independently on routine assignments and receives instruction and guidance on complex assignments. Work is reviewed for accuracy of judgment, compliance with instructions, and to insure proper alignment with the overall system.

### **Computer Systems Analyst III**

Works independently or under only general direction on complex problems involving all phases of systems analysis. Problems are complex because of diverse sources of input data and multiple-use requirements of output data. (For example, develops an integrated 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 follow-up 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 recommendations, if needed, for approval of major systems installations or changes and for obtaining equipment.

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

### **COMPUTER PROGRAMMER, 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 programmer develops the precise instructions which, when entered into the computer system in coded language, cause the manipulation of data to achieve desired results. Work involves *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 programmed; develops sequence of program steps; writes detailed flow charts to show order in which data will be processed; converts these charts to coded instructions for machine to follow; tests and corrects programs; 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 programming 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 other electronic data processing employees, or programmers primarily concerned with scientific and/or engineering problems.

For wage study purposes, programmers are classified as follows:

#### **Computer Programmer I**

Makes practical applications of programming 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 Programmer II**

Works independently or under only general direction on relatively simple programs, or on simple segments of complex programs. Programs (or segments) usually 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 of data can be tested by using a few routine checks. Typically, the program deals with routine recordkeeping operations. *OR*

Works on complex programs (as described for level III) under close direction of a higher level programmer or supervisor. May assist higher level programmer by independently performing less difficult tasks assigned, and performing more difficult tasks under fairly close direction.

May guide or instruct lower level programmers.

#### **Computer Programmer III**

Works independently or under only general direction on complex problems which require competence in all phases of programming concepts and practices. Working from diagrams and charts which identify the nature of desired results, major processing steps to be accomplished, and the relationships between various steps of the problem solving routine; plans the full range of programming actions needed to efficiently utilize the computer system in achieving desired end products.

At this level, programming is difficult because computer equipment must be organized to produce several interrelated but diverse products from numerous and diverse data elements. 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 computer storage capacity, and substantial manipulation and resequencing of data elements to form a highly integrated program.

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

#### **COMPUTER OPERATOR**

In accordance with operating instructions, monitors and operates the control console of a digital computer to process data. Executes runs by either serial processing

(processes one program at a time) or multiprocessing (processes two or more programs simultaneously). The following duties characterize the work of a computer operator:

- a. Studies operating instructions to determine equipment setup needed.
- b. Loads equipment with required items (tapes, cards, disks, paper, etc.).
- c. Switches necessary auxiliary equipment into system.
- d. Starts and operates computer.
- e. Responds to operating and computer output instructions.
- f. Reviews error messages and makes corrections during operation *or* refers problems.
- g. Maintains operating record.

May test-run new or modified programs. May assist in modifying systems or programs. The scope of this definition includes trainees working to become fully qualified computer operators, fully qualified computer operators, and lead operators providing technical assistance to lower level operators. It excludes workers who monitor and operate remote terminals.

For wage study purposes, computer operators are classified as follows:

#### **Computer Operator I**

Work assignments are limited to established production runs (i.e., programs which present few operating problems). Assignments may consist primarily of on-the-job training (sometimes augmented by classroom instruction). When learning to run programs, the supervisor or a higher level operator provides detailed written or oral guidance to the operator before and during the run. After the operator has gained experience with a program, however, the operator works fairly independently in applying standard operating or corrective procedures in responding to computer output instructions or error conditions, but refers problems to a higher level operator or the supervisor when standard procedures fail.

#### **Computer Operator II**

In addition to established production runs, work assignments include runs involving new programs, applications, and procedures (i.e., situations which require the operator to adapt to a variety of problems). At this level, the operator has the training and experience to work fairly independently in carrying out most assignments. Assignments may require the operator to select from a variety of standard setup and operating procedures. In responding to computer output instructions or error conditions, applies standard operating or corrective procedures, but may deviate from standard procedures when standard procedures fail if deviation does not materially alter the computer unit's production plans. Refers the problem or aborts the program when procedures applied do not provide a solution. May guide lower level operators.

#### **Computer Operator III**

In addition to work assignments described for Computer operator II (see above) the work of Computer operator III involves at least one of the following:

- a. Deviates from standard procedures to avoid the loss of information or to conserve computer time even though the procedures applied materially alter the computer unit's production plans.
- b. Tests new programs, applications, and procedures.

- c. Advises programmers and subject-matter experts on setup techniques.
- d. Assists in (1) maintaining, modifying, and developing operating systems or programs; (2) developing operating instructions and techniques to cover problem situations; and/or (3) switching to emergency backup procedures (such assistance requires a working knowledge of program language, computer features, and software systems).

An operator at this level typically guides lower level operators.

### PERIPHERAL EQUIPMENT OPERATOR

Operates peripheral equipment which directly supports digital computer operations. Such equipment is uniquely and specifically designed for computer applications, but need not be physically or electronically connected to a computer. Printers, plotters, card read/punches, tape readers, tape units or drives, disk units or drives, and data display units are examples of such equipment.

The following duties characterize the work of a peripheral equipment operator:

- a. Loading printers and plotters with correct paper; adjusting controls for forms, thickness, tension, printing density, and location; and unloading hard copy.
- b. Labeling tape reels, disks, or card decks.
- c. Checking labels and mounting and dismounting designated tape reels or disks on specified units or drives.
- d. Setting controls which regulate operation of the equipment.
- e. Observing panel lights for warnings and error indications and taking appropriate action.
- f. Examining tapes, cards, or other material for creases, tears, or other defects which could cause processing problems.

This classification excludes workers (1) who monitor and operate a control console (see Computer operator) or a remote terminal, or (2) whose duties are limited to operating decollaters, bursters, separators, or similar equipment.

### COMPUTER DATA LIBRARIAN

Maintains library of media (tapes, disks, cards, cassettes) used for automatic data processing applications. The following or similar duties characterize the work of a computer data librarian: Classifying, cataloging, and storing media in accordance with a standardized system; upon proper requests, releasing media for processing; maintaining records of releases and returns; inspecting returned media for damage or excessive wear to determine whether or not they need replacing. May perform minor repairs to damaged tapes.

### DRAFTER

Performs drafting work requiring knowledge and skill in drafting methods, procedures, and techniques. Prepares drawings of structures, mechanical and electrical equipment, piping and duct systems and other similar equipment, systems, and assemblies. Uses recognized systems of symbols, legends, shadings, and lines having specific meanings in drawings. Drawings are used to communicate engineering ideas, designs, and information in support of engineering functions.

The following are excluded when they constitute the primary purpose of the job:

- a. Design work requiring the technical knowledge, skill, and ability to conceive or originate designs;
- b. Illustrating work requiring artistic ability;
- c. Work involving the preparation of charts, diagrams, room arrangements, floor plans, etc.;
- d. Cartographic work involving the preparation of maps or plats and related materials, and drawings of geological structures; and
- e. Supervisory work involving the management of a drafting program or the supervision of drafters.

Positions are classified into levels on the basis of the following definitions.

#### Drafter I

Working under close supervision, traces or copies finished drawings, making clearly indicated revisions. Uses appropriate templates to draw curved lines. Assignments are designed to develop increasing skill in various drafting techniques. Work is spot-checked during progress and reviewed upon completion.

NOTE: Exclude drafters performing elementary tasks while receiving training in the most basic drafting methods.

#### Drafter II

Prepares drawings of simple, easily visualized parts or equipment from sketches or marked-up prints. Selects appropriate templates and other equipment needed to complete assignments. Drawings fit familiar patterns and present few technical problems. Supervisor provides detailed instructions on new assignments, gives guidance when questions arise, and reviews completed work for accuracy.

#### Drafter III

Prepares various drawings of parts and assemblies, including sectional profiles, irregular or reverse curves, hidden lines, and small or intricate details. Work requires use of most of the conventional drafting techniques and a working knowledge of the terms and procedures of the industry. Familiar or recurring work is assigned in general terms; unfamiliar assignments include information on methods, procedures, sources of information, and precedents to be followed. Simple revisions to existing drawings may be assigned with a verbal explanation of the desired results; more complex revisions are produced from sketches which clearly depict the desired product.

#### Drafter IV

Prepares complete sets of complex drawings which include multiple views, detail drawings, and assembly drawings. Drawings include complex design features that require considerable drafting skill to visualize and portray. Assignments regularly require the use of mathematical formulas to compute weights, load capacities, dimensions, quantities of materials, etc. Working from sketches and verbal information supplied by an engineer or designer, determines the most appropriate views, detail drawings, and supplementary information needed to complete assignments. Selects required information from precedents, manufacturers' catalogs, and technical guides. Independently resolves most of the problems encountered. Supervisor or designer may suggest methods of approach or provide advice on unusually difficult problems.

NOTE: Exclude drafters performing work of similar difficulty to that described at this level but who provide support for a variety of organizations which have widely differing functions or requirements.

#### **Drafter V**

Works closely with design originators, preparing drawings of unusual, complex or original designs which require a high degree of precision. Performs unusually difficult assignments requiring considerable initiative, resourcefulness, and drafting expertise. Assures that anticipated problems in manufacture, assembly, installation, and operation are resolved by the drawings produced. Exercises independent judgment in selecting and interpreting data based on a knowledge of the design intent. Although working primarily as a drafter, may occasionally perform engineering design work in interpreting general designs prepared by others or in completing missing design details. May provide advice and guidance to lower level drafters or serve as coordinator and planner for large and complex drafting projects.

#### **ELECTRONICS TECHNICIAN**

Works on various types of electronic equipment and related devices by performing one or a combination of the following: Installing, maintaining, repairing, overhauling, troubleshooting, modifying, constructing, and testing. Work requires practical application of technical knowledge of electronics principles, ability to determine malfunctions, and skill to put equipment in required operating condition.

The equipment—consisting of either many different kinds of circuits or multiple repetition of the same kind of circuit—includes, but is not limited to, the following: (a) electronic transmitting and receiving equipment (e.g., radar, radio, television, telephone, sonar, navigational aids), (b) digital and analog computers, and (c) industrial and medical measuring and controlling equipment.

This classification excludes repairers of such standard electronic equipment as common office machines and household radio and television sets; production assemblers and testers; workers whose primary duty is servicing electronic test instruments; technicians who have administrative or supervisory responsibility; and drafters, designers, and professional engineers.

Positions are classified into levels on the basis of the following definitions:

#### **Electronics Technician I**

Applies working technical knowledge to perform simple or routine tasks in working on electronic equipment, following detailed instructions which cover virtually all procedures. Work typically involves such tasks as: Assisting higher level technicians by performing such activities as replacing components, wiring circuits, and taking test readings; repairing simple electronic equipment; and using tools and common test instruments (e.g., multimeters, audio signal generators, tube testers, oscilloscopes). Is not required to be familiar with the interrelationships of circuits. This knowledge, however, may be acquired through assignments designed to increase competence (including classroom training) so that worker can advance to higher level technician.

Receives technical guidance, as required, from supervisor or higher level technician. Work is typically spot-checked, but is given detailed review when new or advanced assignments are involved.

#### **Electronics Technician II**

Applies comprehensive technical knowledge to solve complex problems (i.e., those that typically *can* be solved solely by properly interpreting manufacturers' manuals or similar documents) in working on electronic equipment. Work involves: A familiarity with the interrelationships of circuits; and judgment in determining work sequence and in selecting tools and testing instructions, usually less complex than those used by the level III technician.

Receives technical guidance, as required, from supervisor or higher level technician, and work is reviewed for specific compliance with accepted practices and work assignments. May provide technical guidance to lower level technicians.

#### **Electronics Technician III**

Applies advanced technical knowledge to solve unusually complex problems (i.e., those that typically *cannot* be solved solely by reference to manufacturers' manuals or similar documents) in working on electronic equipment. Examples of such problems include location and density of circuitry, electromagnetic radiation, isolating malfunctions, and frequent engineering changes. Work involves: A detailed understanding of the interrelationships of circuits; exercising independent judgment in performing such tasks as making circuit analyses, calculating wave forms, tracing relationships in signal flow; and regularly using complex test instruments (e.g., dual trace oscilloscopes, Q-meters, deviation meters, pulse generators).

Work may be reviewed by supervisor (frequently an engineer or designer) for general compliance with accepted practices. May provide technical guidance to lower level technicians.

#### **REGISTERED INDUSTRIAL NURSE**

A registered nurse 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 to the ill or injured; attending to subsequent dressing of employees' injuries; keeping records of patients treated; preparing accident reports for compensation or other purposes; assisting in physical examinations and health evaluations of applicants and employees; and planning and carrying out programs involving health education, accident prevention, evaluation of plant environment, or other activities affecting the health, welfare, and safety of all personnel. Nursing supervisors or head nurses in establishments employing more than one nurse are excluded.

### **Maintenance, Toolroom, and Powerplant**

#### **MAINTENANCE CARPENTER**

Performs the carpentry duties necessary to construct and maintain in good repair building woodwork and equipment such as bins, cribs, counters, benches, partitions, doors, floors, stairs, casings, and trim 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 of carpenter's handtools, portable power tools, and standard measuring instruments; making standard shop computations relating to dimensions of work; and selecting materials necessary for the work. In general, the work of the maintenance carpenter requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

### **MAINTENANCE ELECTRICIAN**

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 breakers, 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 training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

### **MAINTENANCE PAINTER**

Paints and redecorates walls, woodwork, and fixtures of an establishment. Work involves *the following*: Knowledge of surface peculiarities and types of paint required for different applications; preparing surface for painting by removing old finish or by placing putty or filler 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 experience usually acquired through a formal apprenticeship or equivalent training and experience.

### **MAINTENANCE MACHINIST**

Produces replacement parts and new parts in making repairs of metal parts of mechanical equipment operated in an establishment. Work involves *most of the following*: Interpreting written instructions and specifications; planning and laying out of work; using a variety of machinist'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 this 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.

### **MAINTENANCE MECHANIC (MACHINERY)**

Repairs machinery or mechanical equipment of an establishment. Work involves *most of the following*: Examining machines and mechanical equipment to diagnose source of trouble; dismantling or partly dismantling machines and performing repairs that mainly involve the use 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 the machine to a machine shop for major repairs; preparing written specifications for major repairs or for the production of parts ordered from machine shops; reassembling machines; and making all necessary adjustments for operation. In general, the work of a machinery maintenance mechanic requires 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.

### **MAINTENANCE MECHANIC (MOTOR VEHICLE)**

Repairs automobiles, buses, motortrucks, and tractors of an establishment. Work involves *most of the following*: Examining automotive equipment to diagnose source of trouble; disassembling equipment and performing repairs that involve the use of such handtools as wrenches, gauges, drills, or specialized equipment in disassembling or fitting parts; replacing broken or defective parts from stock; grinding and adjusting valves; reassembling and installing the various assemblies in the vehicle and making necessary adjustments; and aligning wheels, adjusting brakes and lights, or tightening body bolts. In general, the work of the motor vehicle maintenance mechanic requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

This classification does not include mechanics who repair customers' vehicles in automobile repair shops.

### **MAINTENANCE PIPEFITTER**

Installs or repairs water, steam, gas, or other types of pipe and pipefittings in an establishment. Work involves *most of the following*: Laying out work and measuring to locate position of pipe from drawings or other written specifications; cutting various sizes of pipe to correct lengths with chisel and hammer or oxyacetylene torch or pipe-cutting machines; threading pipe with stocks and dies; bending pipe by hand-driven or power-driven machines; assembling pipe with couplings and fastening pipe to hangers; making standard shop computations relating to pressures, flow, and size of pipe required; 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 training and experience. *Workers primarily engaged in installing and repairing building sanitation or heating systems are excluded.*

### **MAINTENANCE SHEET-METAL WORKER**

Fabricates, installs, and maintains in good repair the sheet-metal equipment and fixtures (such as machine guards, grease pans, shelves, lockers, tanks, ventilators, chutes, ducts, metal roofing) of an establishment. Work involves *most of the following*: Planning and laying out all types of sheet-metal maintenance work from blueprints, models, or other specifications; setting up and operating all available types of sheet-metal working machines; using a variety of handtools in cutting, bending, forming, shaping, fitting, and assembling; and installing sheet-metal 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.

### **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 following*: Planning and laying out work; interpreting blueprints or other specifications; using a variety of handtools and rigging; making standard shop computations relating to stresses, strength of materials, and centers of gravity; aligning and balancing equipment; selecting standard tools, equipment, and parts to be used; and installing and maintaining in good order power 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 apprenticeship or equivalent training and experience.

#### **MAINTENANCE TRADES HELPER**

Assists one or more workers in the skilled maintenance trades by performing specific or general duties of lesser skill, such as keeping a worker supplied with materials and tools; cleaning working area, machine, and equipment; assisting journeyman by holding materials or tools; and performing other unskilled tasks as directed by journeyman. The kind of work the helper is permitted to perform varies from trade to trade: In some trades the helper is confined to supplying, lifting, and holding materials and tools, and cleaning working areas; and in others he is permitted to perform specialized machine operations, or parts of a trade that are also performed by workers on a full-time basis.

#### **MACHINE-TOOL OPERATOR (TOOLROOM)**

Specializes in operating one or more than one type of machine tool (e.g., jig borer, grinding machine, engine lathe, milling machine) to machine metal for use in making or maintaining jigs, fixtures, cutting tools, gauges, or metal dies or molds used in shaping or forming metal or nonmetallic material (e.g., plastic, plaster, rubber, glass). *Work typically involves:* Planning and performing difficult machining operations which require complicated setups or a high degree of accuracy; setting up machine tool or tools (e.g., install cutting tools and adjust guides, stops, working tables, and other controls to handle the size of stock to be machined; determine proper feeds, speeds, tooling, and operation sequence or select those prescribed in drawings, blueprints, or layouts); using a variety of precision measuring instruments; making necessary adjustments during machining operation to achieve requisite dimensions to very close tolerances. May be required to select proper coolants and cutting and lubricating oils, to recognize when tools need dressing, and to dress tools. In general, the work of a machine-tool operator (toolroom) at the skill level called for in this classification requires extensive knowledge of machine-shop and toolroom practice usually acquired through considerable on-the-job training and experience.

For cross-industry wage study purposes, this classification does *not* include machine-tool operators (toolroom) employed in tool and die jobbing shops.

#### **TOOL AND DIE MAKER**

Constructs and repairs jigs, fixtures, cutting tools, gauges, or metal dies or molds used in shaping or forming metal or nonmetallic material (e.g., plastic, plaster, rubber, glass). *Work typically involves:* Planning and laying out work according to models, blueprints, drawings, or other written or oral specifications; understanding the working properties of common metals and alloys; selecting appropriate materials, tools, and processes required to complete task; making necessary shop computations; setting up and operating various machine tools and related equipment; using various tool and die maker's handtools and precision measuring instruments; working to very close tolerances; heat-treating metal parts and finished tools and dies to achieve required qualities; fitting and assembling parts to prescribed tolerances and allowances. In general, the tool and die maker's work requires rounded training in machine-shop and toolroom practice usually acquired through formal apprenticeship or equivalent training and experience.

For cross-industry wage study purposes, this classification does *not* include tool and die makers who (1) are employed in tool and die jobbing shops or (2) produce forging dies (die sinkers).

#### **STATIONARY ENGINEER**

Operates and maintains one or more systems which provide an establishment with such services as heat, air-conditioning (cool, humidify, dehumidify, filter, and circulate air), refrigeration, steam or high-temperature water, or electricity. Duties involve: Observing and interpreting readings on gauges, meters, and charts which register various aspects of the system's operation; adjusting controls to insure safe and efficient operation of the system and to meet demands for the service provided; recording in logs various aspects of the system's operation; keeping the engines, machinery, and equipment of the system in good working order. May direct and coordinate activities of other workers (not stationary engineers) in performing tasks directly related to operating and maintaining the system or systems.

The classification excludes head or chief engineers in establishments employing more than one engineer; workers required to be skilled in the repair of electronic control equipment; and workers in establishments producing electricity, steam, or heated or cooled air primarily for sale.

#### **BOILER TENDER**

Tends one or more boilers to produce steam or high-temperature water for use in an establishment. Fires boiler. Observes and interprets readings on gauges, meters, and charts which register various aspects of boiler operation. Adjusts controls to insure safe and efficient boiler operation and to meet demands for steam or high-temperature water. May also do one or more of the following: Maintain a log in which various aspects of boiler operation are recorded; clean, oil, make minor repairs or assist in repairs to boilerroom equipment; and, following prescribed methods, treat boiler water with chemicals and analyze boiler water for such things as acidity, causticity, and alkalinity.

The classification excludes workers in establishments producing electricity, steam, or heated or cooled air primarily for sale.

### **Material Movement and Custodial**

#### **TRUCKDRIVER**

Drives a truck within a city or industrial area to transport materials, merchandise, equipment, or workers between various types of establishments such as: Manufacturing plants, freight depots, warehouses, wholesale and retail establishments, or between retail establishments and customers' houses or places of business. May also load or unload truck with or without helpers, make minor mechanical repairs, and keep truck in good working order. *Salesroute and over-the-road drivers are excluded.*

For wage study purposes, truckdrivers are classified by type and rated capacity of truck, as follows:

*Truckdriver, light truck*

(straight truck, under 1 1/2 tons, usually 4 wheels)

*Truckdriver, medium truck*

(straight truck, 1 1/2 to 4 tons inclusive, usually 6 wheels)

*Truckdriver, heavy truck*

(straight truck, over 4 tons, usually 10 wheels)

*Truckdriver, tractor-trailer*

## SHIPPER AND RECEIVER

Performs *clerical and physical* tasks in connection with shipping goods of the establishment in which employed and receiving incoming shipments. In performing day-to-day, routine tasks, follows established guidelines. In handling unusual nonroutine problems, receives specific guidance from supervisor or other officials. May direct and coordinate the activities of other workers engaged in handling goods to be shipped or being received.

*Shippers* typically are responsible for most of the following: Verifying that orders are accurately filled by comparing items and quantities of goods gathered for shipment against documents; insuring that shipments are properly packaged, identified with shipping information, and loaded into transporting vehicles; preparing and keeping records of goods shipped, e.g., manifests, bills of lading.

*Receivers* typically are responsible for most of the following: Verifying the correctness of incoming shipments by comparing items and quantities unloaded against bills of lading, invoices, manifests, storage receipts, or other records; checking for damaged goods; insuring that goods are appropriately identified for routing to departments within the establishment; preparing and keeping records of goods received.

For wage study purposes, workers are classified as follows:

*Shipper*  
*Receiver*  
*Shipper and receiver*

## WAREHOUSEMAN

As directed, performs a *variety of warehousing* duties which require an *understanding of the establishment's storage plan*. Work involves *most of the following*: Verifying materials (or merchandise) against receiving documents, noting and reporting discrepancies and obvious damages; routing materials to prescribed storage locations; storing, stacking, or palletizing materials in accordance with prescribed storage methods; rearranging and taking inventory of stored materials; examining stored materials and reporting deterioration and damage; removing material from storage and preparing it for shipment. May operate hand or power trucks in performing warehousing duties.

Exclude workers whose *primary* duties involve shipping and receiving work (see Shipper and receiver and Shipping packer), order filling (see Order filler), or operating power trucks (see Power-truck operator).

## ORDER FILLER

Fills shipping or transfer orders for finished goods from stored merchandise in accordance with specifications on sales slips, customers' orders, or other instructions. May, in addition to filling orders and indicating items filled or omitted, keep records of outgoing orders, requisition additional stock or report short supplies to supervisor, and perform other related duties.

## SHIPPING PACKER

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*: Knowledge 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 breakage 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.*

## MATERIAL HANDLING LABORER

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 and merchandise on or from freight cars, trucks, or other transporting devices; unpacking, shelving, or placing materials or merchandise in proper storage location; and transporting materials or merchandise by handtruck, car, or wheelbarrow. *Longshore workers, who load and unload ships, are excluded.*

## POWER-TRUCK OPERATOR

Operates a manually controlled gasoline- or electric-powered truck or tractor to transport goods and materials of all kinds about a warehouse, manufacturing plant, or other establishment.

For wage study purposes, workers are classified by type of powertruck, as follows:

*Forklift operator*  
*Power-truck operator (other than forklift)*

## GUARD

Protects property from theft or damage, or persons from hazards or interference. Duties involve serving at a fixed post, making rounds on foot or by motor vehicle, or escorting persons or property. May be deputized to make arrests. May also help visitors and customers by answering questions and giving directions.

Guards employed by establishments which provide protective services on a contract basis are included in this occupation.

For wage study purposes, guards are classified as follows:

### Guard I

Carries out instructions primarily oriented toward insuring that emergencies and security violations are readily discovered and reported to appropriate authority. Intervenes directly only in situations which require minimal action to safeguard property or persons. Duties require minimal training. Commonly, the guard is not required to demonstrate physical fitness. May be armed, but generally is not required to demonstrate proficiency in the use of firearms or special weapons.

### Guard II

Enforces regulations designed to prevent breaches of security. Exercises judgment and uses discretion in dealing with emergencies and security violations encountered. Determines whether first response should be to intervene directly (asking for assistance when deemed necessary and time allows), to keep situation under surveillance, or to report situation so that it can be handled by appropriate authority. Duties require specialized training in methods and techniques of protecting security areas. Commonly, the guard is required to demonstrate continuing physical fitness and proficiency with firearms or other special weapons.

**JANITOR, PORTER, OR CLEANER**

Cleans and keeps in an orderly condition factory working areas and washrooms, or premises of an office, apartment house, or commercial or other establishment. Duties involve *a combination of the following*: Sweeping, mopping or scrubbing, and polishing

floors; removing chips, trash, and other refuse; dusting equipment, furniture, or fixtures; polishing metal fixtures or trimmings; providing supplies and minor maintenance services; and cleaning lavatories, showers, and restrooms. *Workers who specialize in window washing are excluded.*

# Appendix C. Job Conversion Table

Beginning in 1981, multilevel jobs are identified by numeric instead of alphabetic designations. A conversion table for the affected occupations follows:

Occupation	Numeric designation (currently used)	Alphabetic designation (previously used)	Occupation	Numeric designation (currently used)	Alphabetic designation (previously used)
Secretary.....	I II III IV V	E D C B A	Computer systems analyst (business).....	I II III	C B A
Stenographer .....	I II	General Senior	Computer programmer (business) .....	I II III	C B A
Typist.....	I II	B A	Computer operator .....	I II III	C B A
File clerk .....	I II III	C B A	Drafter .....	I II III IV V	E D C B A
Order clerk.....	I II	B A	Electronics technician .....	I II III	C B A
Accounting clerk .....	I II III IV	D C B A	Guard.....	I II	B A
Key entry operator .....	I II	B A			

# Area Wage Survey Summaries

The following areas are surveyed periodically for use in administering the Service Contract Act of 1965. Survey results are published in summaries which are available, at no cost, while supplies last from any of the BLS regional offices shown on the back cover.

Alaska (statewide)  
Albany, Ga.  
Albuquerque, N. Mex.  
Alexandria-Leesville, La.  
Alpena-Standish-Tawas City, Mich.  
Ann Arbor, Mich.  
Antelope Valley, Calif.  
Asheville, N.C.  
Atlantic City, N.J.  
Augusta, Ga.-S.C.  
Austin, Tex.  
Bakersfield, Calif.  
Baton Rouge, La.  
Battle Creek, Mich.  
Beaumont-Port Arthur-Orange and Lake Charles, Tex.-La.  
Biloxi-Gulfport and Pascagoula-Moss Point, Miss.  
Binghamton, N.Y.  
Birmingham, Ala.  
Bloomington-Vincennes, Ind.  
Bremerton-Shelton, Wash.  
Brunswick, Ga.  
Cedar Rapids, Iowa  
Champaign-Urbana-Rantoul, Ill.  
Charleston-North Charleston-Walterboro, S.C.  
Charlotte-Gastonia, N.C.  
Cheyenne, Wyo.  
Clarksville-Hopkinsville, Tenn.-Ky.  
Colorado Springs, Colo.  
Columbia-Sumter, S.C.

Columbus, Ga.-Ala.  
Columbus, Miss.  
Connecticut (statewide)  
Decatur, Ill.  
Des Moines, Iowa  
Dothan, Ala.  
Duluth-Superior, Minn.-Wis.  
El Paso-Alamogordo-Las Cruces, Tex.-N. Mex.  
Eugene-Springfield-Medford, Oreg.  
Fayetteville, N.C.  
Fort Lauderdale-Hollywood and West Palm Beach-Boca Raton, Fla.  
Fort Smith, Ark.-Okla.  
Fort Wayne, Ind.  
Frederick-Hagerstown-Chambersburg, Md.-Pa.  
Gadsden and Anniston, Ala.  
Goldsboro, N.C.  
Grand Island-Hastings, Nebr.  
Guam, Territory of  
Harrisburg-Lebanon, Pa.  
Knoxville, Tenn.  
La Crosse-Sparta, Wis.  
Laredo, Tex.  
Las Vegas-Tonopah, Nev.  
Lexington-Fayette, Ky.  
Lima, Ohio  
Little Rock-North Little Rock, Ark.  
Logansport-Peru, Ind.  
Lorain-Elyria, Ohio  
Lower Eastern Shore, Md.-Va.-Del.  
Macon, Ga.  
Madison, Wis.  
Maine (statewide)  
Mansfield, Ohio  
McAllen-Pharr-Edinburg and Brownsville-Harlingen- San Benito, Tex.  
Meridian, Miss.

Middlesex, Monmouth, and Ocean Counties, N.J.  
Mobile-Pensacola-Panama City, Ala.-Fla.  
Montana (statewide)  
Montgomery, Ala.  
Nashville-Davidson, Tenn.  
New Bern-Jacksonville, N.C.  
New Hampshire (statewide)  
North Dakota (statewide)  
Northern New York  
Northwest Texas  
Orlando, Fla.  
Oxnard-Simi Valley-Ventura, Calif.  
Peoria, Ill.  
Phoenix, Ariz.  
Pine Bluff, Ark.  
Portsmouth-Chillicothe-Gallipolis, Ohio  
Pueblo, Colo.  
Puerto Rico  
Raleigh-Durham, N.C.  
Reno, Nev.  
Riverside-San Bernardino-Ontario, Calif.  
Salina, Kans.  
Salinas-Seaside-Monterey, Calif.  
Sandusky, Ohio  
Santa Barbara-Santa Maria-Lompoc, Calif.  
Savannah, Ga.  
Selma, Ala.  
Sherman-Denison, Tex.  
Shreveport, La.  
South Dakota (statewide)  
Southeastern Massachusetts  
Southern Idaho  
Southwest Virginia  
Spokane, Wash.  
Springfield, Ill.

Stockton, Calif.  
Tacoma, Wash.  
Tampa-St. Petersburg, Fla.  
Topeka, Kans.  
Tucson-Douglas, Ariz.  
Tulsa, Okla.  
Upper Peninsula, Mich.  
Vallejo-Fairfield-Napa, Calif.  
Vermont (statewide)  
Virgin Islands of the U.S.  
Waco and Killeen-Temple, Tex.  
Waterloo-Cedar Falls, Iowa  
West Virginia (statewide)  
Western and Northern Massachusetts  
Wichita Falls-Lawton-Altus, Tex.-Okla.  
Wilmington, Del., N.J.-Md.  
Yakima-Richland-Kennewick-Pendleton, Wash.-Oreg.

## ALSO AVAILABLE—

An annual report on salaries for accountants, auditors, public accountants, chief accountants, attorneys, job analysts, directors of personnel, buyers, chemists, engineers, engineering technicians, drafters, computer operators, and clerical employees is available. Order as BLS Bulletin 2081, *National Survey of Professional, Administrative, Technical and Clerical Pay, March 1980*, \$4.00 a copy, from any of the BLS regional sales offices shown on the back cover, or from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

# Area Wage Surveys

A list of the latest bulletins available is presented below. Bulletins may be purchased from any of the BLS regional offices shown on the back cover, or from the Superintendent of Documents, U.S. Government Printing Office, Washington, D. C. 20402. Make checks payable to Superintendent of Documents. A directory of occupational wage surveys, covering the years 1974 through 1979, is available on request.

Area	Bulletin number and price*	
Albany-Schenectady-Troy, N.Y., Sept. 1980 <sup>1</sup>	3000-45	\$2.25
Anaheim-Santa Ana-Garden Grove, Calif., Oct. 1980	3000-62	\$2.00
Atlanta, Ga., May 1980	3000-21	\$2.25
Baltimore, Md., Aug. 1980	3000-38	\$2.25
Billings, Mont., July 1980 <sup>1</sup>	3000-31	\$2.00
Boston, Mass., Aug. 1980	3000-40	\$2.25
Buffalo, N.Y., Oct. 1980	3000-52	\$2.25
Chattanooga, Tenn.—Ga., Sept. 1980	3000-44	\$1.75
Chicago, Ill., May 1980 <sup>1</sup>	3000-26	\$3.25
Cincinnati, Ohio—Ky.—Ind., July 1980	3000-32	\$2.25
Cleveland, Ohio, Sept. 1980 <sup>1</sup>	3000-46	\$3.25
Columbus, Ohio, Oct. 1980	3000-48	\$2.00
Corpus Christi, Tex., July 1980	3000-28	\$1.75
Dallas—Fort Worth, Tex., Dec. 1980 <sup>1</sup>	3000-67	\$3.25
Davenport—Rock Island—Moline, Iowa—Ill., Feb. 1980 <sup>1</sup>	3000-5	\$2.25
Dayton, Ohio, Dec. 1980 <sup>1</sup>	3000-64	\$2.25
Daytona Beach, Fla., Aug. 1980 <sup>1</sup>	3000-33	\$1.75
Denver—Boulder, Colo., Dec. 1980 <sup>1</sup>	3000-68	\$3.25
Detroit, Mich., Mar. 1980	3000-7	\$2.25
Fresno, Calif., June 1980 <sup>1</sup>	3000-30	\$2.00
Gainesville, Fla., Sept. 1980 <sup>1</sup>	3000-55	\$2.00
Gary—Hammond—East Chicago, Ind., Nov. 1980 <sup>1</sup>	3000-56	\$1.75
Green Bay, Wis., July 1980	3000-22	\$1.75
Greensboro—Winston-Salem—High Point, N.C., Aug. 1980 <sup>1</sup>	3000-50	\$2.25
Greenville—Spartanburg, S.C., June 1980	3000-16	\$1.75
Hartford, Conn., Mar. 1980 <sup>1</sup>	3000-19	\$2.25
Houston, Tex., Apr. 1980 <sup>1</sup>	3000-18	\$3.25
Huntsville, Ala., Feb. 1980 <sup>1</sup>	3000-14	\$2.25
Indianapolis, Ind., Oct. 1980	3000-47	\$2.25
Jackson, Miss., Jan. 1980	3000-2	\$1.75
Jacksonville, Fla., Dec. 1980	3000-66	\$1.75
Kansas City, Mo.—Kans., Sept. 1980	3000-42	\$2.25
Los Angeles—Long Beach, Calif., Oct. 1980	3000-63	\$2.25
Louisville, Ky.—Ind., Nov. 1980 <sup>1</sup>	3000-65	\$2.25

Area	Bulletin number and price*	
Memphis, Tenn.—Ark.—Miss., Nov. 1980	3000-59	\$1.75
Miami, Fla., Oct. 1980	3000-51	\$2.25
Milwaukee, Wis., Apr. 1980	3000-10	\$2.25
Minneapolis—St. Paul, Minn.—Wis., Jan. 1981 <sup>1</sup>	3010-1	\$3.75
Nassau—Suffolk, N.Y., June 1980	3000-29	\$2.00
Newark, N.J., Jan. 1981	3010-3	\$2.25
New Orleans, La., Oct. 1980	3000-58	\$2.00
New York, N.Y.—N.J., May 1980	3000-24	\$2.25
Norfolk—Virginia Beach—Portsmouth, Va.—N.C., May 1980	3000-20	\$1.75
Northeast Pennsylvania, Aug. 1980	3000-37	\$1.75
Oklahoma City, Okla., Aug. 1980 <sup>1</sup>	3000-41	\$2.25
Omaha, Nebr.—Iowa, Oct. 1980 <sup>1</sup>	3000-57	\$2.25
Paterson—Clifton—Passaic, N.J., June 1980 <sup>1</sup>	3000-34	\$2.25
Philadelphia, Pa.—N.J., Nov. 1980	3000-53	\$2.25
Pittsburgh, Pa., Jan. 1981	3010-2	\$2.25
Portland, Maine, Dec. 1980	3000-61	\$1.75
Portland, Oreg.—Wash., June 1980 <sup>1</sup>	3000-49	\$2.50
Poughkeepsie, N.Y., June 1980 <sup>1</sup>	3000-35	\$2.00
Poughkeepsie—Kingston—Newburgh, N.Y., June 1980 <sup>1</sup>	3000-39	\$2.00
Providence—Warwick—Pawtucket, R.I.—Mass., June 1980	3000-27	\$2.00
Richmond, Va., June 1980 <sup>1</sup>	3000-23	\$2.25
St. Louis, Mo.—Ill., Mar. 1980	3000-12	\$2.25
Sacramento, Calif., Dec. 1980 <sup>1</sup>	3000-70	\$2.25
Saginaw, Mich., Nov. 1980	3000-54	\$1.75
Salt Lake City—Ogden, Utah, Nov. 1980	3000-60	\$2.00
San Antonio, Tex., May 1980 <sup>1</sup>	3000-17	\$2.00
San Diego, Calif., Nov. 1980 <sup>1</sup>	3000-71	\$2.25
San Francisco—Oakland, Calif., Mar. 1980	3000-9	\$2.25
San Jose, Calif., Mar. 1980	3000-6	\$2.00
Seattle—Everett, Wash., Dec. 1980	3000-69	\$1.75
South Bend, Ind., Aug. 1980	3000-36	\$1.75
Toledo, Ohio—Mich., May 1980	3000-13	\$1.75
Trenton, N.J., Sept. 1980	3000-43	\$1.75
Washington, D.C.—Md.—Va., Mar. 1980	3000-4	\$2.25
Wichita, Kans., Apr. 1980 <sup>1</sup>	3000-15	\$2.25
Worcester, Mass., Apr. 1980 <sup>1</sup>	3000-25	\$2.00
York, Pa., Feb. 1980	3000-11	\$1.75

\* Prices are determined by the Government Printing Office and are subject to change.

<sup>1</sup> Data on establishment practices and supplementary wage provisions are also presented.

U.S. Department of Labor  
Bureau of Labor Statistics  
Washington, D.C. 20212

Official Business  
Penalty for private use, \$300

Postage and Fees Paid  
U.S. Department of Labor

Third Class Mail

Lab-441



## Bureau of Labor Statistics Regional Offices

### Region I

1603 JFK Federal Building  
Government Center  
Boston, Mass. 02203  
Phone: 223-6761 (Area Code 617)

Connecticut  
Maine  
Massachusetts  
New Hampshire  
Rhode Island  
Vermont

### Region II

Suite 3400  
1515 Broadway  
New York, N.Y. 10036  
Phone: 944-3121 (Area Code 212)

New Jersey  
New York  
Puerto Rico  
Virgin Islands

### Region III

2535 Market Street,  
P.O. Box 13309  
Philadelphia, Pa. 19101  
Phone: 596-1154 (Area Code 215)

Delaware  
District of Columbia  
Maryland  
Pennsylvania  
Virginia  
West Virginia

### Region IV

Suite 540  
1371 Peachtree St., N.E.  
Atlanta, Ga. 30367  
Phone: 881-4418 (Area Code 404)

Alabama  
Florida  
Georgia  
Kentucky  
Mississippi  
North Carolina  
South Carolina  
Tennessee

### Region V

9th Floor, 230 S. Dearborn St.  
Chicago, Ill. 60604  
Phone: 353-1880 (Area Code 312)

Illinois  
Indiana  
Michigan  
Minnesota  
Ohio  
Wisconsin

### Region VI

Second Floor  
555 Griffin Square Building  
Dallas, Tex. 75202  
Phone: 767-6971 (Area Code 214)

Arkansas  
Louisiana  
New Mexico  
Oklahoma  
Texas

### Regions VII and VIII

Federal Office Building  
911 Walnut St., 15th Floor  
Kansas City, Mo. 64106  
Phone: 374-2481 (Area Code 816)

VII  
Iowa  
Kansas  
Missouri  
Nebraska

VIII  
Colorado  
Montana  
North Dakota  
South Dakota  
Utah  
Wyoming

### Regions IX and X

450 Golden Gate Ave.  
Box 36017  
San Francisco, Calif. 94102  
Phone: 556-4678 (Area Code 415)

IX  
Arizona  
California  
Hawaii  
Nevada

X  
Alaska  
Idaho  
Oregon  
Washington

