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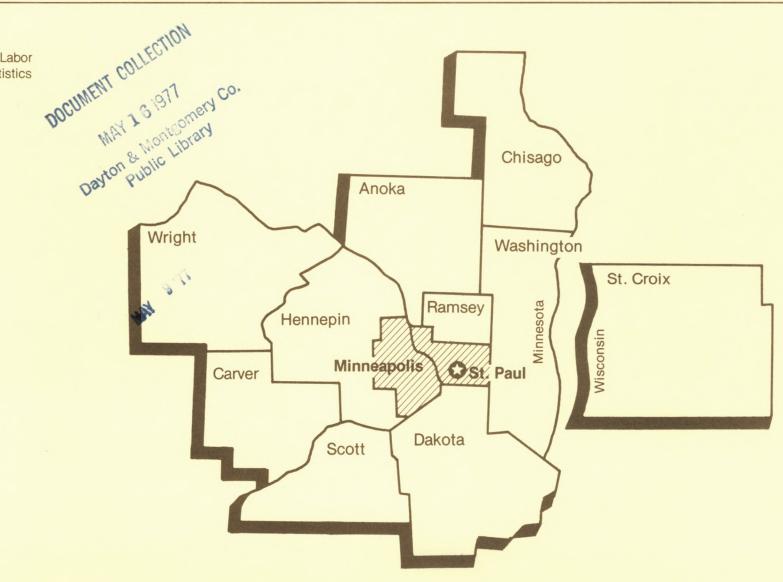
# Area Wage Survey

# Minneapolis—St. Paul, Minnesota—Wisconsin, Metropolitan Area, January 1977



Bulletin 1950-3

U.S. Department of Labor Bureau of Labor Statistics



# **Preface**

This bulletin provides results of a January 1977 survey of occupational earnings in the Minneapolis-St. Paul, Minnesota-Wisconsin, 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 Chicago, Ill., under the general direction of Lois L. Orr, 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.

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the Bureau of Labor Statistics and cite the name and number of this publication.

# Note:

Reports on occupational earnings and supplementary wage provisions in the Minneapolis—St. Paul area are available for the nonelectrical machinery (November 1974), hospitals (August 1975), electrical appliance repair (November 1975), and metalworking (January 1976) industries. Also available for Minneapolis and for St. Paul are listings of union wage rates for building trades, printing trades, local-transit operating employees, local truckdrivers and helpers, and grocery store employees. Free copies of these are available from the Bureau's regional offices. (See back cover for addresses.)

# Area Wage Survey

# Minneapolis—St. Paul, Minnesota—Wisconsin, Metropolitan Area, January 1977

U.S. Department of Labor Ray Marshall, Secretary Bureau of Labor Statistics Julius Shiskin, Commissioner Contents Page Page

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# Introduction

This area is 1 of 74 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, occupational earnings data (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 bulletins 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. For the 31 largest survey areas, tables A-8 through A-13 provide similar data for establishments employing 500 workers or more.

Table A-7 provides percent changes in average hourly earnings of 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 elinimation 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.

# Appendixes

Appendix A describes the methods and concepts used in the area wage survey program and provides information on the scope of the survey.

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

# A. Earnings

Table A-1. Weekly earnings of office workers in Minneapolis-St. Paul, Minn.-Wis., January 1977

				Weekly (stan	earnings <sup>1</sup> dard)	Numbe																				
Occupation and industry division	Number	Ave#ge weekly							\$ 110								\$ 190							320	340	\$
Occupation and industry division	workers	hours i (standard)	Mean 2	Median 2	Middle range 2	and											100									
		(standard)				under	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	
						90	100	110	120	130	140	150	160	170	180	190	200	220	240	260	280	300	320	340	360	_
ALL WORKERS	Ī																									
ECRETARIES	6,098	39.5	186.50	181.00	162.50-202.50	-	-	-	6	22	197	445	586	862	818	853	633	875	345	192	101	84	58	19	1	
MANUFACTURING		39.5	185.00	181.50	167.00-198.00		-	-	-	-	29	148	310	453	592	570	424	453	212	67	31	12	4	1	-	
NONMANUFACTURING	2,792				157.00-207.00		-	-	6	22	168	297	276	409	226	283	209	422	133	125	70	72	54	18	1	
PUBLIC UTILITIES	366		242.00	245.00	211.50-279.50	-	-	-	-	-	9	4	10	4	10	10	16	60	47	60	45	52	24	13	1	
WHOLESALE TRADE	615				161.00-215.50		-	-	-	5	22	62	44	75	61	55	48	112	32	42	11	15	30	1	-	
RETAIL TRADE	363				160.00-203.50		-	-	2	4	33	19	24	52	37	47	24	98	16	5	5	-	-	-	-	
FINANCE	988				150.50-193.50		-	-	4	9	94	138	116	154	80	126	74	123	35		11	5	-	4	-	
SERVICES	460	39.5	168.50	162.50	152.60-184.00	-	-	-	-	4	10	74	82	124	38	45	47	29	3	3	1	-	-	-	-	
SECRETARIES, CLASS A					202.09-254.09		-	-	-	-	-	2	10	16	11	29	48	141	95	95	45	42	18	12	-	
MANUFACTURING	224				211.50-250.00	-	-	-	-	-	-	2	10		1	19	9	48	60	41	27	8	1	-	-	
NONMANUFACTURING	342				200.50-257.50	-	-	-	-	- 7	-	2	-	16	10	10	39	93	35		19	34	17	12	-	
WHOLESALE TRADE	105				245.00-302.50		-	-	-	-	-	-	-	6	2	1	13	7 40	22		9	95	16	10	-	
FINANCE	79				201.50-230.00		-	_	_	_	_	_	_	-	4	8	11	25	4	11	9	5	1	2	_	
												20	52	00												
SECRETARIES, CLASS B	1,444				178.50-216.00		-	-	-	_	41	39	53	99	161	194	178	380	164	58	50	37	13	6	1	
MANUFACTURING	741				189.00-218.00		-	-	-	-	-	1	6		80	106	124	259	124	26	5	3	-	1	-	
NONMANUFACTURING	703				164.50-211.00		-	-	-	-	41	38	47	90	81	88	54	121	40	32	18	34	13	5	1	
PUBLIC UTILITIES	77				253.00-292.00		-	-	-	-	-		8	24	1	-	1	. 2	8		10	31	9 5	3	1 -	
WHOLESALE TRADE	174				162.00-200.00		_	-	-	-	3	19	9	34 22	27	33 17	5	17	3	13	2		2		-	
FINANCE	298				167.00-185.00		_	_	_	_	36	19	29	31	26	28	24	72	25	4	2	_		2		
SERVICES					157.00-207.00		-	-	-	-	-	-	1	3	6	10	18	21	-	2	-	-	-	-	-	
SECRETARIES, CLASS C	2,592	39.5	179.50	178.00	163.50-191.00		_	_	4	6	75	183	226	443	466	484	342	232	55	36	13	5	27	1	_	
MANUFACTURING	1,687				166.00-188.50		-	_	_	_	17	73	141	284	398	374	257	118	19		5	1	3	_	-	
NONMANUFACTURING	905				155.50-199.00		_	_	4	6		110	85	159	68	110	85	114	36		11	4	24	1	_	
PUBLIC UTILITIES	91				208.50-223.50		_	_	-	-	-	110	3	137	4	5	9	34	19		4	1	-	_	_	
WHOLESALE TRADE	180				167.50-249.00		-	_	-	-	8	19	13	7	3	9	19	42	7		7	3	24	1	-	
RETAIL TRADE	91				139.00-193.50		-	_	-	2	21	4	3	5	9	18	11	14	4		_	-	-	_	-	r
FINANCE	415				148.50-184.90		-	-	4	4	28	79	50	87	35	72	29		6		-	-	-	-	-	
SERVICES	128				161.00-175.50		-	-	-	-	1	8	16	60	17	6	17	3	-	-	-	-	-	-	-	
SECRETARIES, CLASS D	1,403	39.5	168.50	162.00	151.00-181.00	-	-	-	2	15	81	216	283	288	159	134	60	105	29	9	22	_	_	_	-	
MANUFACTURING	654	39.0	167.53	164.00	154.50-177.00	-	-	-	-	-	12	74	153	160	113	71	34	28	9	-	-	-	-	-	-	
NONMANUFACTURING	749	39.5	169.50	161.00	149.50-184.00	-	-	-	2	15	69	142	130	128	46	63	26	77	20	9	55	-	-	-	-	
PUBLIC UTILITIES	101				173.50-253.50		-	-	-	-	9	4	7	4	3	5	6	17	15	9	55	-	-	-	-	
WHOLESALE TRADE	90				149.50-178.50		-	-	-	4	11	19	10	14	11	6	8	7	-	-	-	-	-	-	-	
RETAIL TRADE	112				151.50-203.50		-	-	5	2	10	13	11	13	2	5	5	48	4		-	-	-	-	-	4
FINANCE	196				145.00-169.00		-	-	-	5	30	40	37	36	15		10	5	-	-	-	-	-	-	-	
SERVICES	250	40.0	158.50	156.50	147.50-167.50	-	-	-	-	4	9	66	65	61	15	29	-	-	1	-	-	-	-	-	-	ř
TENOGRAPHERS	1,949	39.5	167.50	156.50	144.00-174.50	-	-	4	40	89	231	370	316	311	170	73	42	60	61	67	86	26	3	-	-	j
MANUFACTURING	932	39.5	156.00	153.00	145.00-164.00	-	-	3	12	32	99	210	237	190	85	38	-	3	17		3		-	-	-	
NONMANUFACTURING	1,017				140.50-208.50		-	1	28	57	132	160	79	121	85	35			44		83		3	-	-	
PUBLIC UTILITIES	269				208.50-262.00		-	-	-	-	4	2	9	10	16	3	14	45	25				3	-	-	
WHOLESALE TRADE	339				140.00-174.50		-	-	17	20	39	72		52	40	8	9	10	18	-	12	21	-	-	-	,
FINANCE	166	39.5	149.50	145.00	137.00-159.00	-	-	-	6	12	40	50	19	12	6		15	2	1	-	-	-	-	-	-	
SERVICES	188	38.5	155.59	153.03	134.50-165.00	-	-	-	1	23	31	24	28	38	50	5	15	2	1	-	-	-	-	-	-	
STENOGRAPHERS, GENERAL	571				134.00-208.50		-	4	39	63	104			24	23	8	4		18		44	2	-	-	-	1
MANUFACTURING	171				131.00-149.50		-	3	12	23	50	44	16	4	8			1	6		-	-	-	-	-	
NONMANUFACTURING	400				138.00-237.00		-	1		40	54	58			15			41						-	-	ſ
PUBLIC UTILITIES	174				238.50-260.50		-	-	-	-	4	2	4	5	4	3	4	41					-	-	-	
WHOLESALE TRADE	135				127.00-150.50		-	-	17	50	24	38			7		-	-	-	-	-	-	-	-	-	
FINANCE	- 53	38.5	139.50	136.00	128.00-149.50	-	-	-	5	11	17	7	6	1	4	2	-	-	-	-	-	-	-	-	-	,

Table A-1. Weekly earnings of office workers in Minneapolis-St. Paul, Minn.-Wis., January 1977—Continued

					earnings l									kly ea:												
Occupation and industry division	Number of workers	Average weekly hours I (standard		Median 2	Middle range 2	80 and	90	100	110	120	130	140	150	160	170		190	200	220	240	260		300		340	36
						under 90	100	110	120	130	140	150	160	170	180	190	200	220	240	260	280	300	320	340	360	38
ALL WORKERS CONTINUED																										
TENOGRAPHERS - CONTINUED		-	4	\$	\$ \$																					
STENOGRAPHERS, SENIOR	761 617 95	39.5 39.5 40.0 40.0 39.5	158.50 178.00 229.00 189.00 154.00	160.00 156.00 163.50 230.00 174.50 149.50	149.00-172.50 149.00-165.50 146.00-195.00 195.00-265.50 154.00-221.50 144.00-164.50 143.00-172.50	:			1 - 1	26 9 17 - 1 14	127 49 78 - 15 23 24	268 166 102 34 43 15	275 221 54 5 6 13 28	287 186 101 5 38 11 38	147 77 70 12 33 2 20	65 37 28 - 8 15 5	38 38 10 9 4	18 2 16 4 10 -	43 11 32 13 18	14 - 14 13 -	42 3 39 27 12	24 24 3 21	3 3 3			
RANSCRIBING-MACHINE TYPISTS MANUFACTURING NONMANUFACTURING FINANCE		39.0 39.0	142.50 137.50	145.00	126.50-149.50 129.50-155.50 126.00-145.00 121.00-143.50	-	:	5	36 5 31 27	52 12 40 27	89 11 78 43	63 16 47 27	27 14 13 12	29 7 22 13	4 -	1 -	2 1 1	:	:	1	:	:	:	-	:	
TYPISTS	698 1,858 279 234 155	39.5 39.0 40.0 40.0 39.5 38.5	138.00 135.50 192.50 134.50 138.50 120.00	135.00 126.50 190.50 131.00 135.00 119.50	117.50-145.00 123.00-146.00 115.00-145.00 147.00-242.00 121.00-149.50 109.00-130.00 121.00-145.00	-	=	28 208 4 7 13	81 310 2 43 18	534 129 405 51 43 250 58	177 269 18 55 19	323 127 196 48 40 24 63 21	135 60 75 14 15 9 25	90 35 55 25 9 8 13	60 1 59 20 8 13 3 15	14 1 13 5 6 2	15 15 9 - 6 -	45 45 45	47 43 4 - -	81 81 81		1 1				
TYPISTS, CLASS A	408	39.5 39.0 40.0 39.5	147.50 146.50 136.50 154.00	139.50 139.00 134.00 149.50	129.00-154.00 131.00-154.00 126.50-155.50 125.50-148.00 138.00-169.00 126.50-144.00	:		4 3 1 - 1	32 50 11	173 56 117 28 12 56	252 114 138 18 7 108	186 68 118 27 16 59	94 56 38 3 8 20	66 34 32 8 6 13	48 1 47 2 8 3	5 1 4 - 1	14 - 14 - 6	39 39 -	44 43 1 -	:		1	:	-	-	
TYPISTS, CLASS B	1,548 290 1,258 198 137 754 78	39.0 39.0 40.0 40.0 38.5	125.50 130.50 192.00 133.00 114.00	125.50 121.00 162.50 131.00 115.00	110.00-136.00 115.00-135.00 109.59-136.00 147.00-250.50 117.00-140.00 105.50-125.00 121.00-134.50	-	-	232 25 207 4 7 178 5	309 49 260 2 32 196 12	361 73 288 3 23 194 37	194 63 131 17 37 55 10	137 59 78 48 13 4	41 4 37 10 12 5 9	24 1 23 20 1	12 12 1 6	9 2 6 -	1 1	6 6	3	81 81 -						
ILE CLERKS	201	39.0 39.0 40.0 40.0 39.5	121.00 125.50 174.50 118.50 112.00	120.00 115.00 166.00 115.50 111.00	103.50-131.00 106.00-130.00 103.50-131.00 112.50-216.50 104.00-126.50 102.00-116.50 103.50-128.00	3 1	5 9	342 48 294 35 53 18 176	206 30 176 13 11 21 126	194 46 148 7 46 4 89	136 18 118 6 1 4 104	54 25 29 3 - 4 21	26 5 21 3 13	27 5 22 11 -	22 3 19 5 -	4 4		31 31 30 1	14 - 14 14 - -	5 5	17 - 17 17 -	3 3				
FILE CLERKS, CLASS A NONMANUFACTURING PUBLIC UTILITIES FINANCE	170 140 43 54	39.5 40.0	164.50 227.00	142.00	130.00-171.00 126.50-179.00 180.00-268.50 125.50-141.00	-	:	3 3 -	14 11 - 9	26 23 - 6	33 30 1 25	23 11 3 4	20 17 2 2	3	15 12 4 8	3 3 -	:	5 5 5	2 2	4 4	16 16 16	3 3 3	:	:	:	
FILE CLERKS, CLASS B	421 84 337 68 60 166	39.5 39.0 40.0 40.0	125.50 132.50 186.50 116.50	122.50 118.00 210.00 114.50	109.50-137.00 115.00-135.00 108.50-139.00 162.00-214.00 104.50-127.00 109.50-133.00	=	34 34 - 3 22	75 12 63 4 24 23	102 17 85 2 9	73 28 45 4 22 16	36 10 26 5 1	23 13 10	6 2 4 1 - 2	24 2 22 11 -	7 7 1 - 6	1 1 -		26 26 25 1	12 12 12	1 1 -	1 1 1 -					

Table A-1. Weekly earnings of office workers in Minneapolis-St. Paul, Minn.-Wis., January 1977—Continued

					earnings 1 ndard)	Numb	er of	worke	rs rec	eiving	strai	ght-tir	ne we	ekly ea	rning	s of—										
Occupation and industry division	Number	Average weekly				50		\$ 100	\$ 110	\$ 120	130	\$ 140	\$ 150	\$ 160	170	180	\$ 190	\$ 200	\$ 220	\$ 240	\$ 260	\$ 280	300	320	\$ 340	\$ 3
,	workers	hours 1 (standard)	Mean 2	Median 2	Middle range 2	and under	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280	-	-	-	-	
ALL WORKERS CONTINUED																					200	300	323	3.0	-	
FILE CLERKS - CONTINUED																										
FILE CLERKS, CLASS C MANUFACTURING NONMANUFACTURING FINANCE	628 87 541 420	39.0	108.00	105.00	\$ 101.50-120.00 100.00-118.00 101.50-121.00 101.50-125.00	3	100 18 82 72	264 36 228 153	90 10 80 57	95 15 80 67	67 5 62 62	8 - 8 8	:	:	:	:	:	:	:	:	:	:	:	:	:	
MESSENGERS	471 163 308 58 51 164	39.0 39.5 40.0 40.0	115.00 128.50 189.50 120.50	115.05 109.50 228.00 104.00	103.50-131.50 104.00-121.00 103.50-142.50 141.00-228.00 93.00-145.00 103.50-111.50	=	58 15 43 - 16 21	152 38 114 1 12 92	96 57 39 6 2 31	43 32 11 - 4 6	33 17 16 5	24 3 21 10 6 5	16 16 1	6 1 5 - 5	8 - 6 2	1 1 1 -	4 4 4		22 22 -	8 8 8 -						
WITCHBOARD OPERATORS  MANUFACTURING  NONMANUFACTURING  PUBLIC UTLITIES  RETAIL TRADE  FINANCE  SERVICES	354 96 258 32 73 52 70	39.5 39.5 40.0 40.0 38.5	149.00 143.00 220.50 132.00 145.00	148.00 132.50 237.00 120.00 144.00	120.00-155.50 138.00-159.50 116.00-155.00 198.50-245.50 120.00-146.00 132.50-152.50 112.00-116.00	=	4 - 4	15 15 6 1 8	53 - 53 - 8 - 45	61 13 48 - 23 7 14	64 18 46 2 11 16	38 22 16 - 3 12	40 20 20 - 2 9 2	23 10 13 1 10 1	12 7 5 - 2 3	9 5 4	9 6 3 - 3 -	2 2 2	11 11 9	13 13 13	:					
WITCHBOARD OPERATOR-RECEPTIONISTS- MANUFACTURING	807 215 592 100 169 149 96 78	40.0 39.5 40.0 40.0 40.0 38.0	143.00 138.50 171.50 131.50 133.50 129.00	139.00 129.00 186.00 131.00 124.50 127.50	121.00-152.00 132.50-156.00 120.00-150.00 127.00-190.00 122.00-146.00 120.00-150.00 120.00-136.00 120.00-150.00	:	18 9	39 2 37 2 13 4 18	109 28 81 4 26 42 4 5	179 10 169 11 37 50 31 40	153 69 84 4 49 1 29	91 41 50 - 24 14 9	72 32 40 2 9 24	24 11 13 1 4 3 4	14 7 7 4 - 2 1	71 10 61 31 7 9	10 10 10	15 4 11 11 -	12 1 11 11 							
ORDER CLERKS	1,020 246 774 554	40.0 40.0 40.0	155.00 181.00 201.50	150.00 170.00 200.00	129.00-221.50 131.50-175.00 129.00-241.50 146.00-256.50 106.00-131.00	-	50 50 -	31 5 26 -	46 4 42 9 24	136 52 84 57 18	86 20 66 56 10	78 41 37 25	64 18 46 45	57 32 25 7 9	76 20 56 32 6	68 28 40 21	18 15 3 3	45 3 42 42	58 2 56 56	85 5 80 80	72 1 71 71	50 50 50	:		:	
ACCOUNTING CLERKS	1,530 4,387 1,636	39.5 39.5 40.0 40.0 39.5 38.5	158.00 169.50 207.00 148.00 148.50 147.00	152.00 156.00 211.50 142.50 148.50 140.00	134.50-188.00 138.00-173.00 133.50-200.00 162.00-257.50 126.00-164.00 129.00-161.00 129.00-162.50	1 - 1 -	35 4 31 4 10 17	191 3 188 55 75 17 37 4	381 50 331 46 109 63 91 22	558 164 394 25 181 57 90 41	743 215 528 63 160 71 206 28	783 288 495 64 154 63 157	512 175 337 116 84 61 57	546 209 337 115 97 68 33 24	394 136 258 90 56 61 33 18	367 119 248 84 53 43 61	189 56 133 24 46 16 42 5	496 55 441 337 49 6 43	159 31 128 95 25 1	169 4 165 162 1	280 268 10	74 - 74 74 - -	30 12 18 18	99-	11111111	
ACCOUNTING CLERKS, CLASS A MANUFACTURING		39.5 39.5 40.0 40.0 39.5 38.5	177.00 202.00 242.50 174.50 157.00 165.50	170.50 191.50 257.50 170.00 154.50 159.50	159.00-219.50 159.00-188.50 158.00-257.50 219.50-276.50 150.00-192.00 144.50-167.50 140.50-188.00 140.50-163.50	:		2 - 2	6 - 2 2 2	58 3 55 19 2 25 9	123 34 89 - 22 8 51 8	221 77 144 45 18 56 25	227 78 149 15 59 41 29	287 163 124 22 63 8 16 15	262 116 146 52 49 15 27	233 97 136 33 43 8 45	119 49 70 2 33 2 28 5	300 47 253 163 49 - 35 6	99 29 70 39 25 6	116 4 112 109 1	277 277 265 10	74 74 74	30 12 18 18	99-		

Table A-1. Weekly earnings of office workers in Minneapolis-St. Paul, Minn.-Wis., January 1977—Continued

					earnings l ndard)									kly ea												
Occupation and industry division	Number of workers	Average weekly hours !	Mean 2	Median 2	Middle range 2									160			\$190					280		\$ 320	340	36
		(standard)	Mean	Median	Middle range 2	under	100	110	120	130	140	150	160	170	180	190	200	220	240	260	280	300	320	340	360	38
ALL WORKERS CONTINUED																							77.28			
ACCOUNTING CLERKS - CONTINUED			6																							
ACCOUNTING CLERKS, CLASS B MANUFACTURING	3,474 812 2,662 844 686 434 554 144	39.5 39.5 40.0 40.0 39.5 38.0	141.60 148.50 173.50 131.50 146.50 136.00	140.00 140.00 163.50 129.00 140.00 135.00	125.59-160.59 127.50-150.00 124.09-164.00 143.59-211.59 116.09-142.59 126.09-169.09 119.59-142.00 125.59-155.59	1 - 1	4	55	375 50 325 46 109 61 89 20	500 161 339 25 162 55 65 32	181 439 63	562 211 351 64 109 45 101 32	285 97 188 101 25 20 28 14	259 46 213 93 34 60 17	132 20 112 38 7 46 6 15	134 22 112 51 10 35 16	70 7 63 22 13 14 14	196 8 188 174 - 6 8	60 2 58 56 - 1 1	53 53 53	3 3					
BOOKKEEPING-MACHINE OPERATORS MANUFACTURINGNOMMANUFACTURING NOMMANUFACTURING	319 71 248 82 93	40.0 39.5 40.0	161.00 142.00 136.00	150.00 138.00 138.00	136.00-154.00 150.00-161.50 132.50-150.00 131.50-144.00 128.00-150.00	=	:	14 14 14	22 22 2 20	15 1 14 4 10	100 100 35 20	34 17 17 12	77 30 47 12 20	27 6 21 1 20	5 2 3 - 3	7 5 2 1	6	11 4 7 -	:	1 1 -	:	:	:	:	:	
BOOKKEEPING-MACHINE OPERATORS, CLASS A	86	39.0	158.50	150.00	138.00-161.00	-	-	_	2	-	21	6	30	6	-	7	6	7	-	1	-	-	-			
BOOKKEEPING-MACHINE OPERATORS, CLASS B NONMANUFACTURING WHOLESALE TRADE RETAIL TRADE	233 199 76 93	39.5 40.0	138.50	138.00	132.50-150.00 132.00-150.00 131.50-144.00 128.00-150.00	=	:	14 14 14	20	15 14 4 10	79 79 34 20	28 12 12	47 37 12 20	21 20 20	5 3 - 3	:	:	4 -	:	:	:	:	:	:	:	
MACHINE BILLERSMANUFACTURINGNONMANUFACTURING	401 95 306	39.5	152.00	126.50	136.00-220.00 116.00-176.00 138.50-232.00	-	13 13	1	42 22 20	32 13 19	50 12 38	38 - 38	12 3 9	17 4 13	46 10 36	1	:	33 - 33	103 4 99	4 3 1	6	3	:	:	=	
BILLING-MACHINE BILLERS	257 73				136.00-234.00		12 12	:	21	10 10	36 10	12	:	17 4	:	:	:	33	103	.4	6	3	Ξ	:	:	
BOOKKEEPING-MACHINE BILLERS	144 122				130.00-173.00		1	1_	21	22 19	14 12	26 26	12	:	46 36	1	:	:	:	:	:	Ξ	Ξ	:	:	
PAYROLL CLERKS MANUFACTURING NONMANUFACTURING PUBLIC UTILITIES WHOLESALE TRADE RETAIL TRADE	589 228 361 128 113 64	40.0 39.5 40.0 40.0	177.00 191.50 232.00 165.00	167.00 187.50 220.00 174.00	158.00-201.50 157.00-193.00 158.00-207.00 189.00-276.50 135.50-190.00 151.00-185.50	=		1 - 1	18 10 8 - 4 2	28 7 21 - 12 6	31 4 27 - 15 6	37 18 19 2 15	50 34 16 2 2 7	73 49 24 1 1	33 13 20 6 9 2	75 8 67 28 19 6	79 49 30 - 22 3	69 15 54 23 13	29 6 23 15	16 8 8	26 1 25 25	16 3 7 7	:	3 3	11 11 11	
KEYPUNCH OPERATORS	849 1,666 303 405	39.5 39.5 40.0 40.0 39.5 38.5	148.50 157.50 205.00 151.50 151.00 141.00	147.50 149.00 198.00 144.00 153.00 141.00	132.50-167.00 136.00-160.00 132.00-173.50 177.00-248.50 131.00-168.00 130.50-166.50 126.50-155.50 130.00-153.50	-		58 1 57 6 14 37	133 27 106 - 13 7 66 20	92 172 69 30	175 247 8 68 24	426 153 273 13 77 24 87 72	355 195 160 7 31 32 72 18	331 125 206 33 65 47 51	128 44 84 28 17 17 18 4	120 24 96 36 18 18 23	75 1 74 28 18 8 4 16	73 1 72 42 12 2	33 6 27 19 8	88 88 88	1 3 -	4				
KEYPUNCH OPERATORS, CLASS A MANUFACTURING		39.5 39.5 40.0 40.0 39.5	154.00 171.00 213.50 163.50 156.50	153.00 161.00 202.00 159.00 158.00	144.00-173.00 144.00-162.00 145.00-193.00 185.00-251.00 144.00-175.50 150.00-164.00 145.50-162.00	-				37 11 26 - 10 6	169 73 96 - 10 10 24	297 112 185 - 55 4 54	269 164 105 3 19 31 37	235 107 128 16 31 44 27	96 31 65 25 17 4 15	10 34 23 1 9	56 1 55 24 12 3	69 1 68 38 12 2	26 6 20 12 8	79 79 79	1 1 1	1 1	:			

Table A-1. Weekly earnings of office workers in Minneapolis-St. Paul, Minn.-Wis., January 1977—Continued

				Weekly (stand		Numbe	er of v	worke	rs rec	eiving	straig	ght-tin	ne wee	ekly ea	rning	s of—										
Occupation and industry division	Number of workers	Average weekly hours !				\$ 80	90	100	\$ 110	120	130	140	150	\$ 160	170	180	190	200	\$ 220	\$ 240	\$ 260	\$ 280	300	\$ 320	340	\$ 36
	workers	(standard)	Mean 2	Median 2	Middle range 2	and under	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						90	100	110	120	130	140	150	160	170	180	190	200	550	240	260	280	300	320	340	360	38
ALL WORKERS CONTINUED																										
EYPUNCH OPERATORS - CONTINUED			\$	s	\$ \$	-																				
KEYPUNCH OPERATORS, CLASS B	1,135	39.5	142.00	136.00	124.00-155.00	-	-	58	133	227	253	129	86	96	32	76	19	4	7	9	3	3	-	-	-	
MANUFACTURING					126.50-148.50		-	1	27	81	102	41	31	18	13	14	-	-	-	-	-	3	-	-	-	
NONMANUFACTURING					122.00-160.00		-	57	106	146	151	88	55	78	19	62	19	4	7	9	3	-	-	-	-	
PUBLIC UTILITIES	82				149.00-198.00		-	-	-	-	8	13	4	17	3	13	4	4	7	9	-	-	-	-	-	
WHOLESALE TRADE					124.00-160.60		-	6	13	69	58	22	12	34	-	18	6	-	-	-	3	-	-	-	-	
RETAIL TRADE					122.00-179.00		-	14	7	20	14	20	1	3	13	17	5	-	-	-	-	-	-	-	-	
FINANCE	324	39.0	134-50	130-50	117.00-147.50	-	-	37	66	45	63	33	35	24	3	14	4	-	-	-	-	-	-	-	-	

Table A-2. Weekly earnings of professional and technical workers in Minneapolis—St. Paul, Minn.—Wis., January 1977

					earnings 1 ndard)				s rece	-																
Occupation and industry division	Number	Average weekly							150		170			220	\$ 240						200	380	400	420	440	\$
Occupation and industry division	workers	hours I (standard	Mean 2	Median 2	Middle range 2	and	_	-	-	_	-	-	-	-	-	-	-	-	-	-	-	-	-	-	_	
						under 130	140	150	160	170	180	200	220	240	260	280	300	320	340	360	380	400	420	440	460	4
ALL WORKERS																										
MPUTER SYSTEMS ANALYSTS			\$	\$	\$ \$																				100	
MANUFACTURING					304.00-370.00		-	-	-	-	-	3	16	23	87	69	83	142	179 83	201	161	67	71	30	8	
NONMANUFACTURING	668	39.5	326.50	332.00	287.50-361.50	-	-	-	-	-	-	1	10	14	65	50	53	83	96	115	91	47	23	12	4	
PUBLIC UTILITIES	112				306.00-395.50	-	-	-	-	-	-	-	-	2	5	2	16	11	12	15	10	18	9	7	3	
FINANCE	346				269.00-344.50		-	-	-		-	1	10	12	32	8 37	23	11 50	68	12 45	46	51	4	5	1	
OMPUTER SYSTEMS ANALYSTS (BUSINESS), CLASS A	568	30.5	366 50	345 50	345.00-392.50									1	4	15	6	40	51	122	125	94	67	28	8	
MANUFACTURING	261	39.5	378.00	379.50	358.00-400.50	_	_		-	_	-	-	-	-	-	-	3	12	17	40	61	6ù	45	16	4	
NONMANUFACTURING	307				331.50-379.50		-	-	-	-	-	-	-	1	4	15	3	28	34	82	64	34	22	15	4	
FINANCE					379.50-426.00		-	-	-	-	-	-	-	1	4	15	2	23	23	24	25	11	9	7	1	
COMPUTER SYSTEMS ANALYSTS		20	200										0	9			7.0	0.0		70				-		
(BUSINESS), CLASS B					287.50-341.50		-	_		-	_	1		-	45 18	45 16	73 25	98		79 45	36	20	3	2		
NONMANUFACTURING					283.07-339.50		-	-	-	-	-	1	8	9	27	29	48	52	58	33		13	ì	-	-	
FINANCE					297.50-358.50 264.51-338.50		-		-	-	-	1	8	9	26	22	15 21	27	7 45	21	18	7 6	1	-	=	
COMPUTER SYSTEMS ANALYSTS	43	40.0	251 =0	344 00	239.50-259.50							2	8	13	38	9	4	4	4							
NONMANUFACTURING					244.00-262.50		-	=	-	-	=	-	2	4	34	6	2	3	4	-	=	-	=	-	-	
MANUFACTURING					249.00-321.00		-	-	-	26 10	40	71 10	94	151 30	243 113	275 108	301 145	212		127	100	49 41	45 31	9	2	
NONMANUFACTURING	994	39.5	267.50	267.00	232.50-298.00	-	-	-	-	16	25	61	85		130	167	156	90				8	14	2	-	
PUBLIC UTILITIES					284.00-352.00		-	-	-	3	-	20	13	21	11 33	23	20	17				8	8	5	-	
FINANCE					234.00-297.50		-	-	-	12	22		67			87	35 67	24		3		-	6	-	-	
SERVICES					256.50-307.50		-	-	-	1	3	2	4	9	7	15	17	19	6	11	3	-	-	-	-	
COMPUTER PROGRAMMERS (BUSINESS).	827	39.5	318.50	307.50	278.50-358.00	-	_	_	_	_	_	-	4	23	69	121	147	88	84	95	92	48	45	9	2	,
MANUFACTURING	361				321.00-377.50		-	-	-	-	-	-	-	-	11	8	38	33				41	31	7		2
PUBLIC UTILITIES	466				264.50-308.50 339.50-394.50					-	_	-	4	23	58	113	109	55 3				7	14	5		
WHOLESALE TRADE	77	40.0	304.00	282.00	268.50-345.00	-	-	-	-	-	-	-	-	2		22	11	6				-	6			
FINANCESERVICES	234				258.50-294.50 281.00-324.00			-	-	-	-	-	3	16		71	16	20 18	18		3	-	-	:	-	
COMPUTER PROGRAMMERS (BUSINESS),																										
CLASS B	751				240.00-305.00		-	-	-	-		15	49	103			133					1	-	-	-	
MANUFACTURING	365 386				274.00-313.00			-	-	-	12	8	48		35 67	67 41	91	87 33								
PUBLIC UTILITIES	85	40.0	307.0	305.00	284.00-337.00	-	-	-	-	-	-	-	1	3	7	10	15						-	-	_	
FINANCE	95	40 • 0 38 • 5	262.5	259.00	232.50-288.50	-	-	-	-	-	12	2 5	37			7 16	21	18		-	:	-	-	Ξ	- 1	:
COMPUTER PROGRAMMERS (BUSINESS),																										
CLASS C					187.00-259.00		-	-	-	26 16			41 33			46	21	4	-	-	-	-	-	-	-	
NONMANUFACTURING					181.00-207.00		-	-	-	12					-	13	5	2	_	_	- 1	-	-			

Table A-2. Weekly earnings of professional and technical workers in Minneapolis—St. Paul, Minn.—Wis., January 1977—Continued

					earnings <sup>1</sup> ndard)			worke																		
Occupation and industry division	Number	Average weekly						\$ 140					\$ 200				\$ 280	300	\$ 320	340	\$ 360	380	400	\$ 420	\$ 440	\$
Occupation and industry division	workers	hours I (standard	Mean 2	Median 2	Middle range 2	and under	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	-	-		-		130	140	150	160	170	180	200	220	240	260	280	300	320	340	360	380	400	420	440	460	
ALL WORKERS CONTINUED																			,							
MPUTER OPERATORS	432 856 154 166 65	39.5 39.5 40.0 40.0 39.5	191.00 194.00 231.00 180.50 193.50	187.50 184.50 237.00 179.50 190.00	\$ 167.00-214.00 169.00-210.50 165.50-215.50 192.00-273.50 160.00-191.00 175.00-213.00 159.00-208.50	17	32 9 23 2 - 2	90 41 49 2 16 2 28	90 22 68 4 22	125 36 89 8 16 8	182 57 125 16 31 11 42	269 95 174 16 52 14 70	227 98 129 18 14 15	134 44 90 26 13 8 33	40 19 21 9 1 5	27 5 22 16 1	33 33 31	10 1 9 3	5 2 3 3 -	5 1 4 4						
MANUFACTURING	386 117 269 29	39.5 39.5 39.5 40.0	213.00 222.00 209.00 256.00	215.00 220.00 211.50 261.50	191.00-227;00 210.50-235.50 180.00-224.00 237.00-274.50 203.00-225.99	-	-	6 -	-	23	38	56 15 41 1	115 44 71 3 40	84 35 49 4 22	35 17 18 6 5	21 5 16 12 3	1 1 1 -	1	2 2	4 - 4	-		:	:		
COMPUTER OPERATORS, CLASS B MANUFACTURING NONMANUFACTURING	179 410 113 102	39.5 39.5 40.0 40.0	192.00 200.50 233.00 187.00	190.00 188.00 237.00 185.00	176.50-208.00 179.50-203.50 172.50-211.50 192.00-288.00 172.50-198.00 168.00-204.00	1	2	17 4 13 - 3 10	26 26 8 12	53 9 44 5 9	92 32 60 15 15	188 65 123 15 49 46	105 53 52 15 10 18	50 9 41 22 8 11	5 2 3 3 -	6 4 - 2	32 32 30 -	9 - 9 3 - 6	3 2 1 1		:	:				
COMPUTER OPERATORS, CLASS C MANUFACTURING NONMANUFACTURING FINANCE	136 177	40.0 39.0	162.00	161.00	145.50-172.50 146.00-176.00 140.00-168.00 139.00-167.50		30 7 23 17	67 37 30 18	64 22 42 23	49 27 22 16	52 25 27 16	25 15 10 9	7 1 6 2	:	:	:	:	:	:	1 1 -	:	:	:	:	:	
AFTERS	1,298 680 101	39.5 39.0 40.0	240.50 239.50 276.50	232.00 230.00 271.50	200.50-276.00 196.50-280.50 207.00-270.50 247.00-308.50 178.50-228.00	-	2 -	1 1	25 12 13 1 1	65 51 14 -	137 103 34 -	243 172 71 2 30	315 195 120 13 36	268 145 123 2 42	235 153 82 13 19	225 136 89 31 12	166 126 40 11	123 90 33 11 6	112 64 48 6	20 16 4 4	24 24 4	13 11 2 2	1 1 -	:	:	
RAFTERS, CLASS A	498	39.5 39.5	290.00 308.50	286.50	267.00-322.00 262.00-317.50 282.00-329.50 276.50-337.00	:	:	:	:	:	3 -	:	8 -	43 39 4	69 66 3	112 89 23 15	124 98 26 8	112 84 28 7	112 64 48 6	20 16 4 4	24 20 4 4	13 11 2 2	1 1	:	:	
RAFTERS, CLASS B MANUFACTURING PUBLIC UTILITIES WHOLESALE TRADE	741 443 298 37 99	39.5 39.5 40.0	231.50 240.00 265.50	223.00 241.50 269.00	209.50-256.00 207.00-251.50 220.00-264.50 251.00-269.00 209.50-236.00	:	:	:	:	:	5 5 - 5	53 53 -	194 129 65 -	167 95 72 2 39	156 85 71 12 16	113 47 66 16 6	42 28 14 3	11 6 5 4	:		:	:	:	:	-	
RAFTERS, CLASS C	577 353 224	39.5	184.00	184.00	172.50-201.5n 172.00-193.50 179.50-213.00	1 1	:	1	24 12 12	65 51 14	129 100 29	189 119 70	100 58 42	58 11 47	10 2 8	:	:	:	:	=	:	:	:	:	:	
CTRONICS TECHNICIANS	1,770 940 388	39.5	301.50	308.00	237.50-332.50 264.00-346.00 285.00-365.00	:	=	=	:	:	19 12 -	124 30 -	135 34 10	215 88 28	124 60	159 71 41	243 140 44	200 105 33	168 101 17	231 180 102	134 105 99	8 4 4	10 10	:	:	
MANUFACTURING	a 120 85				225.50-264.50	:	-	-	:	:	-	6	22	22 19	30 26	25 18	9	3	1	2	-	-	-	-	-	

Table A-3. Average weekly earnings of office, professional, and technical workers, by sex, in Minneapolis—St. Paul, Minn.—Wis., January 1977

	Number		erage ean <sup>2</sup> )		Number	Aver (mea	n <sup>2</sup> )		Number	(mea	rage an <sup>2</sup> )
Sex, $^{\rm 3}$ occupation, and industry division	of workers	Weekly hours 1 (standard)	Weekly earnings 1 (standard)	Sex, 3 occupation, and industry division	of workers	Weekly hours 1 (standard)	Weekly earnings <sup>1</sup> (standard)	Sex, 3 occupation, and industry division	of workers	Weekly hours 1 (standard)	Weekly earnings (standard
OFFICE OCCUPATIONS - MEN			¢	OFFICE OCCUPATIONS - WOMENCONTINUED				OFFICE OCCUPATIONS - WOMENCONTINUED			
ESSENGERS	129		150.50 162.50	SECRETARIES - CONTINUED				FILE CLERKS	1.178	39.0	\$ 124.5
				SECRETARIES, CLASS D	1,391	39.5	169.00	MANUFACTURING	196		121.0
RDER CLERKS	349		231.50	MANUFACTURING	654		167.50	NONMANUFACTURING	982		
MANUFACTURING	53		177.50	NONMANUFACTURING	737		170.00	PUBLIC UTILITIES WHOLESALE TRADE	151		
NONMANUFACTURING	296		241.50	PURITC UTILITIES	100		210.50	RETAIL TRADE	57		
WHOLESALE TRADE	296	40.0	241.59	WHOLESALE TRADE	90		164.50	FINANCE	632		
CCOUNTING CLERKS:				RETAIL TRADE	112		178.50				
MANUFACTURING	88	39.5	203.00	FINANCE	196		159.00	FILE CLERKS, CLASS A	164	39.0	160.
NONMANUFACTURING:				SERVICES	239	40.0	159.50	NONMANUFACTURING	134	39.5	163
PUBLIC UTILITIES	340	40.0	240.50	STENOGRAPHERS	1,918	30.5	168.00	PURI IC UTIL ITIES	41		225.
		11127		MANUFACTURING	932		156.00	FINANCE	52	38.5	138.
ACCOUNTING CLERKS, CLASS A	418		231.50	NONMANUFACTURING	986		179.50		265	20 -	
MANUFACTURING	66		219.00	DURI IC UTILITIES	266		230.50	FILE CLERKS, CLASS B	399 84		
NONMANUFACTURING	352	40.0	233.50	WHOLESALE TRACE	320	40.0	170.50	NONMANUFACTURING	315		
				FINANCE	166		149.50	PUBLIC UTILITIES	65		
				SERVICES	179	38.5	156.50	FINANCE	164		
OFFICE OCCUPATIONS - WOMEN					220			T INANGE	1.0.	0000	
				STENOGRAPHERS, GENERAL	551 171		170.00	FILE CLERKS, CLASS C	615	39.0	110.
				MANUFACTURING			145.00	MANUFACTURING	82		
ECRETARIES	5,995	39.5	186.50	PUBLIC UTILITIES	173		232.00	NONMANUFACTURING	533		
MANUFACTURING	3,306		185.00	WHOLESALE TRACE	116		138.50	FINANCE	416	38.5	112
NONMANUFACTURING	2,689		188.50	FINANCE	53		139.50	II .	201		
PUBLIC UTILITIES	360		241.50	l and a					336 124		
WHOLESALE TRADE	547	40.0	198.50	STENOGRAPHERS, SENIOR	1,367		167.00	MANUFACTURING	212		
FINANCE	363 987		180.50	MANUFACTURING	761		158.50	FINANCE	138		
SERVICES	432		169.60	NONMANUFACTURING	606		178.00		130	37.00	100
321111023	452	3763	107.00	PUBLIC UTILITIES	93		227.50		350	39.5	145
SECRETARIES, CLASS A	561	39.5	230.00	WHOLESALE TRADE	204		189.00	MANUFACTURING	95	39.5	149
MANUFACTURING	224	40.0	228.00	SERVICES	153		154.00	NONMANUFACTURING	255		
NONMANUFACTURING	337		231.50	SERVICES CONTROLLED	130	30.3	200.00	PUBLIC UTILITIES	32		
PUBLIC UTILITIES	94		271.60	TRANSCRIBING-MACHINE TYPISTS	309	39.0	138.50	RETAIL TRADE	73		132.
WHOLESALE TRADEFINANCE	104		220.50	MANUFACTURING	76		142.50		52 70		117
FINANCE	79	39.0	223.50	NONMANUFACTURING	233		137.50	II .	70	40.0	111
SECRETARIES, CLASS B	1,432	30-0	200.00	FINANCE	149	38.0	135.50	SWITCHBOARD OPERATOR-RECEPTIONISTS-	804	39.5	140
MANUFACTURING	741		204.00					MANUFACTURING	215		143
NONMANUFACTURING	691		195.50	TYPISTS			136.00	NONMANUFACTURING	589	39.5	139
PUBLIC UTILITIES	76		275.00	MANUFACTURING	697		138.00	PUBLIC UTILITIES	97		172
WHOLESALE TRADE	173		187.50	NONMANUFACTURING	1,790		194.50	WHOLESALE TRADE	169	40.0	131
RETAIL TRADE	93		181.00	WHOLESALE TRADE	202		135.00	RETAIL TRADE	149		133
FINANCE	298		183.50	RETAIL TRADE	155		138.50	FINANCE	96		
SERVICES	51	38.5	198.50	FINANCE	1,053		120.00	SERVICES	78	39.5	134
CCOCTADICC CLASS O	2 55:	20 -	170 5:	SERVICES	129	39.0	136.50		/		1.4-
SECRETARIES, CLASS C	2,584		179.50					ORDER CLERKS	671		145
MANUFACTURING	1,687		178.00	TYPISTS, CLASS A	981		147.00	NONMANUFACTURING	478		
PUBLIC UTILITIES	90		216.50	MANUFACTURING	40		147.50		258		
WHOLESALE TRADE	180		212.50	NONMANUFACTURING	574		146.50	DETAIL TRACE	99		
RETAIL TRADE	91		173.50	RETAIL TRADE	64		154.00		1 "	0,.0	
FINANCE	414		167.00	FINANCE	299	38.0	135.50		5.214	39.5	161
SERVICES	122		169.50			20 -	120	MANUE ACTURING	1,442		155
				TYPISTS, CLASS B	1,500		129.00	NONMANUFACTURING	3,772		
				MANUFACTURING	1,21		125.50	PUBLIC UTILITIES	1.296	40.0	
;				PUBLIC UTILITIES	17		195.50	WHOLESALE TRADE	907		
				WHOLESALE TRADE	13		134.00	II RETAIL TRADE	533		148
				WHOLESALE TRADE	754		114.00	TANANCE	847	38.5	145
			1	SERVICES	7		129.50		1	1	1

Table A-3. Average weekly earnings of office, professional, and technical workers, by sex, in Minneapolis—St. Paul, Minn.—Wis., January 1977—Continued

		(n	verage nean <sup>2</sup> )			Ave (me	rage an <sup>2</sup> )		,,	Ave (me	erage an <sup>2</sup> )
Sex, 3 occupation, and industry division	Number of workers	Weekly hours 1 (standard)	Weekly earnings 1 (standard)	Sex, 3 occupation, and industry division	Number of workers	Weekly hours <sup>1</sup> (standard)	Weekly earnings <sup>1</sup> (standard)	Sex, 3 occupation, and industry division	Number of workers	Weekly hours 1 (standard)	Week! earning (standa
OFFICE OCCUPATIONS - WOMENCONTINUED				OFFICE OCCUPATIONS - WOMENCONTINUED				PROFESSIONAL AND TECHNICAL OCCUPATIONS - MENCONTINUED			
CCOUNTING CLERKS - CONTINUED			s	KEYPUNCH OPERATORS - CONTINUED			· e	COMPUTER PROGRAMMERS (BUSINESS) -			
ACCOUNTING CLERKS, CLASS A	1,961		188.00	KEYPUNCH OPERATORS, CLASS A	1,341		165.00	AND THE PROPERTY OF A PROPERTY			
NONMANUFACTURING	1,309		172.50	MANUFACTURING	514 827		154.50	CLASS B	565	39.5	279.
PUBLIC UTILITIES	544	40.0	235.50	PUBLIC UTILITIES	220		213.50	MANUFACTURING	287	39.5	294
WHOLESALE TRADE	288		179.50	WHOLESALE TRADE	156		164.50	NONMANUFACTURING	278		
FINANCE	99		156.00	RETAIL TRADE	108		156.50	PURLIC UTILITIES	66		
SERVICES	300 78		164.00	FINANCE	172	38.5	153.00	WHOLESALE TRADEFINANCE	79 109		266
SERVICES	,,,	3763	133.30	KEYPUNCH OPERATORS, CLASS B	1,120	39.5	142.50	FINANCE	10,	30.3	233
ACCOUNTING CLERKS, CLASS B	3,253	39.5	146.00	MANUE ACTURING	328		140.50	COMPUTER PROGRAMMERS (BUSINESS),			
MANUFACTURING	790	39.5	141.00	NONMANUFACTURING	792	39.5	143.00	CLASS C	216		
NONMANUFACTURING	2,463		147.50	PUBLIC UTILITIES	82		182.00	NONMANUFACTURING	91		
WHOLESALE TRADE	752 619		171.00	WHOLESALE TRADE	232		143.50	FINANCE	58	38.0	192
RETAIL TRADE	434		146.50	FINANCE	113 324		145.50	COMPUTER OPERATORS	934	39.5	197
FINANCE	547		135.50	FINANCE	324	39.0	134.50	MANUFACTURING	301		
			1	PROFESSIONAL AND TECHNICAL				NONMANUFACTURING	633		
OOKKEEPING-MACHINE OPERATORS	314		146.00	OCCUPATIONS - MEN	1		1	DURI TO UTTI TITES	108	40.0	246
MANUFACTURING	71		161.00					WHOLESALE TRADE	125		
NONMANUFACTURING	243		142.00	COMPUTER SYSTEMS ANALYSTS				FINANCE	272	38.5	191
RETAIL TRADE	77 93		136.00	(BUSINESS)	1,000		338.50		317	39.5	214
RETAIL TRADE	75	40.0	142.50	NONMANUFACTURING	534		330.50	COMPUTER OPERATORS, CLASS A			
BOOKKEEPING-MACHINE OPERATORS,				PUBLIC UTILITIES	100		355.50	NONMANUFACTURING	225		
CLASS A	82	39.0	160.00	FINANCE	271		321.50	PUBLIC UTILITIES	25	40.0	262
BOOKKEEPING-MACHINE OPERATORS,				COMPUTER SYSTEMS ANALYSTS				FINANCE	82	38.5	222
CLASS B	232		141.50	(BUSINESS) . CLASS A	494		370.50	COMPUTER OPERATORS, CLASS B	402		
NONMANUFACTURING	198		138.50	MANUFACTURING	242		379.00	MANUFACTURING	120		
RETAIL TRADE	75 93		134.00	NONMANUFACTURING	252 41		362.00	NONMANUFACTURING	282 77		
RETAIL TRADE SECTIONS	93	40.0	142.50	PUBLIC UTILITIES	116		407.00 344.50		79		
ACHINE BILLERS	400	39.5	173.00	F INANCE	110	3700	344.50	FINANCE	99		
MANUFACTURING	95	39.5	152.00	COMPUTER SYSTEMS ANALYSTS			100			100	1
NONMANUFACTURING	305	39.5	179.50	(DUSTNESS) CLASS B	434		316.50	COMPUTER OPERATORS, CLASS C	215		
				MANUFACTURING	205		321.00	MANUFACTURING	89		
BILLING-MACHINE BILLERS	256 73		187.50 151.50	II NONMANUFACTUDING	229 46		312.50		126		
MANOFACTURING	13	39.5	121.20	PUBLIC UTILITIES	149		328.00		91	30.5	154
BOOKKEEPING-MACHINE BILLERS	144	39.0	146.50	T INAMEL		37.00	501.00	DRAFTERS	1,905	39.5	242
NONMANUFACTURING	122	39.0	145.50	COMPUTER SYSTEMS ANALYSTS				MANUFACTURING	1,257	39.5	242
				(BUSINESS), CLASS C	72		253.00	NONMANUFACTURING	648		
AYROLL CLERKS	552		186.00	NONMANUFACTURING	53	40.0	258.00	PUBLIC UTILITIES	85		
MANUFACTURING	213		173.50			20 5	202 24	WHOLESALE TRADE	186	40.0	211
PUBLIC UTILITIES	339 125		231.00	COMPUTER PROGRAMMERS (BUSINESS)	1,443	39.5	293.00	DD. ETERS CLASS 4	639	39.5	204
WHOLESALE TRADE	97		170.00	NONMANUFACTURING	122		325.50	DRAFTERS, CLASS A	496		
RETAIL TRADE	64		167.50	WHOLESALE TRADE	164		276.50	NONMANUFACTURING	143		
NETHIE THOSE		3700	201.00	FINANCE	329		250.50	PUBLIC UTILITIES	47		
EYPUNCH OPERATORS	2,461	39.5	154.50	SERVICES	67		294.00				"
MANUFACTURING	842	39.5	149.00				1	DRAFTERS+ CLASS B	729		
NONMANUFACTURING	1,619		158.00	COMPUTER PROGRAMMENS (BUSINESS),				MANUFACTURING	434		
PUBLIC UTILITIES	302		205.00	CLASS A	662		326.00	NONMANUFACTURING	295		
WHOLESALE TRADE	388		152.00	NONMANUFACTURING	354		301.50	PUBLIC UTILITIES	35		
RETAIL TRADE	221 496		151.00	II PUBLIC UTILITIES	67		364.00	WHOLESALE TRADE	98	40.0	263
LTIMULE	470	30.3	141.00	WHOLESALE TRADEFINANCE	162		283.00				
				FINANCE	102	30.3	203.00	II .			1

Table A-3. Average weekly earnings of office, professional, and technical workers, by sex, in Minneapolis—St. Paul, Minn.—Wis., January 1977—Continued

	3.00	(me	ean2)			(mea	an <sup>2</sup> )		40.00	(me	erage an <sup>2</sup> )
Sex, $^{3}$ occupation, and industry division	Number of workers	Weekly hours 1 (standard)	Weekly earnings <sup>1</sup> (standard)	Sex, 3 occupation, and industry division	Number of workers	Weekly hours <sup>1</sup> (standard)	Weekly earnings <sup>1</sup> (standard)	Sex, 3 occupation, and industry division	Number of workers	Weekly hours 1 (standard)	Weekly earnings (standard
PROFESSIONAL AND TECHNICAL OCCUPATIONS - MENCONTINUED				PROFESSIONAL AND TECHNICAL OCCUPATIONS - WOMENCONTINUED				PROFESSIONAL AND TECHNICAL OCCUPATIONS - WOMENCONTINUED			
RAFTERS - CONTINUED			\$	COMPUTER SYSTEMS ANALYSTS (BUSINESS) - CONTINUED				COMPUTER PROGRAMMERS (BUSINESS) -			
DRAFTERS, CLASS C	536		190.00								
MANUFACTURING	327		184.00	COMPUTER SYSTEMS ANALYSTS			\$	COMPUTER PROGRAMMERS (BUSINESS),	98	20.5	\$
NONMANUFACTURING	209	38.5	200.00	(BUSINESS), CLASS B	103		304.50	CLASS C	51		215.0
FORDONIOS TECHNICIANS	. 720	20 5	205 54	NONMANUFACTURING	70		301.00	NUNMANUFACTURING	. 51	39.5	201.0
LECTRONICS TECHNICIANS	1,738		285.50	FINANCE	55	39.0	296.50	COMPUTED ODERATORS	224	20 5	180.5
PUBLIC UTILITIES	925 373		302.00			20 5	0.00	COMPUTER OPERATORS	324 115		181.0
PUBLIC OTTLITTES	3/3	39.0	328.50	COMPUTER PROGRAMMERS (BUSINESS)	413		258.00	NONMANUFACTURING	209		180.5
	- n			MANUFACTURING	156		275.00	PUBLIC UTILITIES	46		195.0
DEOFECCIONAL AND TECHNICAL				NONMANUFACTURING	257		247.50		86		176.5
PROFESSIONAL AND TECHNICAL				PUBLIC UTILITIES	35		302.50	FINANCE	00	36.5	110.5
OCCUPATIONS - WOMEN				FINANCE	161	39.0	235.50			20.5	107 5
								COMPUTER OPERATORS, CLASS A	60	39.5	197.5
				COMPUTER PROGRAMMERS (BUSINESS),					170	20 5	185.5
OMPUTER SYSTEMS ANALYSTS (BUSINESS)		20 5		CLASS A	139		287.00		50		188.0
MANUFACTURING	177		313.00	NONMANUFACTURING	104		277.00				184.0
NONMANUFACTURING	55		313.50	FINANCE	72	39.0	265.00		122		198.5
FINANCE	122 75		313.00					PUBLIC UTILITIES	36	40.0	190.5
TINANCE	15	38.5	296.50	COMPUTER PROGRAMMERS (BUSINESS) .					02	30 F	160.5
COMPUTER SYSTEMS ANALYSTS				CLASS B	176		259.50		92	39.5	100.5
(BUSINESS), CLASS A		26.5	222	MANUFACTURING	74	39.5	284.00	00457505	73	400	100 =
NONMANUFACTURING	64 50		338.00	NONMANUFACTURING	102			DRAFTERS	13	40.0	188.5
MONTHANDI ACTORING	50	39.5	332.00	FINANCE	62	39.0	224.00	REGISTERED INDUSTRIAL NURSES	119	20 5	246.0
								MANUFACTURING			249.0

Table A-4. Hourly earnings of maintenance, toolroom, and powerplant workers in Minneapolis—St. Paul, Minn.—Wis., January 1977

			Hourly ear	mings 4	Numb	oer of	work	ers rec	eiving	strai	ght-tir	ne hou	rly ea	rning	s of—												
Occupation and industry division	Number of workers	Mean 2	Median <sup>2</sup>	Middle range <sup>2</sup>	\$ 3.80 and under	4.00	\$ 4.20	\$ 4.40	\$ 4.60	\$ 4.80	\$ 5.00	\$ 5.20	\$ 5.40 -	\$ 5.60	5.80	6.00	6.20							9.00	9.40	\$ 9.801	\$ .0.
	-				4.00	4.20	4.4	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.60	7.00	7.40	7.80	8.20	8.60	9.00	9.40	9.801	0.201	0.
ALL WORKERS	235	\$ 7.25	\$ 6.00	\$ \$ 6•74 <b>-</b> 7•2									1		4	2	40	102	37	3	3	_	4	26	7		
MANUFACTURING	103 132	6.92 7.51	6.86	6.69- 7.0	7 -	-			:	=	Ξ	:	1 -	Ξ	-	3	17 23 22	43 59	27 10 1	2 -	2	1 4	4 2	1 25 1	3	:	
INTENANCE ELECTRICIANS MANUFACTURING NONMANUFACTURING	282	8.03	7.91		-			:	:	=	Ξ	:	1	=	:	:	33 33 -	5	74 65 9	28 26 2	75 72 3	7 7 -	35 33 2	2 - 2	18	88 21 67	
INTENANCE PAINTERS	61	7.06	7.07	7.00= 7.89 6.86= 7.70 7.00= 8.20	-	=			Ξ	:	=	:	2 -	1	3 3 -	:	16 9 7	13 11 2	55 19 36	14 14 -	7 1 6	23 2 21	4 4	6	1	1	
INTENANCE MACHINISTS	534 526			7.15- 7.8 7.15- 7.8		-		: :	:	:	-	:	Ξ	:	:	8	55	53 53	114 114	117 117		16 16	12	3	5	:	
INTENANCE MECHANICS (MACHINERY) - MANUFACTURING NONMANUFACTURING PUBLIC UTILITIES	854 85	6.64 7.66	6.39 7.59		1 -				:	:	4	40 40 -	3	38 38 -	121 120 1	68 64 4	247 235 12	78 73 5 3	106 91 15 8	89 77 12 9	81 70 11 5	46 38 8 8	2 2 2	15 15 15	=	:	
AINTENANCE MECHANICS (MOTOR VEHICLES)	106 927	6.98 7.82	6.40 8.13	6.38- 8.09 8.04- 8.13	3 -	=		2 2	:	:	40 40 40	:	2 -	4 4 -	. 5 4 1 1	12 10 2	61 35 26 4	84 3 81 81	49 13 36 23	2 -	28 670	19 5 14 14	34 34 34	21	=	:	
AINTENANCE PIPEFITTERS MANUFACTURING	140 123			8.13- 8.59 8.13- 8.29		:		: :	-	Ξ	:	-	:	Ξ	:	1	3	5	14 13	4	67 67	31 31	Ξ	2	13	-	
ILLWRIGHTS	184 178			7.07- 7.38 7.07- 7.38		-		: :	:	-	Ξ	1	:	=	:	:	5 5	17 17	118 118	22	-	21	Ξ	- 2	:	:	
MANUFACTURING	135 120		5.81 5.48	5.48- 6.00 5.48- 6.10		:	:	: :	-	Ξ	1	-	40 40	3	28	41 32	5 5	-	:	2	-	:	- :	=	:	:	
OL AND DIE MAKERS	995 994			7.31- 7.81 7.31- 7.81		1		: :	- :	-	Ξ	:	:	30 30	:	:	10 10	91 91	131 131	277 277	394 394	32 32	29	1_	-	:	
MANUFACTURING	36 57	7.64 7.22 7.49 7.59	7.83 7.12 7.11 7.75	7.12- 7.79 7.23- 7.99 7.12- 7.59 6.73- 8.16 7.12- 7.79 6.87- 7.12	-					3	:	6	1	:	2 2 -	10	19 13 6 - 6	55 21 34 16 1	184 26 158 - 14 63	133 47 86 4 40 12	7 7 -	28 24 4 - 2	6 5 1 1 -	6 6		:	
MANUFACTURING				6.34- 7.28 6.61- 7.60		-	:	:	:	:	:	12	12	:	:	1 -	12	13 13		4	18 18	5	-	-	-	-	

Table A-5. Hourly earnings of material movement and custodial workers in Minneapolis—St.Paul, Minn.—Wis., January 1977

			Hourly ear	mings 4					-	straig																	
Occupation and industry division	Number of									\$ 3.20						\$ 4.40				\$ 5.40		-	\$ 6.60	7.00	\$ 7.40	5 7.80	3.6
	workers	Mean 2	Median <sup>2</sup>	Middle range <sup>2</sup>	and under	- 2 60	- 2 90	-	- 20	- 3 40	-	-	-	-	-	-	-	-	-	5.80	- 6 20	-	7 00	7 40	7 80	8.20	
ALL WORKERS					2.40	2.00	2000	3.00	3.20	3.40	3.00	3,00	4.00	7020	4.40	4.00	4.00	3.00	3.40	3.00	0.23	0.00	7.00	7.40	7.00	0.20	, , ,
TRUCKDRIVERS	5,097 905 4,192 2,593 930	6.58 7.51 7.75	6.41 7.76 7.76	\$ 7.03- 7.76 5.77- 7.80 7.67- 7.76 7.76- 7.76 7.38- 7.67	:		:	:	:	:	:	3 - 3	30 30 -	9	8 2 6 - 3	18	18 5 13	20 20 - -	35 12 23 -	227 185 42 -	232 202 30 3	144 119 25 6 13	145 74 71 22 48	703	2945 2198	621 234 387 358 17	
TRUCKDRIVERS, LIGHT TRUCK MANUFACTURING NONMANUFACTURING WHOLESALE TRADE	348 222 126 53	7.09 6.03	8.18 5.70	5.49- 8.18 5.90- 8.18 5.47- 7.04 5.38- 6.35	-	:	:	:	:	:	:	:	:	:	:	18 18 -	10	-	24 4 20 20	74 32 42 12	55	16 3 13 13	27 21 6 6	35 35 2	:	122	
TRUCKDRIVERS, MEDIUM TRUCK MANUFACTURING NONMANUFACTURING PUBLIC UTILITIES	2,314 348 1,966 1,440	6.16 7.49	5.92 7.76	7.03- 7.76 5.77- 6.43 7.38- 7.76 7.76- 7.76	=	:	:	:	:	:	:	3 - 3 -	30 30	:	8 2 6	:	8 5 3	20 20 -	11 8 3	115 115 -	99 77 22 3	61 52 9 6	43 29 19 18	442	1428 15 1413 1413	41 25 16	
TRUCKDRIVERS, HEAVY TRUCK (TRAILER)	618 229 389 216 173	6.19 7.61 7.76	5.92 7.76 7.76	6.41- 7.76 5.92- 6.58 7.54- 7.84 7.76- 7.84 6.70- 7.76	=	:::::	:	:::::::::::::::::::::::::::::::::::::::		:	:	:	:	::::	:	::::	:		:	38 38 -	100 98 2 -	64	62 20 42 -	25 1 24 6 18	217 8 209 116 93	-	
TRUCKDRIVERS, HEAVY TRUCK (OTHER THAN TRAILER) NONMANUFACTURING	263 172			7.03- 7.80 7.03- 7.13		-	:	-	-	:	:	:	:	9	:	:	:	-	:	:	6	3	8	130 130	20	87	
HIPPING CLERKS MANUFACTURING NONMANUFACTURING WHOLESALE TRADE	423 211 212 153	5.51 6.85	5.66 7.01	5.63- 7.01 5.12- 5.85 6.66- 7.33 6.66- 7.18	-	=	:	:	:	:	:	1	18 18	:	2 -	4 4	1	13 13	37 37 -	95 80 15 5	62 37 25 23	20 14 6 6	33 6 27 18	91 91 87	46 4 42 10	:	
RECEIVING CLERKS MANUFACTURING NONMANUFACTURING WHOLESALE TRADE RETAIL TRADE	515 143 372 125 222	6.01 5.92 6.48	5.95 5.91 6.76	5.41- 6.76 5.35- 6.60 5.41- 6.76 5.80- 7.04 5.64- 5.95	=	4 -	:	:	:	2 2 -	4 - 4	9	4 - 4	2 - 2	9	14 14 14	17 5 12 -	5 4 1 - 1	55 32 23 17 6	88 9 79 13 66	109 22 87 19 68	39 30 9 6 2	37 16 21 12 9	82 21 61 43 18	33 2 31 15 16	- :	
HIPPING AND RECEIVING CLERKS MANUFACTURING NONMANUFACTURING WHOLESALE TRADE	455 278 177 141	5.46	5.38 7.10	4.77- 7.10 4.70- 6.00 5.47- 7.10 6.35- 7.10	=	:	:	10	4 4 -	10	1 -	:	:	:	1 -	12 12 12	78 68 10	10 10 -	66 65 1	55 54 1	62 43 19 19	19 6 13 13	6	101 21 80 77	17 17 17	3 - 3 3	
MAREHOUSEMENMANUFACTURINGNONMANUFACTURING	497 701	4.50 6.64 7.05	4.35 6.85 7.18	5.87- 7.18 6.78- 7.66	=	:	:	:	:	:	2 -	2	200	39 20 19	86 86	:	=	137 120 17 -	79 6 73 4 67	60 22 38 27 11	64 15 49 24 23	60 28 32 -	141 141 84 49	175 175 98 77	71 71 59	-	
ORDER FILLERS	407	6.42 5.37 6.54 6.53 5.99	5.45 7.01 7.00	5.97- 7.18 4.84- 6.03 6.31- 7.38 6.31- 7.18 5.04- 7.01	=	2 - 2	13 13 13		52 52 52	40 2 38 34 4	25 1 24 15 9	57 57 33 24	43 30 13 3	9 9	95 31 64 23 40	16 16 12 4	69 69 65 4	210 112 98 78 20	83 11 72 26 46	65	75	72 205	210	1617	647	:	

Table A-5. Hourly earnings of material movement and custodial workers in Minneapolis—St. Paul, Minn.—Wis., January 1977—Continued

			Hourly ear	mings 4	Numb	er of v	vorker	s rec	eiving	straig	ht-tin	nę hou	rly ea	rnings	of—					,							
Occupation and industry division	Number	9 1			\$ 2.30	\$ 2.40	2.60	2.80	\$ 3.00	\$ 3.20	\$ 3.40	\$ 3.60	\$ 3.80	\$ 4.00	4.20	\$ 4.40	\$ 4.60	\$ 4.80			5.80	\$ 6.20	\$ 6.60	\$ 7.00	\$ 7.40	\$ 7.80	\$ 8.
Occupation and industry division	workers	Mean 2	Median <sup>2</sup>	Middle range 2	and	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
					2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.40	5.80	6.20	6.60	7.00	7.40	7.80	8.20	8.
ALL WORKERS CONTINUED							4 1-																				
HIPPING PACKERS	908 600 521	5.00 5.47 5.50	4.95 5.55 5.94	\$ 4.50- 5.80 4.46- 5.44 4.55- 7.00 4.55- 7.13	4	27 1 26 26	1 -	3 3	45 45 42 3	15 2 13 13	9 9	24 18 6 6	14 8 6 6	68 50 18 12 6	21 20 1	235 188 47 39 8	176 161 15 13 2	95 22 73 51 22	218 199 19 12 7	170 141 29 28 1	55 52 3 3	99 45 54 54	7 7 6 1	222 222 198 24	:	:	
TERIAL HANDLING LABORERS MANUFACTURING NOMMANUFACTURING PUBLIC UTILITIES WHOLESALE TRADE RETAIL TRADE	1,589 3,576 1,330 1,503	5.49 6.60 7.73 5.95	5.49 7.18 7.76 6.85	5.32- 7.67 5.27- 5.61 5.71- 7.76 7.76- 7.76 4.55- 7.18 5.75- 7.13	9 -	5	1 - 1	66	25 25 15	40 40 - 12 13	57 57 56 1	144 - 144 - 109 11	18 18 - 13 5	84 16 68 - 28 4	112 48 64 16 39	123 52 71 - 63 8	153 150 3 -	158 39 119 - 78 41	405 359 46 - 35 11	954 671 283 1 167 115	70 25 45 7 15 23	173 91 82 7 74	329 60 269 143 126	75 496	1670 2 1668 1306 262 100	1 1	
ORKLIFT OPERATORS	871 681 385	7.08 7.07	5.65 7.09 7.10	5.63- 7.09 5.32- 6.40 7.03- 7.79 6.63- 7.79 7.03- 7.23	5 -	-	:	:		:	:	:	17 17 -	:	:	12	93 93 -	60	105 104 1 -	257 198 59 30 29	140 124 16 7 9	130 125 5	101 53 48 48	408 90 318 160 158	209 7 202 108 52	20 20 20	
OWER-TRUCK OPERATORS (OTHER THAN FORKLIFT) MANUFACTURING				5.78= 6.86 5.64= 6.57		-	:	:	:	-	-	-	:	=	:	-	-	-	1 1	65 65	7	98 98	35 35	37 5	:	=	
JARDS AND WATCHMEN	460 1,762 40	5.25 2.92 6.53	5.27 2.40 6.68	2.40- 4.64 4.91- 5.84 2.35- 2.80 6.34- 7.14 4.10- 5.41	519	-	209	94 1 93 -	20	9 7 2 - 1	17 3 14 -	16 8 8 -	11 2 9	131 52 79 60	27 25 25	33 11 22 -	51 19 32 -	103 86 17 -	104 74 30 - 26	119 49 70 10 60	80	61 61 -	18 1 17 17	23 4 19 13	:		
ANITORS, PORTEPS, AND CLEANERS MANUFACTURING NONMANUFACTURING PUBLIC UTILITIES WHOLESALE TRADE RETAIL TRADE SERVICES	1,827 5,140 318 137 352	4.87 3.79 5.66 4.87 3.94	4.70 3.58 5.87 4.85 3.97	3.4n= 4.69 4.50= 5.30 3.22= 4.30 5.43= 6.00 4.25= 5.34 3.10= 4.40 3.04= 3.80	16 7 - 4 - 5	8 - 1	562 2 560 2 2 7 549	179 179 - 4 13 162	351 24 327 20 2 70 217	506 2 3 16	1117 55 1062 - 1 18 754	282 11 271 4 3 35 187	332 42 290 1 - 23 266	312 80 232 1 18 35 178	34 37	240 109 131 - 22 84	110 2 - 18	191 129 62 6 6 6 5	659 539 120 14 30 50 26	110 23 87 71 12 2	301 157 144 144	53 9 44 38 6	40 24 16 1 15	3 3	15	:	

Table A-6. Average hourly earnings of maintenance, toolroom, powerplant, material movement, and custodial workers, by sex, in Minneapolis—St. Paul, Minn.—Wis., January 1977

Sex, $^{3}$ occupation, and industry division	Number of workers	Average (mean <sup>2</sup> ) hourly earnings <sup>4</sup>	Sex, 3 occupation, and industry division	Number of workers	Average (mean <sup>2</sup> ) hourly earnings <sup>4</sup>	Sex, 3 occupation, and industry division	Number of workers	Average (mean <sup>2</sup> ) hourly earnings
MAINTENANCE, TOOLROOM, AND POWERPLANT OCCUPATIONS - MEN			MATERIAL MOVEMENT AND CUSTODIAL OCCUPATIONS - MEN			MATERIAL MOVEMENT AND CUSTODIAL OCCUPATIONS - MENCONTINUED		
MAINTENANCE CARPENTERS	235	7.25	TRUCKDRIVERS	5,083	7-35	SHIPPING PACKERS	050	\$ 5.47
MANUFACTURING	103		MANUFACTURING	905		MANUFACTURING	448	
NONMANUFACTURING	132		NONMANUFACTURING	4,178		NONMANUFACTURING	502	
PUBLIC UTILITIES	26		PUBLIC UTILITIES	2,579 930		WHOLESALE TRADE	475	
MAINTENANCE ELECTRICIANS	384					MATERIAL HANDLING LABORERS	4,929	6.35
MANUFACTURING	281		TRUCKDRIVERS, LIGHT TRUCK	348		MANUFACTURING	1,575	
NONMANUFACTURING	103	9.49	MANUFACTURING	222		NONMANUFACTURING	3,354	
			NONMANUFACTURING	126			1,314	
MAINTENANCE PAINTERS	143		WHOLESALE TRADE	53	5.93		1,353	
MANUFACTURING	58 85		TRUCKDRIVERS, MEDIUM TRUCK	2,302	7.29	RETAIL TRADE	585	6.44
NUNMANUFACTURING	0.5	7.62	MANUFACTURING	348		FORKLIFT OPERATORS	1.547	6 20
MAINTENANCE MACHINISTS	531	7.49	NONMANUFACTURING	1,954		MANUFACTURING	1,547	
MANUFACTURING	523			1,428			681	
						WHOLESALE TRADE	385	
MAINTENANCE MECHANICS (MACHINERY) -	937	6.73	TRUCKDRIVERS, HEAVY TRUCK			RETAIL TRADE	251	
MANUFACTURING	853	6.64	(TRAILER)	616			1975	
NONMANUFACTURING	84		MANUFACTURING	229		POWER-TRUCK OPERATORS (OTHER		
PUBLIC UTILITIES	50	8.17		387		THAN FORKLIFT)	243	
			PUBLIC UTILITIES	214		MANUFACTURING	205	6.30
MAINTENANCE MECHANICS		7 70	WHOLESALE TRADE	173	7.42			
MANUFACTURING	1,033		TRUCKDRIVERS, HEAVY TRUCK			GUARDS AND WATCHMEN	2,139	
NONMANUFACTURING	927	7.82	(OTHER THAN TRAILER)	263	7.28	NONMANUFACTURING	1.703	
PUBLIC UTILITIES	868		NONMANUFACTURING	172		PUBLIC UTILITIES	40	
, obelo offerfiles	000	1.00			0.70	FINANCE	201	
MAINTENANCE PIPEFITTERS	140	8.16	SHIPPING CLERKS	397	6.31			
MANUFACTURING	123	8.02	MANUFACTURING	185	5.69	JANITORS, PORTERS, AND CLEANERS	5,316	4.21
			NONMANUFACTURING	212		MANUFACTURING	1,615	
MILLWRIGHTS	184		WHOLESALE TRADE	153	6.79	NONMANUFACTURING	3,701	
MANUFACTURING	178	7.35	DECENTRIC OF FORCE	101		PUBLIC UTILITIES	276	
WATERIANCE TRANSC UELDEDS	124	C C2	MANUFACTURING	496 140		WHOLESALE TRADE	124	
MAINTENANCE TRADES HELPERS	134		NONMANUFACTURING	356		SERVICES	320	
MANUFACTURING	119	3.41	WHOLESALE TRADE	120		SERVICES	2,412	3.56
TOOL AND DIE MAKERS	995	7.56	RETAIL TRADE	215				
MANUFACTURING	994	7.56				MATERIAL MOVEMENT AND CUSTODIAL		
			SHIPPING AND RECEIVING CLERKS	426		OCCUPATIONS - WOMEN		
STATIONARY ENGINEERS	547	7.39	MANUFACTURING	250				1
MANUFACTURING	224		NONMANUFACTURING	176		ORDER FILLERS	366	3.92
NONMANUFACTURING	323	7.22	WHOLESALE TRADE	140	6.77			1
PUBLIC UTILITIES	36	7.49	UADS VOUS SUSSE			SHIPPING PACKERS	558	
RETAIL TRADE	57		WAREHOUSEMEN	1,152		MANUFACTURING	460	
SERVICES	110	6.92	NONMANUFACTURING	479 673		NONMANUFACTURING	98	4.27
BOILER TENDERS	103	6.78	WHOLESALE TRADE	367		GUARDS AND WATCHMEN	83	3.39
MANUFACTURING	80	6.98		268	6.13		59	
			ORDER FILLERS	3,598	6.68	JANITORS, PORTEPS, AND CLEANERS	1,644	3.64
			MANUFACTURING	302	5.70	MANUFACTURING	212	4.66
			NONMANUFACTURING	3,296		NONMANUFACTURING	1,432	
			WHOLESALE TRADE	2,496		PUBLIC UTILITIES	42	
	1		RETAIL TRADE	447	6.19	SERVICES	896	3.22

Table A-7. Percent increases in average hourly earnings, adjusted for employment shifts, for selected occupational groups in Minneapolis—St. Paul, Minn.—Wis., for selected periods

Industry and occupational group 5	January 1972 to January 1973	January 1973 to January 1974	January 1974 to January 1975	January 1975 to January 1976	January 1976 to January 1977
All industries:					
Office clerical	5.1	6.2	8.6	7.7	7.9
Electronic data processing	(6)	(6)	8.4	6.5	5.5
Industrial nurses	5.9	5.6	7.8	9.9	8.2
Skilled maintenance trades	6.8	6.4	9.2	8.1	8.7
Unskilled plant workers	6.8	6.1	9.3	7.7	8.9
Manufacturing:					
Office clerical	4.2	5.4	7.7	7.9	8.1
Electronic data processing	(6)	(6)	6.9	5.0	5.8
Industrial nurses	5.4	6.4	6.5	9.8	9.0
Skilled maintenance trades	6.4	6.1	9.0	8.9	8.8
Unskilled plant workers	6.3	6.6	9.3	10.1	8.3
Nonmanufacturing:					
Office clerical	5.5	6.7	9.0	7.6	7.7
Electronic data processing	(6) (6)	(6)	10.2	7.8	5.0
Industrial nurses	(6)	(6)	(6)	(6)	(6)
Unskilled plant workers	7.1	5.8	9.2	6.7	9.2

Table A-8. Weekly earnings of office workers—large establishments in Minneapolis—St. Paul, Minn.—Wis., January 1977

					earnings 1 ndard)	Numbe	r of w								rnings	of—										
Occupation and industry division	Number of workers	Average weekly hours 1 (standard)	Mean 2	Median 2	Middle range 2	\$ 80 and under 90	90	100	-	120	130	140	150	160	-	180	-	\$ 200 - 220	220	240	260	280	300	-	-	
ALL WORKERS																										
MANUFACTURING		39.0 39.5 40.0 40.0 39.5	186.50 195.00 248.00 183.50 183.00	182.50 186.00 251.00 175.00 184.00	\$ \$ 168.00-203.50 169.00-199.50 163.50-212.50 281.00 163.50-203.50 164.50-204.50	:			2 - 2 - 2 -	11 - 11 - 5 4 2	54 17 37 - 10 13 7	190 96 94 - 23 19 34	379 232 147 6 33 24 47	557 397 160 50 41 50	667 515 152 6 44 37 52	668 509 159 10 31 41 69	520 402 118 14 16 24 47	706 423 283 58 54 84 78	269 201 68 20 9 14 24	119 57 62 41 7 5	79 21 58 45 4	53 12 41 36 6	28 1 27 24 3	19 1 18 13 1 -	1 1	
SECRETARIES, CLASS A MANUFACTURING NONMANUFACTURING PUBLIC UTILITIES WHOLESALE TRADE	337 165 172 73 51	40.0 40.0 40.0	236.50 245.50 277.00	233.00 243.50 279.50	216.00-260.00 222.00-251.00 207.00-282.50 251.00-306.00 201.00-218.50	=	:	:	:	:	:	2	:	:	5 1 4 - 2	2 2 1	22 9 13 - 7	76 26 50 7 34	71 60 11 5 3	70 41 29 16	31 17 14 9	25 8 17 9 3	18 17 16 1	12 12 10	:	
SECRETARIES, CLASS B MANUFACTURING NONMANUFACTURING PUBLIC UTILITIES RETAIL TRADE FINANCE	664	39.0 39.5 40.0 39.5	204.50 204.50 272.50 181.00	204.00 195.00 280.00 175.00	184.00-218.50 191.00-218.00 174.00-221.00 246.00-297.00 167.00-185.00 188.00-218.50	:		:	:		5 - 2 -	11 1 10 - - 3	24 6 18 - 9 1	56 9 47 - 22 5	114 58 56 1 21 14	130 76 54 - 17 16	160 120 40 1 6 12	323 253 70 2 9 50	153 119 34 8 4 22	31 16 15 10 1	20 2 18 10 2	26 3 23 20	10 10 8	6 1 5 3 - 2	1 1 -	
SECRETARIES, CLASS C	1,913 1,518 395 184	39.5 39.5	179.00	179.50 182.00	167.50-191.00 168.00-190.00 163.00-207.00 161.50-190.00	-	:	:	:	2	15 8 7	76 46 30 15	151 105 46 26	301 253 48 31	410 365 45 23	424 360 64 43	295 249 46 26	193 116 77 18	28 13 15 2	9 - 9 -	6 2 4	1 1 -	:	1	:	
SECRETARIES, CLASS D	537 373	39.0	169.00	166.00	155.00-185.00 156.00-179.00 151.00-203.00 150.50-203.50	-	:	:	2 2 2	8 - 8 2	34 9 25 10	96 49 47 13	190 121 69 11	184 135 49 12	117 91 26 2	98 71 27 5	38 24 14 2	97 28 69 48	15 9 6 3	9 - 9 -	55	:	:	:	:	
ENOGRAPHERS	841 473 215	39.5 39.5 40.0 40.0	154.00 190.50 238.00 151.50	153.00 178.00 253.50 147.50	144.00-172.50 144.50-163.50 143.50-252.50 208.50-264.00 137.00-163.00 132.50-174.00	=		4 3 1 -	25 10 15 - 4 6	49 32 17 7 8	166 99 67 4 26 18	262 203 59 2 33 10	236 206 30 4 10 14	204 170 34 5 16 7	105 85 20 6 5	53 28 25 3 3	10 10 4 2	49 1 48 41 7	18 4 14 14	54 54 54	71 71 70 -	5 5 -	3 3 3 -			
STENOGRAPHERS, GENERAL MANUFACTURING NOMMANUFACTURING PUBLIC UTILITIES	160 289	39.5 40.0	141.50	139.00	134.50-209.50 130.50-148.50 146.00-254.00 208.50-260.50	:	:	4 3 1	24 10 14	37 23 14	81 50 31 4	65 42 23 2	34 15 19 4	20 4 16 5	19 8 11 4	8 1 7 3	4 4	42 1 41 41	15 3 12 12	50 50 50	44 44 43	2 2 2	:	:	:	
STENOGRAPHERS, SENIOR MANUFACTURING NONMANUFACTURING	681	39.5	156.50	156.00	148.00-167.00 149.00-165.50 142.50-199.50	-	:	Ξ	1	12 9 3	85 49 36	197 161 36	202 191 11	184 166 18	86 77 9	45 27 18	6	7 7	3 1 2	4 - 4	27 - 27	3 - 3	3 - 3	:	:	
ANSCRIBING-MACHINE TYPISTS	95 65				127.00-155.50 126.50-155.50		:	5 5	7 5	19 12	16 11	16 8	19 14	5	4	1	2	:	:	1 -	:	:	:	:	:	
PISTS	482 748 60	39.0 39.5 40.0	140.00 143.50 131.00	135.00 134.50 131.50	121.00-148.50 122.50-147.00 121.00-150.50 121.00-139.50 117.50-134.50	=	18 16 2 -	4	181 53 128 9	234 78 156 14 94	242 112 130 18 71	204 97 107 11 23	84 44 40 2 13	35 9 26 2 1	28 1 27 - 3	7 1 6 -	15	45 45 -	47 43 4	25	:	1 -	:		:	

Table A-8. Weekly earnings of office workers—large establishments in Minneapolis—St. Paul, Minn.—Wis., January 1977—Continued

					earnings 1 ndard)	Numbe	r of w	vorker	s rec	eiving	straig	ht-tin	ne wee	kly ea	rnings	of—										
Occupation and industry division	Number of workers	Average weekly hours <sup>1</sup> (standard)	Mean 2	Median 2	Middle range 2	and under	90	100	110	120	130	140	150	-	170	180	190	200	220	240	260	280	300	-	-	
ALL WORKERS CONTINUED																										
YPISTS - CONTINUED																										
TYPISTS, CLASS A	618 302 316 152	39.5 39.5	149.50 151.00	140.50	\$ 129.50-157.50 130.00-154.00 126.50-169.50 119.50-139.00	-	:	4 3 1 1	69 28 41 39	82 36 46 36	132 74 58 40	119 68 51 23	66 40 26 9	22 8 14 1	22 1 21 3	4 1 3	14 14	39 - 39	44 43 1	:	:	1 -	:	:	:	
TYPISTS, CLASS B	612 180 432 132 161	38.5 39.5 40.0	123.50 138.00 170.00	124.50 126.50 147.00	117.50-141.00 110.00-134.50 118.50-147.00 147.00-201.00 115.00-126.50	:	18 16 2 -	60 25 35 4 13	112 25 87 2 53	152 42 110 3 58	110 38 72 17 31	85 29 56 48	18 4 14 10 4	13 1 12 10	6 1 -	3 2	1 1 -	6 6	3 3 3	25 25 25	:	:	:	:::::::::::::::::::::::::::::::::::::::	:	
MANUFACTURING NONMANUFACTURING FINANCE	526 127 399 244	38.5 39.0	122.50	122.00	107.50-137.50 105.00-140.50 108.00-137.50 108.00-133.00	3	35 18 17 6	116 24 92 62	83 17 66 42	80 21 59 45	84 11 73 63	37 20 17 9	13 5 8 4	12 5 7 7	11 3 8 6	1 -		16 16	10	5 5	17 17	3 - 3 -	:	:	:	
FILE CLERKS, CLASS A	93 63				133.50-230.50 137.50-264.50		-	Ξ	6	10 7	12	19 7	8	3	8	-	-	2	5	4	16 16	3	Ξ	Ξ	=	
FILE CLERKS, CLASS R	225 59 166 76	39.5 39.0	126.50 136.00	125.00	110.50-139.00 113.50-135.50 107.50-144.00 111.50-135.50	-	10 10 1	8 36 16	46 13 33 14	39 18 21 12	30 8 22 17	14 8 6 5	5 2 3 2	9 2 7 7	3 3 2	1 1		14	8 -	1	1	:	:	:	:	
FILE CLERKS, CLASS C NONMANUFACTURING FINANCE	208 170 155	39.0	117.50	111.00	102.50-125.00 106.00-131.00 106.00-131.00	-	25 7 5	72 56 46	31 30 27	31 31 31	42 42 42	4 4	Ξ	Ξ	=	Ξ	-	:	=	=	=	=	=	Ξ	=	
ESSENGERS MANUFACTURING NONMANUFACTURING FINANCE	316 139 177 102	38.5 39.5	114.50 133.00	113.00	103.50-127.00 104.00-122.00 103.50-138.00 102.50-111.50	- :	30 15 15 9	121 38 83 62	64 42 22 19	28 23 5 2	28 17 11 7	5 3 2 1	2 -	1 -	5 5	1	4 -		22	8 -	:	:	:	=	:	
MANUFACTURINGNONMANUFACTURINGRETAIL TRADE	201 73 128 50	39.0 39.5	152.50 155.00	150.50	132.50-164.00 144.00-159.50 127.50-172.50 117.50-160.00	-	4 4	9 6	13 13 5	14 3 11 3	39 10 29 11	27 22 5 3	30 20 10 2	23 10 13 10	7 2 5 2	4 4	9 6 3	2 -	7 7 -	13	:	:	:	:	:	
NITCHBOARD OPERATOR-RECEPTIONISTS- NONMANUFACTURING	99 64				130.00-158.00		:	6	9	9	22 10	18 10	20 17	7	5	-	-	2	1_	:	-	Ξ	:	Ξ	Ξ	
RDER CLERKS NOMMANUFACTURING RETAIL TRADE	165 129 94	39.5	129.00	121.00	115.00-156.00 110.50-146.00 105.50-125.50	-	14 14 14	18 17 17	27 27 24	23 17 17	20 17 8	10 7	13 9 -	16 10 9	10 4 4	4 4 1	3	3	2	1 -	1 -	=	:	:	:	
COUNTING CLERKS	3,258 848 2,410 1,076 441 430 394	39.0 39.5 40.0 40.0 39.5	156.00 181.00 225.50 137.50 147.00	155.00 169.00 219.50 132.50 140.00	136.00-202.00 138.00-171.50 134.50-218.50 185.00-270.00 120.00-149.50 126.00-169.00 127.00-181.50	1 - 1	18 4 14 - 4 10	47 3 44 - 12 11 17	244 40 204 - 87 61 44	312 73 239 - 98 55 62	359 108 251 53 77 59 47	321 141 180 24 55 51 40		338 138 200 68 40 66 26	228 94 134 60 12 37 22	217 62 155 64 13 38 40	90 30 60 19 1 16 24	347 23 324 283 - 5 36	37 11 26 16 6 1	133 4 129 126 1	261 261 257 2	74 - 74 74 - -	18 18 18			

Table A-8. Weekly earnings of office workers—large establishments in Minneapolis—St. Paul, Minn.—Wis., January 1977—Continued

					earnings 1 ndard)	Numbe	er of w	orker	s rece	iving	straig	ht-tim	e wee	kly ea:	rnings	of—										
Occupation and industry division	Number of workers	Average weekly hours 1 (standard)	Mean 2		Middle range≥	\$ 80 and under 90	-	100	-	120	130	140	150	160	170	180	190	\$ 200 - 220	220	240	260	280	300	-	-	
ALL WORKERS CONTINUED	-																									
CCOUNTING CLERKS - CONTINUED																										
ACCOUNTING CLERKS, CLASS A MANUFACTURING NOMMANUFACTURING PUBLIC UTILITIES HOLESALE TRADE FINANCE	1,039	39.0 40.0 40.0 40.0	167.50 219.50 246.50 159.50	164.50 219.50 257.50 156.50	\$ 161.00-257.50 153.50-179.50 173.50-271.50 219.50-276.50 144.50-164.00 150.00-197.00	:		2 -	6 - 2	29 3 26 - 6 9	67 22 45 - 16 13	119 73 46 - 21 12	118 75 43 2 22 9	181 111 70 22 31	142 78 64 36 6	124 56 68 28 4 28	43 28 15 2 1 10	196 15 181 153 -	30 9 21 13 6 2	106 4 102 99 1 2	258 258 254 2	74 74 74	18 18 18			
ACCOUNTING CLERKS, CLASS B MANUFACTURING	374	39.0 39.5 40.0 40.0 39.5	141.50 151.50 186.00 129.00 145.50	138.00 140.00 189.00 126.00 140.00	126.00-169.00 127.00-152.00 124.50-176.00 162.50-211.50 116.00-137.00 124.00-169.40	1 - 1	18 4 14 - 4 10	45 3 42 - 12 11 17	238 40 198 - 87 59 42	283 70 213 - 92 53 53	292 86 206 53 61 51 34	202 68 134 24 34 45 28	95 42 53 12 11 10 20	157 27 130 46 9 58 17	86 16 70 24 6 34	93 6 87 36 9 30 12	47 2 45 17 - 14 14	151 8 143 130 - 5 8	7 2 5 3 - 1	27 27 27	3 3					
AYROLL CLERKS	252 69 183 61	40.0	173.00 185.50	170.50	144.00-207.50 147.50-198.00 140.00-212.00 202.00-276.50	-	:	1 -	8 1 7	24 7 17	24 4 20	21 10 11	21 8 13 2	24 4 20 1	14 4 10 6	19 8 11 2	18 8 10	29 9 20 11	9 4 5 1	7 1 6 6	26 1 25 25	7 - 7 7	:	:	:	
EYPUNCH OPERATORS		39.5 39.5 40.0 40.0 39.5	149.50 161.50 219.50 139.50 150.50	149.50 154.00 237.50 135.00 154.00	136.00-165.00 138.00-160.00 133.00-177.00 185.50-253.50 132.00-166.00 132.00-166.00	=		17 1 16 - 14 2	85 23 62 - 4 7 31	132 48 84 - 7 30 40	191 97 94 3 25 24 35	209 130 79 2 11 14 44	258 137 121 7 9 32 60	197 87 110 13 5 47	72 34 38 7 - 17 14	66 14 52 12 17 23	15 1 14 4 - 6 4	27 1 26 26 -	14 6 8 8 -	80 80 80	2 1 1 1	1 1			:	
KEYPUNCH OPERATORS, CLASS A MANUFACTURING NOMMANUFACTURING PUBLIC UTILITIES FINANCE FINANCE	776 425 351 117 104 92	39.5 39.5 40.0 39.5	154.50 179.50 228.50 155.00	153.00 162.50 248.50 158.00	147.00-169.00 144.00-162.00 152.00-202.00 202.00-253.50 150.00-163.00 147.00-168.00	=				24 11 13 - 10 3	87 63 24 - 10 10	125 93 32 - 4 15	203 130 73 3 31 25	153 77 76 6 44 19	50 31 19 4 4	28 10 18 9 -	2 1 1 - 1	23 1 22 22 -	7 6 1 1 -	71 71 71	2 1 1 1	1 1	:	:		
KEYPUNCH OPERATORS, CLASS B MANUFACTURING NONMANUFACTURING PUBLIC UTILITIES RETAIL TRADE FINANCE	156 434 46 104	39.5 39.5 40.0 40.0	136.50 147.50 197.00 146.00	133.00 139.50 193.00 139.00	124.50-157.50 124.00-145.00 124.50-161.00 160.50-228.00 121.00-179.00 127.00-157.20	-		17 1 16 - 14 2	85 23 62 - 7 31	108 37 71 - 20 37	104 34 70 3 14 25	84 37 47 2 10 29	55 7 48 4 1 35	44 10 34 7 3 24	22 3 19 3 13 3	38 4 34 3 17 14	13 13 4 5 4	4 4	7 7 7 -	9 9 9 -		:	:	:	:	

Table A-9. Weekly earnings of professional and technical workers—large establishments in Minneapolis—St. Paul, Minn.—Wis., January 1977

					earnings <sup>1</sup> ndard)	Numb	er of v	vorker	s rece	eiving	straig	ght-tin	ne wee	ekly ea	rning	s of—										
Occupation and industry division	Number of workers	Average weekly hours (standard)	.,,	Median 2		and under	130	140	150	160	170	180	200	- 550	240	260	\$ 280 - 300	300	320	340	360	380	400 -	420	-	
ALL WORKERS																										
COMPUTER SYSTEMS ANALYSTS (BUSINESS) MANUFACTURING NONMANUFACTURING PUBLIC UTILITIES FINANCE		39.0 39.5 40.0	348.50 330.00 369.50	353.00 332.50 369.50	\$ 309.50-376.00 318.00-385.50 300.00-362.50 332.50-399.00 279.50-356.50	=	:	:	:	::::	:	3 2 1 - 1	12 6 6 6	23 9 14 -	38 12 26 -	60 19 41 2	54 27 27 2 13	110 46 64 11 34	146 60 86 12 64	148 83 65 15 35	124 63 61 10 36	110 67 43 18 21	61 48 13 9	27 18 9 7 2	8 4 4 3 1	
COMPUTER SYSTEMS ANALYSTS (BUSINESS), CLASS A MANUFACTURING NONMANUFACTURING PUBLIC UTILITIES FINANCE	250 185 46	39.5 39.5 40.0	379.00 357.50 402.00	381.00 360.00 398.50	345.00-397.00 358.00-402.50 327.00-386.50 379.50-426.00 317.50-375.00	=		:	:	:		:	:	1 - 1	4 - 4	15 15 -	6 3 3 - 2	23 12 11 -	40 14 26 1	69 37 32 6 14	90 56 34 6 18	90 60 30 11 15	57 45 12 8 4	25 16 9 7 2	8 4 4 3 1	
COMPUTER SYSTEMS ANALYSTS (BUSINESS), CLASS B MANUFACTURING NONMANUFACTURING PUBLIC UTILITIES FINANCE	190 255 38	39.0 39.5 40.0	324.00 316.00 344.00	326.50 320.00 348.50	297.50-345.50 300.50-345.50 290.00-348.50 320.00-366.50 275.50-340.50	=	:	:	:	:	:	1 - 1	4 - 4	9 - 9	27 8 19	36 16 20 1	44 22 22 1	83 33 50 8 27	102 46 56 7 45	79 46 33 9 21	34 7 27 4 18	20 7 13 7 6	4 3 1 1	2 2 -	:	
COMPUTER SYSTEMS ANALYSTS (BUSINESS), CLASS C	51	40.0	254.50	249.50	230.00-276.50	_	_	-	_	-	_	2	8	13	7	9	. 4	4	4		_	_	_	-	_	
OMPUTER PROGRAMMERS (BUSINESS) NONMANUFACTURING PUBLIC UTILITIES WHOLESALE TRADE FINANCE	677 157 85	39.0 40.0 40.0	268.50 320.50 248.00	266.00 322.00 249.00	256.50-325.50 237.50-294.50 284.00-352.00 230.00-268.50 232.50-277.50	-	:	:	:	:	13 13 -	55 45 8 36	46 40 1 7 31	3 18	218 114 11 23 75	241 135 23 15 84	256 111 20 11 63	162 44 17 3 13	124 36 28	113	95 14 14	49 8 8	39 8 8	2 2 -	2	
COMPUTER PROGRAMMERS (BUSINESS), CLASS A NONMANUFACTURING PUBLIC UTILITIES FINANCE	51	39.0	289.00	281.00	279.00-362.00 262.50-299.00 339.50-394.50 257.50-287.50	-	=	=	:	=	=	:	4 4 - 3	19 19 -	54 48 - 42	99 91 - 71	124 86 3 60	57 28 3 13	63 15 7 7	81 10 16	77 11 11	48 7 7	39 8 8	9 2 2	2	
COMPUTER PROGRAMMERS (BUSINESS), CLASS B MANUFACTURING NONMANUFACTURING PUBLIC UTILITIES FINANCE	270 85	39.5 39.5 40.0	294.00 260.00 307.00	296.50 249.50 305.00	249.00-307.00 276.00-314.00 232.50-282.50 284.00-337.00 219.50-249.50	=	:		:	:	8 8	12 7 5 -	27 1 26 1 22	71 7 64 3 42	93 31 62 7 33	96 65 31 10 13	114 91 23 15	101 87 14 12	61 40 21 21		3 5 3					
COMPUTER PROGRAMMERS (BUSINESS), CLASS C	224	39.5	239.50	246.50	209.00-264.50 183.00-254.00	-	:	:	:	-	5	43 40	15 10	22	71 4	46 13	18	4 2	-	-	-	-	-	-		
MANUFACTURING	834 384 450 107 58 51	39.5 39.5 39.5 40.0 40.0 39.5	200.50 192.50 207.50 242.50 188.00 194.50	196.50 190.00 199.00 259.50 190.00 194.00	171.50-219.00 170.50-212.00 172.50-224.00 207.00-288.00 169.50-202.00 179.50-213.00 169.50-217.50	2 2 -	2	55 31 24 2 4 2 16	45 22 23 4 4 -	77 31 46 3 7 8 26	82	188 94 94 7 20 13	173 84 89 14	84 42 42 6 4 8	36 19 17	27 5 22 16 1	33 33 31	10 1 9 3	3	4	. :	:		-		

Table A-9. Weekly earnings of professional and technical workers—large establishments in Minneapolis—St. Paul, Minn.—Wis., January 1977—Continued

					earnings 1 dard)	Numb	er of v	vorker	s rece	iving	straig	ht-tin	ne wee	kly ea	rnings	of—										
Occupation and industry division	Number of workers	Average weekly hours I	Mean 2		Middle range <sup>2</sup>	\$ 120 and	130	\$ 140	\$ 150		170		200				\$ 280		\$ 320	340	\$ 36n	380	400	420	\$ 440	5 46
		(standard)	Mean	Median	Middle range	under	140	150	160	170	180	200	220	240	260	280	300	320	340	360	380	400	420	440	460	4
ALL WORKERS CONTINUED																										
COMPUTER OPERATORS CONTINUED																										
COMPUTER OPERATORS, CLASS A MANUFACTURING NONMANUFACTURING	112	39.5 39.0	223.00	221.00	208.00-238.50 211.00-237.00 204.00-241.00	=	Ξ	Ξ	Ξ	Ξ	7	37 15 22	77 39 38	71 35 36	31 17 14	21 5 16	1	1	2	4 - 4	:	=	=	=	=	
FINANCE					237.00-272.50 199.50-230.00	=	-	-	-	-	6	15	28	22	5	12	1 -	-	-	4	-	-	-	-	-	
COMPUTER OPERATORS, CLASS B MANUFACTURING NONMANUFACTURING PUBLIC UTILITIES FINANCE	161 221 66	39.5 39.5 40.0	192.00 211.50 252.50	189.50 198.00 287.50	179.50-210.00 179.50-203.00 179.50-221.00 211.50-288.00 171.00-206.00	1	2 2	9 4 5 - 2	10	32 8 24 -	45 27 18 6	126 64 62 6 28	89 44 45 11 15	13 7 6 2 2	5 2 3 3	6 4 2	32 32 30	9 9 3 6	3 2 1 1	:	:	:	:		:	
COMPUTER OPERATORS, CLASS C MANUFACTURINGNOWMANUFACTURING	200 111 89	39.5 40.0 39.0	164.00 162.00 166.00	163.00 158.50 166.00	149.50-175.00 148.50-172.50 149.50-176.00 154.50-176.00	-	10 6 4	46 27 19 14	35 22 13 6	45 23 22 16	30 15 15 13	25 15 10 9	7 1 6 2	:	:	:	:	-	:	1 1 -	:	:	:	:	:	
DRAFTERS	852 220	39.5 37.5	252.00	251.00	213.00-285.00 211.00-285.00 213.00-282.00 241.00-308.50	1	2 2 -	1	1 1	13 11 2	35 33 2	119 97 22 2	140 103 37 13	147 112 35 2	143 121 22 13	155 120 35 19	118 96 22 11	87 78 9 7	56 36 25 6	20 16 4 4	18 14 4 4	13 11 2 2	1 1	=	:	
DRAFTERS, CLASS A MANUFACTURING NONMANUFACTURING:	427	39.5	287.50	284.50	264.50-317.50 262.00-309.50	Ξ	Ξ	Ē	Ξ	Ξ	3	:	5	36 36	56 56	104 89	100	76 72	56 36	20 16	18 14	13 11	1 -	-	=	:
DRAFTERS, CLASS B	322	39.0	238.50	238.50	276.00-342.50 214.00-259.00 210.50-251.00	:	:	:	:	-	1	23	74 74	67 65	77 63	15 51 31	18	11	-	-	-	-	-	-	:	
NONMANUFACTURING		38.0	269.00	270.00	256.50-282.00 241.50-284.00	-	-	-	:	:	1 -	:	-	2	14 12	20	14	5	:	:	-	:	:	:	:	
DRAFTERS, CLASS C					184.00-213.00 178.00-200.50	1 -	:	1-	:	13 11	31 30	95 74	51 27	44 11	10 2	:	:	:	-	:	:	:	:	-	=	
MANUFACTURING					218.00-263.00 230.50-262.00	:	:	-	:	=	-	6	22	19	25 21	19 15	9	:	1	2	-	-	:	- :	=	

Table A-10. Average weekly earnings of office, professional, and technical workers, by sex–large establishments in Minneapolis—St. Paul, Minn.—Wis., January 1977

			verage (ean <sup>2</sup> )			Ave (me				Ave (me	erage ean <sup>2</sup> )
Sex, $^{3}$ occupation, and industry division	Number of workers	Weekly hours 1 (standard)	Weekly earnings <sup>1</sup> (standard)	Sex, 3 occupation, and industry division	Number of workers	Weekly hours <sup>1</sup> (standard)	Weekly earnings <sup>1</sup> (standard)	Sex, 3 occupation, and industry division	Number of workers	Weekly hours 1 (standard)	Weekly earnings (standar
OFFICE OCCUPATIONS - MEN	-			OFFICE OCCUPATIONS - WOMENCONTINUED				OFFICE OCCUPATIONS - WOMENCONTINUED			
ESSENGERS	70	39.5	168.00	TYPISTS - CONTINUED				ACCOUNTING CLERKS - CONTINUED			
				TYPISTS. CLASS A	591	39.5	\$ 150.50				\$
OFFICE OCCUPATIONS - WOMEN				MANUFACTURING	301	39.5	149.50	ACCOUNTING CLERKS, CLASS B	1,595		148.
				NONMANUFACTURINGFINANCE	290 152		152.00	NONMANUFACTURING	1,229	39.5	150.
SECRETARIES	4.248	30 5	189.50		152	39.0	131.00	WHOLESALE TRADE	307 259		184.
MANUFACTURING	2,884		186.50	TYPISTS, CLASS B	582		133.50	RETAIL TRADE	382		145.
NONMANUFACTURING	1,364	39.5	196.00	MANUFACTURING	180		123.50	FINANCE	245		141.
PUBLIC UTILITIES	263		247.50	PUBLIC UTILITIES	402 111		137.50				
FINANCE	310		183.00	FINANCE	161		122.00	PAYROLL CLERKS	231		
FINANCE	433	39.0	187.50					NONMANUFACTURING	164		171.
SECRETARIES, CLASS A	333	40.0	240.50	FILE CLERKS	500		133.00	PUBLIC UTILITIES	58		240.
MANUFACTURING	165		236.50	MANUFACTURING	127		122.50				
NONMANUFACTURING	168		244.50	NONMANUFACTURING	373 236		136.50	INCIPUNCH OFERATORS SEESES	1,337		157.
PUBLIC UTILITIES	70	40.0	275.00	TIMANCE STATES	230	30.3	122.50	MANUFACTURING			150.
WHOLESALE TRADE	50	40.0	213.00	FILE CLERKS, CLASS A	87		176.00	NONMANUFACTURING	763 162		162.
SECRETARIES, CLASS 8	1,068	39.0	204.50	NONMANUFACTURING	57	39.5	193.00	RETAIL TRADE	206		150.
MANUFACTURING	664	39.0	204.50	571 5 01 5045 01 400 II	240	20.4		FINANCE	296		148.
NONMANUFACTURING	404		204.00	FILE CLERKS, CLASS &	209 59		134.00				
PUBLIC UTILITIES	63		273.00	NONMANUFACTURING	150		136.50	I KETPONCH OFERATORS, CLASS A	760		166.
FINANCE	93 127		181.00	PUBLIC UTILITIES	35		184.00	MANUFACTURING	421 339		154.
THANCE	121	39.0	204.00	FINANCE	74	39.0	127.50	PUBLIC UTILITIES	116		228.5
SECRETARIES, CLASS C	1,911	39.5	180.50					RETAIL TRADE	103		154.
MANUFACTURING	1,518		179.00	FILE CLERKS, CLASS C	204 166		114.00	FINANCE	92	39.0	157.
NONMANUFACTURING	393		184.50	FINANCE	151		119.00	KENDING! ADEC TODA - 01 - 00 - 5		20.5	
FINANCE	183	39.0	178.00				77,277,33	KEYPUNCH OPERATORS, CLASS B	153	39.5	145.
SECRETARIES, CLASS D	909	39.0	172.50	MESSENGERS	242	39.0	112.50	NONMANUFACTURING	424		148.0
MANUFACTURING	537		169.00	MANUFACTURING	109 133		112.00	PUBLIC UTILITIES	46		197.
NONMANUFACTURING	372		177.50	FINANCE	96		108.50	FINANCE			146.1
RETAIL TRADE	110	39.5	178.00					FINANCE	204	39.0	143.5
STENOGRAPHERS	1,292	39.5	167.00	SWITCHBOARD OPERATORS	197		154.50	PROFESSIONAL AND TECHNICAL	1	-	+
MANUFACTURING	841		154.00	MANUFACTURING	72 125		152.50	OCCUPATIONS - MEN			
NONMANUFACTURING	451		192.00	RETAIL TRADE	50	39.5	137.50	COMPUTER SYSTEMS ANALYSTS			
PUBLIC UTILITIES	212	39-0	237.50 153.50			0,45	20,000	(BUSINESS)	782	30 E	344.
THATCE	,,,	37.0	133.30	SWITCHBOARD OPERATOR-RECEPTIONISTS-	98		143.00	MANUFACTURING	417		352.
STENOGRAPHERS, GENERAL	429		178.50	NONMANUFACTURING	63	39.5	141.50	NONMANUFACTURING	365		336.
MANUFACTURING	160		141.50	ORDER CLERKS	151	30 0	134.00	PUBLIC UTILITIES			373.
NONMANUFACTURING	269		200.00	NONMANUFACTURING	119		128.00	FINANCE	219	39.0	325.
POBLIC OTILITIES	173	40.0	232.00	RETAIL TRADE	94	39.5	121.50	COMPUTER SYSTEMS ANALYSTS			
STENOGRAPHERS, SENIOR	863	39.5	161.50					(BUSINESS), CLASS A	385	30.5	374.
MANUFACTURING	681		156.5û	ACCOUNTING CLERKS			168.00	MANUFACTURING	231		380.
NONMANUFACTURING	182	39.5	179.50	MANUFACTURING	811		155.00	NONMANUFACTURING	154		365
DANCODIDING MACHINE TUCIONO	0.5	20 -		PUBLIC UTILITIES	785		217.50	PUBLIC UTILITIES	41	40.0	407.
RANSCRIBING-MACHINE TYPISTS	95 65		141.50	RETAIL TRADE	425		146.5û	FINANCE	86	39.0	349.1
MANON ACTURING	33	37.0	140.30	FINANCE	384		153.50	COMPUTER SYSTEMS ANALYSTS			
TYPISTS	1,173	39.5	142.00					(BUSINESS), CLASS B	356	39.0	322.
MANUFACTURING	481	39.0	139.50	ACCOUNTING CLERKS, CLASS A			195.50	MANUFACTURING	167		325.
NONMANUFACTURING	692	39.5	143.50	MANUFACTURING	445		166.00	NONMANUFACTURING			320.
PUBLIC UTILITIES	182 313		182.00		743 478		212.50	PUBLIC UTILITIESFINANCE	32	40.0	345.1
FINANCE									127	20 0	314.1

<sup>·</sup> See footnotes at end of tables.

Table A-10. Average weekly earnings of office, professional, and technical workers, by sex–large establishments in Minneapolis-St. Paul, Minn.-Wis., January 1977—Continued

			verage lean <sup>2</sup> )			Ave (me					erage ean <sup>2</sup> )
Sex, $^{3}$ occupation, and industry division	Number of workers	Weekly hours l (standard)	Weekly earnings <sup>1</sup> (standard)	Sex, 3 occupation, and industry division	Number of workers	Weekly hours <sup>1</sup> (standard)	Weekly earnings 1 (standard)	Sex, 3 occupation, and industry division	Number of workers	Weekly hours 1 (standard)	Weekly earnings (standar
PROFESSIONAL AND TECHNICAL OCCUPATIONS - MENCONTINUED				PROFESSIONAL AND TECHNICAL OCCUPATIONS - MENCONTINUED				PROFESSIONAL AND TECHNICAL OCCUPATIONS - WOMENCONTINUED			
OMPUTER PROGRAMMERS (BUSINESS)	1,166			COMPUTER OPERATORS - CONTINUED				COMPUTER PROGRAMMERS (BUSINESS)	326		267.0
NONMANUFACTURING	482	39.5	274.50				\$	MANUFACTURING	141		283.
PUBLIC UTILITIES	122	40.0	325.50	COMPUTER OPERATORS, CLASS C	129	39.5	164.50	NONMANUFACTURING	185		
FINANCE	241	38.5	256.00	MANUFACTURING	75		161.50	PUBLIC UTILITIES	35		302.
				NONMANUFACTURING	54	39.0	169.00	FINANCE	135	39.0	242.
COMPUTER PROGRAMMERS (BUSINESS),											
CLASS A	534			DRAFTERS	1,014		255.50	COMPUTER PROGRAMMERS (BUSINESS),			
NONMANUFACTURING	235		295.50		811	39.5	255.00	CLASS A:			
PUBLIC UTILITIES	44		364.00	NONMANUFACTURING:			26.00	NONMANUFACTURING	88		273.
FINANCE	136	38.5	278.50	PUBLIC UTILITIES	69	40.0	290.50	FINANCE	72	39.0	265.
COMPUTER PROGRAMMERS (BUSINESS),				DRAFTERS, CLASS A	483	30.5	291.00	COMPUTER PROGRAMMERS (BUSINESS),			
CLASS B	476	20 E	283.50	MANUFACTURING	425		288.00	CLASS B	140	39.5	267
NONMANUFACTURING	200		264.00	NONMANUFACTURING:	423	3763	200.00	MANUFACTURING	74		284.
PUBLIC UTILITIES	66		310.50	PUBLIC UTILITIES	43	40.0	310.50	NONMANUFACTURING	66		249.
FINANCE	80		236.50	POBLIC OTILITIES	73	40.0	310.30	NORMANOF ACTORING	00	39.3	247.
TENANCE	- 00	3700	230.30	DRAFTERS, CLASS B	310	39.0	239.50	COMPUTER PROGRAMMERS (BUSINESS),			
COMPUTER PROGRAMMERS (BUSINESS) .				MANUFACTURING	257		233.00	CLASS C	68	39.5	230.
CLASS C	156	39.5	244.00	NONMANUFACTURING	53		272.00	02,35 0		0,00	
02,000								COMPUTER OPERATORS	204	39.5	185.
MPUTER OPERATORS	602	39.5	206.50	DRAFTERS, CLASS C	220	38-0	200.50	MANUFACTURING	97		183.
MANUFACTURING	271		196.00	MANUFACTURING	129		192.00	NONMANUFACTURING	107		186.
NONMANUFACTURING	331		215.00	HANGI ACTONING	10,	37.03	2,200	FINANCE			181.
PUBLIC UTILITIES	83		254.00					1 - 11111			
FINANCE	156		207.00	PROFESSIONAL AND TECHNICAL				COMPUTER OPERATORS, CLASS B	100	39.0	190.
	100			OCCUPATIONS - WOMEN				NONMANUFACTURING	57		192.
COMPUTER OPERATORS. CLASS A	206	39.5	228.50				1				
MANUFACTURING	87		225.00					COMPUTER OPERATORS, CLASS C	65	39.5	162.
NONMANUFACTURING	119			COMPUTER SYSTEMS ANALYSTS							
PUBLIC UTILITIES	25	40.0	262.00	(BUSINESS)	135	39.0	310.50	DRAFTERS	58	40.0	197.
FINANCE	70	38.5	223.50	NONMANUFACTURING	90	39.0	308.50			1779.00	
		77.73		FINANCE	63	39.0	301.00	REGISTERED INDUSTRIAL NURSES	102	39.5	243.
COMPUTER OPERATORS, CLASS B	267		209.50		1000	37.75		MANUFACTURING		39.5	245.
MANUFACTURING	109	39.5	197.00	COMPUTER SYSTEMS ANALYSTS							
NONMANUFACTURING	158		218.50	(BUSINESS) + CLASS B	84		309.00				1
PUBLIC UTILITIES	52	40-0	262.00	NONMANUFACTURING	61	39-0	307.00				

Table A-11. Hourly earnings of maintenance, toolroom, and powerplant workers—large establishments in Minneapolis—St. Paul, Minn.—Wis., January 1977

			Hourly ear	nings 4	Numb	er of v	vorker	s rec	eiving	straig	ht-tim	ne hou	rly ea	rnings	of—											
Occupation and industry division	Number of workers	Mean <sup>2</sup>	Median <sup>2</sup>	Middle range <sup>2</sup>	Under	and under	-	5.60	5.80	-	-	6.40	6.60	6.80	7.00	7.20	-	-	-	-	-	-	-	-	-	\$ 9.8010. - 0.2010.
ALL WORKERS																										
MAINTENANCE CARPENTERS MANUFACTURING NOMMANUFACTURING PUBLIC UTILITIES	80 58	6.87 7.76	6.86 7.40	6.51- 7.07		:	1 -	:	4 4 -	3	18 11 7 6	22 6 16 16	5	26 21 5	18 18	6 5 1 1	3 1 2	:	2 -	1 -	:	1 1 -	4 - 4 2	19 1 18 1	5 2 3	:
MAINTENANCE ELECTRICIANS	315 234			7.35- 9.95 7.35- 8.79		Ξ	1	:	Ξ	:	2	22	2	3	7 2	63 63	2	5 5	6	57 56	5 5	5	35 33	2	:	82 15
MAINTENANCE PAINTERS	84 51					:	:	1	1	:	3 2	13	1 -	6	18 18	1	:	14 14	6	1	:	11	=	6	1 -	1_
MAINTENANCE MACHINISTS	330 322			7.42- 7.80 7.42- 7.80		:	-	:	Ξ	2	1	=	:	12 12	1	58 58	24 24	13 13	169 169	15 15	16 16	-	11	3	5	:
MAINTENANCE MECHANICS (MACHINERY) — MANUFACTURING NONMANUFACTURING PUBLIC UTILITIES	486 415 71 50	7.08	7.06 7.72	6.39- 7.80 7.28- 8.52	-	:	3	:	61 60 1	4 3 1	48 43 5	49 49 -	5 - 5 3	22 22	53 51 2	43 30 13 8	7 - 7 4	51 46 5 5	43 38 5 5	34 32 2	38 38	8 8 8	2 2 2	15 15 15	:	Ē
MAINTENANCE MECHANICS (MOTOR VEHICLES) NONMANUFACTURING	230 197 141	7.96	8.09	7.36- 8.69	-	:	5 2	:	1 1 1	:	22	1 -	:	1 1	5 3 -	36 25 15	:	:	20 20	63 55 55	14 14 14	5	34 34 34	21 21 21		Ξ
MAINTENANCE PIPEFITTERS	140 123			8.13- 8.58 8.13- 8.24		:	-	:	Ξ	1	1	2	4	1	3	11 11	3	1	1	66 66	5	29 29	:	2	13	:
MILLWRIGHTS	138 132			7.07- 7.75 7.07- 7.75		1	-	:	:	:	:	5	1	6	43	39 39	:	22 16	:	:	:	21 21	=	=	:	:
MAINTENANCE TRAVES HELPERS MANUFACTURING						-	40 40	3	18 12	41 32	2	:	:	:	:	:	:	Ξ	-	=	-	:	=	:	Ξ	:
TOOL AND DIE MAKERS	544 543			7.81- 7.83 7.81- 7.83		:	:	:	Ξ	:	:	- :	3	3	5	39 39	24 24	54 54	360 360	17 17	6	16 16	19 19	1 -	:	:
STATIONARY ENGINEERS	152 25	7.75 7.46 7.88	7.94 7.55 8.18	7.60- 8.14	=	:	1	:	:	6	2	8 -	12	1 1 - 1	33 30 - 14	15	21 5 16 4	74 22 52 - 40	55	12 5 7 7	21 17 4 - 2	-	6 5 1 1	6 6 6	:	:
BOILER TENDERS				6.46- 7.17 6.82- 7.44		:	10	:	:	1	8	4	6	7	25 19	4	4	:	:	10	Ξ	5 5	:	:	-	;

Table A-12. Hourly earnings of material movement and custodial workers—large establishments in Minneapolis—St. Paul, Minn.—Wis., January 1977

			Hourly ear	mings 4		Numl	ber of	worke	ers re	ceivin	g stra	ight-ti	me ho	urly e	arning	gs of—												
Occupation and industry division	Number of workers	Mean <sup>2</sup>	Median <sup>2</sup>	Middle ra	inge <sup>2</sup>	and under	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	\$ 5.00 - 5.40	5.40	5.80	6.20	6.60	-	-	-	
ALL WORKERS																												
RUCKDRIVERS MANUFACTURING NONMANUFACTURING RETAIL TRADE	692	7.44	8.18 7.76		8.18 7.76		:	:	:	:	:	:	3 3	:	:	6	:	3	:	6 3 3	49 19 30 30	17 12 5	46 37 9 3	28 5 23 1	96		147	
TRUCKDRIVERS, MEDIUM TRUCK:	63	7.17	7.50	6.11-	8.18	-	-	_	-	-	-	-	-	-	_		-		-	3	10	8	. 5	1	-	14	25	
TRUCKDRIVERS, HEAVY TRUCK (TRAILER)	256	7.75	7.76	7.68- 7.76- 7.76-	7.84	-	=	:	:	Ξ	:	:	:	:	=	:	:	:	:	:	5	2 -	32	:	6 6			
IPPING CLERKS	93	6.45	5.96	5.47-	7.75	-	-	-	-	-	-	-	1	-	-	2	, <b>-</b>	1	3	2	26	14	-	6	6	32	-	
ECEIVING CLERKS	69	6.11 5.88	5.94 5.91	5.64- 5.28- 5.65- 5.66-	7.10 5.95	-	=	:	=	:	2 -	4 4	:	1 1	2 2 2	:	14 14 14	7 5 2 2	1 1 1	20 14 6 6	66 66	90 22 68 67	3 1 2 1	6	40 21 19 18	16 16 16	-	
IPPING AND RECEIVING CLERKS				5.17- 5.38-		:	=	Ξ	:	:	:	1	Ξ	:	:	:	:	10	10 10	6 6	13 13	55 55	6	6	1	11	3	
REHOUSEMEN				4.85- 5.26-			-	-	-	Ξ	Ξ	2	2	:	19	26	:	:	137 17	73 73	30 12	60 49	35 17	9	97 97	42 42		
DER FILLERS	354 805	5.34 5.61	5.45 5.66		5.87 7.01		2 2		61	-	-	25 1 24 9	57 57 24	42 29 13 10	9	77 30 47 40	16 16 4	7 7 4	124 104 20 20	9 3 6 6	158 61 97 97	70 50 20 20	72 72 -	5 4 1	185 185 104	176 176 112	-	
IPPING PACKERS	423	5.22	5.30		5.48 7.00		:	=	3	-	-	9	6	:	24 12 12 6	1 1	45 34 11 8	119 117 2 2		144 131 13 7	60 59 1	10 7 3	45 45 -	7 7 1		:	:	
ATERIAL HANDLING LABORERS MANUFACTURING NOMMANUFACTURING WHOLESALE TRADE RETAIL TRADE	1,083 559	5.73 5.66 5.13	5.29 5.75 5.71		6.47 7.10 7.00	-	5 - 5	1	66 66	16	25 12	30 30 30	116 116 105 11	4 - 4	25 25 24 1	77 33 44 6 38	16 9 7	53 50 3 -	-	146 135 11 - 11	251 41 210 95 114	27 1 26 -	61 57 4 -	16 10 6 - 6	73	2 164	1 -	
ORKLIFT OPERATORS MANUFACTURING NONMANUFACTURING RETAIL TRADE	446	5.96 7.08	5.92 7.35	5.33-	6.67 7.75	:	:	=	-	:	=	:	:	:	:	:	:	9	:	105 104 1 1	143 84 59 29		31 26 5 2			7	20	
WER-TRUCK OPERATORS (OTHER HAN FORKLIFT) MANUFACTURING	185					:	:	-	-	:	:	:	:	:	:	:	:	:	:	1	65 65	7	92	15 15	5	:	:	
JARDS AND WATCHMEN	452 273 40	5.26 5.03 6.53	5.27 4.84 6.68	4.91- 4.37-	5.84 5.60 7.14		=	:	1	:	8 7 1 -	12 3 9	16 8 8	6 2 4 - 3	72 47 25	25	33 11 22 -	32	86 17	101 71 30 -	119 49 70 10 60	80 80 -	61	18 1 17 17			:	

Table A-12. Hourly earnings of material movement and custodial workers—large establishments in Minneapolis—St. Paul, Minn.—Wis., January 1977—Continued

			Hourly ear	mings 4	Numb	er of v	vorker	s rec	eiving	straig	ht-tim	ne hou	rly ear	rnings	of—												
Occupation and industry division	Number of workers	Mean 2	Median <sup>2</sup>	Middle range 2	\$ 2.30 and under	2.40	\$ 2.60	\$ 2.80	\$ 3.00	\$ 3.20	3.40	\$ 3.60	\$ 3.80	\$ 4.00	\$ 4.20	\$ 4.40 -	\$ 4.60	\$ 4.80	\$ 5.00	\$ 5.40	\$ 5.80	\$ 6.20	\$ 6.60	7.00	\$ 7.40	\$ 7.80	.21
					2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.40	5.80	6.20	6.60	7.00	7.40	7,80	8.20	1.6
ALL WORKERS CONTINUED																											
MANUFACTURING						1	4 2	14	81	473	462	87	35	76 32	139	114 75	424 354	154	369 311	90 17	151	47	25	3	12	:	
NONMANUFACTURING	1,716	3.98	3.40	3.22- 4.56 5.50- 6.16	1	1 -	2	14	77	468	456	76	26 1	44	88	39	70	45	58	73 71	127	38	1	-	12	-	:
RETAIL TRADE	194					-	-	2	3	6	9	14	11	34	37	22	18	5	30	2	-	-	_	_	-	-	,

Table A-13. Average hourly earnings of maintenance, toolroom, powerplant, material movement, and custodial workers, by sex-large establishments in Minneapolis-St. Paul, Minn.-Wis., January 1977

Sex, $^{3}$ occupation, and industry division	Number of workers	Average (mean <sup>2</sup> ) hourly earnings <sup>4</sup>	Sex, 3 occupation, and industry division	Number of workers	Average (mean <sup>2</sup> ) hourly earnings <sup>4</sup>	Sex, 3 occupation, and industry division	Number of workers	Average (mean <sup>2</sup> ) hourly earnings <sup>4</sup>
MAINTENANCE, TOOLPOOM, AND POWERPLANT OCCUPATIONS - MEN			MAINTENANCE, TOOLROOM, AND POWERPLANT OCCUPATIONS -			MATERIAL MOVEMENT AND CUSTODIAL OCCUPATIONS - MENCONTINUED		\$
MAINTENANCE CARPENTERS	138	7.25	MENCONTINUED		\$	SHIPPING PACKERS	244	
MANUFACTURING	80	6 97	BOILER TENDERS	81	Ψ.	MANUFACTURING	151	
NONMANUFACTURING	58	7.76	MANUFACTURING	60			93	
PUBLIC UTILITIES	26	6.77	MANOT ACTORING	00	1.11	NORMANOI ACTORINO	,,,	3.01
POBLIC OTILITIES CONTRACTOR	20	0.11				MATERIAL HANDLING LABORERS	1,266	5.94
MAINTENANCE ELECTRICIANS	314	8.49				MANUFACTURING	398	
MANUFACTURING	233		MATERIAL MOVEMENT AND CUSTODIAL			NONMANUFACTURING	868	
TANOL ACTORING	233	0.13	OCCUPATIONS - MEN			WHOLESALE TRADE	412	
MAINTENANCE PAINTERS	84	7.48	The state of the s			RETAIL TRADE	397	
MANUFACTURING	51	7.18				The state of the s		0000
THAT OF ACTORIZED	31	1.10	TRUCKDRIVERS	924	7-45	FORKLIFT OPERATORS	729	6.45
MAINTENANCE MACHINISTS	327	7.74		246		MANUFACTURING	444	
MANUFACTURING	319	7.70		678		NONMANUFACTURING	285	
TANOT ACTORIZED	3.,		RETAIL TRADE	122			142	
MAINTENANCE MECHANICS (MACHINERY) -	484	7.19		1.2.2	0.01			1
MANUFACTURING	414		TRUCKDRIVERS, MEDIUM TRUCK:			POWER-TRUCK OPERATORS (OTHER		
NONMANUFACTURING		7.82	MANUFACTURING	63	7.17	THAN FORKLIFT)	185	6.22
PUBLIC UTILITIES	50	8.17				MANUFACTURING	179	6.2
,			TRUCKDRIVERS, HEAVY TRUCK					
MAINTENANCE MECHANICS			(TRAILER)	290	7.59	GUARDS AND WATCHMEN	690	5.19
(MOTOR VEHICLES)	230	7.89	NONMANUFACTURING	254	7.75	MANUFACTURING	428	5.29
NONMANUFACTURING	197	7.96	PUBLIC UTILITIES	214	7.76	NONMANUFACTURING	262	
PUBLIC UTILITIES	141	8.33			0.5	PUBLIC UTILITIES	40	6.5
	100		SHIPPING CLERKS	9.0	6.50	FINANCE	147	7 5.0
MAINTENANCE PIPEFITTERS	140	8.16						
MANUFACTURING	123	8.02	RECEIVING CLERKS	262	5.98	JANITORS, PORTERS, AND CLEANERS	2,098	8 4.4
	The state of		MANUFACTURING	66	6.15	MANUFACTURING	872	2 4.9
MILLWRIGHTS	138	7.42		196	5.93		1,226	6 4.1
MANUFACTURING	132	7.41	RETAIL TRADE	191	5.95	PUBLIC UTILITIES	237	7 6.0
	1					RETAIL TRADE	167	7 4.3
MAINTENANCE TRADES HELPERS	104		SHIPPING AND RECEIVING CLERKS	82				1 7 7
MANUFACTURING	89	5.79	MANUFACTURING	56	5.86	MATERIAL MOVEMENT AND CUSTODIAL OCCUPATIONS - WOMEN		1
TOOL AND DIE MAKERS	544	7 01	WAREHOUSEMEN	572	6.02	OCCUPATIONS - WOMEN		
MANUFACTURING	543			397	6.51	ORDER FILLERS	326	6 3.8
								1
STATIONARY ENGINEERS	241	7.57	ORDER FILLERS	833	6.18	SHIPPING PACKERS	32	1 5.0
MANUFACTURING	89	7.75	MANUFACTURING	249	5.72	MANUFACTURING	272	
NONMANUFACTURING	152	7.46		584	6.37			
PUBLIC UTILITIES	25			407	6.29	JANITORS, PORTERS, AND CLEANERS	65	7 3.8
RETAIL TRADE	57					MANUFACTURING	174	

# **Footnotes**

1 Standard hours reflect the workweek for which employees receive their regular straight-time salaries (exclusive of pay for overtime at regular and/or premium rates), and the earnings correspond to these

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; a fourth of the workers earn the same or less than the lower of these rates and a fourth earn the same or more than the higher rate.

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

4 Excludes premium pay for overtime and for work on weekends,

holidays, and late shifts.

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

Data on area wages and related benefits are obtained by personal visits of Bureau field representatives at 3-year intervals. In each of the intervening years, information on employment and occupational earnings is collected by a combination of personal visit, mail questionnaire, and telephone interview from establishments participating in the previous survey.

In each of the 74 <sup>1</sup> areas currently surveyed, data are obtained from representative establishments within six broad industry divisions: Manufacturing; transportation, communication, and other public utilities; wholesale trade; retail trade; finance, insurance, and real estate; and services. Major industry groups excluded from these studies are government operations and the construction and extractive industries. Establishments having fewer than a prescribed number of workers are omitted because of insufficient employment in the occupations studied. Separate tabulations are provided for each of the broad industry divisions which meet publication criteria.

These surveys are conducted on a sample basis. 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.

<sup>1</sup> Included in the 74 areas are 4 studies conducted by the Bureau under contract. These areas are Akron, Ohio; Birmingham, Ala.; Norfolk—Virginia Beach—Portsmouth and Newport News—Hampton, Va.—N. C.; and Syracuse, N.Y. 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.

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) employment in the occupation is too small to provide enough data to merit presentation, or (2) there is possibility of disclosure of individual establishment data. 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. Vertical lines within the distribution of workers on some A-tables indicate a change in the size of the class intervals.

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

The percent increases presented in table A-7 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. Hirings, layoffs, and 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.

The percent changes relate to wage changes between the indicated dates. When the time span between surveys is other than 12 months, annual rates are shown. (It is assumed that wages increase at a constant rate between surveys.)

Occupations used to compute wage trends are:

Office		

Secretaries
Stenographers, general
Stenographers, senior
Typists, classes A and B
File clerks, classes A,
B, and C
Messengers
Switchboard operators

## Office clerical—Continued

Order clerks
Accounting clerks,
classes A and B
Bookkeeping-machine
operators, class B
Payroll clerks
Keypunch operators,
classes A and B

## Electronic data processing

Computer systems analysts, classes A, B, and C Computer programmers, classes A, B, and C Computer operators, classes A, B, and C

# Skilled maintenance

Carpenters
Electricians
Painters
Machinists
Mechanics (machinery)
Mechanics (motor vehicle)
Pipefitters
Tool and die makers

## Industrial nurses

Registered industrial nurses

Unskilled plant

Janitors, porters, and cleaners Material handling laborers

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

- 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.
- Each occupation is assigned a weight based on its proportionate employment in the occupational group in the base year.
- 3. These weights are used to compute group averages. Each occupation's average earnings (computed in step 1) is 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.

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.

# 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.

# Appendix table 1. Establishments and workers within scope of survey and number studied in Minneapolis-St. Paul, Minn.-Wis., January 1977

	Minimum	Number of es	tablishments	Wor	rkers in establishme	ents
Industry division 2	employment in establish-	Within scope		Within scop	pe of study 4	
	ments in scope of study	of study §	Studied	Number	Percent	Studied
ALL ESTABLISHMENTS						
ALL DIVISIONS	-	2,059	303	432,934	100	214,577
ANUFACTURING	50	637	95	181,279	42	99,035
ONMANUFACTURING		1,422	208	251,655	58	115,542
OTHER PUBLIC UTILITIES 5	50	122	29	46,289	11	33,947
WHOLESALE TRADE	50	274	42	40,484	9	13,033
RETAIL TRADE	50	594	57	94,664	22	40,541
FINANCE, INSURANCE, AND REAL ESTATE	50	169	33	35,254	8	16,574
SERVICES 7	50	263	47	34,964	. 8	11,447
LARGE ESTABLISHMENTS						
ALL DIVISIONS	-	137	88	216,567	100	178,682
ANUFACTURING	500	49	31	105+088	49	87,585
ONMANUFACTURING		88	57	111,479	51	91,097
TRANSPORTATION, COMMUNICATION, AND		1 2-57				
OTHER PUBLIC UTILITIES 5	500	12	12	31,152	14	31,152
WHOLESALE TRADE	500	12	8	9,810	5	7,396
RETAIL TRADE	500	33	18	44,998	21	34,725
FINANCE, INSURANCE, AND REAL ESTATE	500	20	12	18,748	9	13,210
SERVICES 7	500	11	7	6,771	3	4,614

1 The Minneapolis-St. Paul Standard Metropolitan Statistical Area, as defined by the Office of Management and Budget through February 1974, consists of Anoka, Carver, Chisago, Dakota, Hennepin, Ramsey, Scott, Washington, and Wright Counties, Minn.; and St. Croix County, Wis. The 'workers within scope of study' estimates shown in this table provide a reasonably accurate description of the size and composition of the labor force included in the survey. Estimates are not intended, however, for comparison with other employment indexes 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.

2 The 1972 edition of the Standard Industrial Classification Manual was

used in classifying establishments by industry division. However, all government operations are excluded from the scope of the survey.

Includes all establishments with total employment at or above the minimum limitation. All outlets (within the area) of companies in industries such as trade, finance, auto repair service, and motion picture theaters are considered as 1 establishment.

Includes all workers in all establishments with total employment (within the area) at or above the minimum limitation.

5 Abbreviated to "public utilities" in the A-series tables. Taxicabs and

services incidental to water transportation are excluded.

<sup>6</sup> Abbreviated to "finance" in the A-series tables.

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 staff 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 the grouping of occupational wage rates representing comparable job content. Because of this emphasis on interestablishment and interarea comparability of occupational content, the Bureau's job descriptions may differ significantly from those in use in individual establishments or those prepared for other purposes. In applying these job descriptions, the Bureau's field economists are instructed to exclude working supervisors; apprentices; learners; beginners; and part-time, temporary, and probationary workers. Handicapped workers whose earnings are reduced because of their handicap are also excluded. Trainees are excluded from the survey except for those receiving on-the-job training in some of the lower level professional and technical occupations.

# Office

#### SECRETARY

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

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

#### SECRETARY-Continued

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

# Exclusions

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

- a. Positions which do not meet the "personal" secretary concept described above;
  - b. Stenographers not fully trained in secretarial-type duties;
- c. Stenographers serving as office assistants to a group of professional, technical, or managerial persons;
- d. Secretary positions in which the duties are either substantially more routine or substantially more complex and responsible that those characterized in the definition;

# Exclusions-Continued

e. Assistant-type positions which involve more difficult or more responsible technical, administrative, supervisory, or specialized clerical duties which are not typical of secretarial work.

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

# Class A

1. 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

2. 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

3. 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.

# Class B

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

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

3. Secretary to the head, immediately below the officer level, over either a major corporationwide 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

4. 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

5. 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) or a company that employs, in all, over 25,000 persons.

## SECRETARY-Continued

# Class C

l. Secretary to an executive or managerial person whose responsibility is not equivalent to one of the specific level situations in the definition for class B, 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

2. 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.

# Class D

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

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

## STENOGRAPHER

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, General

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

## Stenographer, Senior

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, general, 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 followup 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 transcribe dictation involving a normal routine vocabulary from transcribing-machine records. May also type from written copy and do simple clerical work. Workers transcribing dictation involving a varied technical or specialized vocabulary such as legal briefs or reports on scientific research are not included. A worker who takes dictation in shorthand or by Stenotype or similar machine is classified as a stenographer.

#### 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.

Class A. 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.

Class B. 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.

#### 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.

Class A. 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.

Class B. 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.

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

#### 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 customers' orders for material or merchandise by mail, phone, or personally. Duties involve any combination of the following: Quoting prices to customers; making out an order sheet listing the items to make up the order; checking prices and quantities of items on order sheet; and distributing order sheets to respective departments to be filled. May check with credit department to determine credit rating of customer, acknowledge receipt of orders from customers, follow up orders to see that they have been filled, keep file of orders received, and check shipping invoices with original orders.

#### ACCOUNTING CLERK

Performs one or more accounting clerical tasks such as posting to registers and ledgers; reconciling bank accounts; verifying the internal consistency, completeness, and mathematical accuracy of accounting documents; assigning prescribed accounting distribution codes; examining and verifying for clerical accuracy various types of reports, lists, calculations, posting, etc.; or preparing simple or assisting in preparing more complicated journal vouchers. May work in either a manual or automated accounting system.

The work requires a knowledge of clerical methods and office practices and procedures which relates to the clerical processing and recording of transactions and accounting information. With experience, the worker typically becomes familiar with the bookkeeping and accounting terms and procedures used in the assigned work, but is not required to have a knowledge of the formal principles of bookkeeping and accounting.

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

#### ACCOUNTING CLERK-Continued

Class A. Under general supervision, performs accounting clerical operations which require the application of experience and judgment, for example, clerically processing complicated or nonrepetitive accounting transactions, selecting among a substantial variety of prescribed accounting codes and classifications, or tracing transactions through previous accounting actions to determine source of discrepancies. May be assisted by one or more class B accounting clerks.

<u>Class B.</u> Under close supervision, following detailed instructions and standardized procedures, performs one or more routine accounting clerical operations, such as posting to ledgers, cards, or worksheets where identification of items and locations of postings are clearly indicated; checking accuracy and completeness of standardized and repetitive records or accounting documents; and coding documents using a few prescribed accounting codes.

#### BOOKKEEPING-MACHINE OPERATOR

Operates a bookkeeping machine (with or without a typewriter keyboard) to keep a record of business transactions.

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

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

#### MACHINE BILLER

Prepares statements, bills, and invoices on a machine other than an ordinary or electromatic typewriter. May also keep records as to billings or shipping charges or perform other clerical work incidental to billing operations. For wage study purposes, machine billers are classified by type of machine, as follows:

Billing-machine biller. Uses a special billing machine (combination typing and adding machine) to prepare bills and invoices from customers' purchase orders, internally prepared orders, shipping memoranda, etc. Usually involves application of predetermined discounts and shipping charges and entry of necessary extensions, which may or may not be computed on the billing machine, and totals which are automatically accumulated by machine. The operation usually involves a large number of carbon copies of the bill being prepared and is often done on a fanfold machine.

#### MACHINE BILLER—Continued

Bookkeeping-machine biller. Uses a bookkeeping machine (with or without a typewriter keyboard) to prepare customers' bills as part of the accounts receivable operation. Generally involves the simultaneous entry of figures on customers' ledger record. The machine automatically accumulates figures on a number of vertical columns and computes and usually prints automatically the debit or credit balances. Does not involve a knowledge of bookkeeping. Works from uniform and standard types of sales and credit slips.

#### PAYROLL CLERK

Computes wages of company employees and enters the necessary data on the payroll sheets. Duties involve: Calculating workers' earnings based on time or production records; and posting calculated data on payroll sheet, showing information such as worker's name, working days, time, rate, deductions for insurance, and total wages due. May make out paychecks and assist paymaster in making up and distributing pay envelopes. May use a calculating machine.

#### KEYPUNCH OPERATOR

Operates a keypunch machine to record or verify alphabetic and/or numeric data on tabulating cards or on tape.

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

Class A. 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 keypunched from a variety of source documents. On occasion may also perform some routine keypunch work. May train inexperienced keypunch operators.

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

#### TABULATING-MACHINE OPERATOR

Operates one or a variety of machines such as the tabulator, calculator, collator, interpreter, sorter, reproducing punch, etc. Excluded from this definition are working supervisors. Also excluded are operators of electronic digital computers, even though they may also operate electric accounting machine equipment.

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

Class A. Performs complete reporting and tabulating assignments including devising difficult control panel wiring under general supervision. Assignments typically involve a variety of long and complex reports which often are irregular or nonrecurring, requiring some planning of the nature and sequencing of operations, and the use of a variety of machines. Is

typically involved in training new operators in machine operations or training lower level operators in wiring from diagrams and in the operating sequences of long and complex reports. Does not include positions in which wiring responsibility is limited to selection and insertion of prewired boards.

Class B. Performs work according to established procedures and under specific instructions. Assignments typically involve complete but routine and recurring reports or parts of larger and more complex reports. Operates more difficult tabulating or electrical accounting machines such as

the tabulator and calculator, in addition to the simpler machines used by class C operators. May be required to do some wiring from diagrams. May train new employees in basic machine operations.

Class C. Under specific instructions, operates simple tabulating or electrical accounting machines such as the sorter, interpreter, reproducing punch, collator, etc. Assignments typically involve portions of a work unit, for example, individual sorting or collating runs, or repetitive operations. May perform simple wiring from diagrams, and do some filing work.

# **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:

Class A. Works independently or under only general direction on complex problems involving all phases of system 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 followup actions are initiated by the computer.) Confers with persons concerned to determine the data processing problems and advises subject-matter personnel on the implications of new or revised systems of data processing operations. Makes 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.

Class B. Works independently or under only general direction on problems that are relatively uncomplicated to analyze, plan, program, and operate. Problems are of limited complexity because sources of input data are homogeneous and the output data are closely related. (For example,

#### COMPUTER SYSTEMS ANALYST, BUSINESS-Continued

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 class A. 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.

Class C. 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 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.)

#### COMPUTER PROGRAMMER, BUSINESS-Continued

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:

Class A. 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.

Class B. 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 class A) 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.

Class C. 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 OPERATOR

Monitors and operates the control console of a digital computer to process data according to operating instructions, usually prepared by a programmer. Work includes most of the following: Studies instructions to determine equipment setup and operations; loads equipment with required items (tape reels, cards, etc.); switches necessary auxiliary equipment into circuit, and starts and operates computer; makes adjustments to computer to correct operating problems and meet special conditions; reviews errors made during operation and determines cause or refers problem to supervisor or programmer; and maintains operating records. May test and assist in correcting program.

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

Class A. Operates independently, or under only general direction, a computer running programs with most of the following characteristics: New programs are frequently tested and introduced; scheduling requirements are of critical importance to minimize downtime; the programs are of complex design so that identification of error source often requires a working knowledge of the total program, and alternate programs may not be available. May give direction and guidance to lower level operators.

Class B. Operates independently, or under only general direction, a computer running programs with most of the following characteristics: Most of the programs are established production runs, typically run on a regularly recurring basis; there is little or no testing of new programs required; alternate programs are provided in case original program needs major change or cannot be corrected within a reasonably short time. In common error situations, diagnoses cause and takes corrective action. This usually involves applying previously programmed corrective steps, or using standard correction techniques.

OR

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

Class C. Works on routine programs under close supervision. Is expected to develop working knowledge of the computer equipment used and ability to detect problems involved in running routine programs. Usually has received some formal training in computer operation. May assist higher level operator on complex programs.

#### DRAFTER

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

#### DRAFTER—Continued

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

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

#### DRAFTER-TRACER

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

#### AND/OR

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

#### 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.

#### ELECTRONICS TECHNICIAN—Continued

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.

Class A. 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.

Class B. 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 instruments, usually less complex than those used by the class A 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.

Class C. 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.

#### REGISTERED INDUSTRIAL NURSE

A registered nurse who gives nursing service under general medical direction to ill or injured employees or other persons who become ill or suffer an accident on the premises of a factory or other establishment. Duties involve a combination of the following: Giving first aid to the ill or injured; attending to subsequent dressing of employees' injuries; keeping records of patients treated; preparing accident reports for compensation or

#### REGISTERED INDUSTRIAL NURSE—Continued

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 Vehicles)

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.

#### MAINTENANCE MECHANIC (Motor Vehicles)—Continued

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

#### MAINTENANCE TRADES HELPER—Continued

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 and may also supervise the operation of stationary engines and equipment (mechanical or electrical) to supply the establishment in which employed with power, heat, refrigeration, or airconditioning. Work involves: Operating and maintaining equipment such as steam engines, air compressors, generators, motors, turbines, ventilating and refrigerating equipment, steam boilers and boiler-fed water pumps; making equipment repairs; and keeping a record of operation of machinery, temperature, and fuel consumption. May also supervise these operations.

## STATIONARY ENGINEER—Continued

Head or chief engineers in establishments employing more than one engineer are excluded.

#### BOILER TENDER

Fires stationary boilers to furnish the establishment in which employed with heat, power, or steam. Feeds fuels to fire by hand or operates a mechanical stoker, gas, or oil burner; and checks water and safety valves. May clean, oil, or assist in repairing boilerroom equipment.

# **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 size and type of equipment, as follows: (Tractor-trailer should be rated on the basis of trailer capacity.)

Truckdriver, light truck (under 11/2 tons)

Truckdriver, medium truck (1½ to and including 4 tons)

Truckdriver, heavy truck (trailer) (over 4 tons)

Truckdriver, heavy truck (other than trailer) (over 4 tons)

#### SHIPPING AND RECEIVING CLERK

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

For wage study purposes, workers are classified as follows:

Shipping clerk Receiving clerk Shipping and receiving clerk

#### WAREHOUSEMAN

As directed, performs a <u>variety</u> of <u>warehousing</u> duties which require an <u>understanding</u> 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 Shipping and Receiving Clerk 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 power-truck, as follows:

Forklift operator Power-truck operator (other than forklift)

#### GUARD AND WATCHMAN

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

Watchman. Makes rounds of premises periodically in protecting property against fire, theft, and illegal entry.

#### JANITOR, PORTER, OR CLEANER

Cleans and keeps in an orderly condition factory working areas and washrooms, or premises of an office, apartment house, or commerical 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.

# Service Contract Act Surveys

The following areas are surveyed periodically for use in administering the Service Contract Act of 1965. Survey results are published in releases 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. Alexandria, La. Alpena, Standish, and Tawas City, Mich. 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, Tex. Biloxi-Gulfport and Pascagoula, Miss. Bremerton, Wash. Bridgeport, Norwalk, and Stamford, Conn. Brunswick, Ga. Cedar Rapids, Iowa Champaign-Urbana-Rantoul, Ill. Charleston, S.C. Cheyenne, Wyo. Clarksville-Hopkinsville, Tenn-Ky. Colorado Springs, Colo. Columbia, S.C. Columbus, Miss. Crane, Ind. Decatur, Ill. Des Moines, Iowa Dothan, Ala. Duluth-Superior, Minn.-Wis. El Paso, Tex., and Alamogordo-Las Cruces, N. Mex. Eugene-Springfield and Medford-Klamath Falls-Grants Pass-Roseburg, Oreg. Favetteville, N.C.

Fitchburg-Leominster, Mass.

Fort Riley-Junction City, Kans. 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. Johnson City-Kingsport-Bristol, Tenn.-Va. La Crosse, Wis. Laredo, Tex. Lawton, Okla. Lexington-Fayette, Ky. Lima, Ohio Logansport-Peru, Ind. Lower Eastern Shore, Md.-Va.-Del. Macon. Ga. Madison, Wis. Maine (statewide) McAllen-Pharr-Edinburg and Brownsville-Harlingen-San Benito, Tex. Meridian, Miss. Middlesex, Monmouth, and Ocean Cos., N.J. Mobile and Pensacola, Ala-Fla. Montana (statewide) New Bern-Jacksonville, N.C. New Hampshire (statewide) New London-Norwich, Conn.-R.I. North Dakota (statewide) Northern New York Orlando, Fla. Oxnard-Simi Valley-Ventura, Calif. Phoenix, Ariz. Pine Bluff, Ark. 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) Southern Idaho Southwestern Virginia Springfield, Ill. Springfield-Chicopee-Holyoke, Mass.-Conn. Stockton, Calif. Tacoma, Wash. Topeka, Kans. 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 Texas Plains West Virginia (statewide) Wilmington, Del.-N.J.-Md. Yakima, Richland-Kennewick, and Walla Walla-Pendleton, Wash.-Oreg.

#### ALSO AVAILABLE—

An annual report on salaries for accountants, auditors, chief accountants, attorneys, job analysts, directors of personnel, buyers, chemists, engineers, engineering technicians, drafters, and clerical employees is available. Order as BLS Bulletin 1931, National Survey of Professional, Administrative, Technical and Clerical Pay, March 1976, \$1.35 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. A directory of occupational wage surveys, covering the years 1950 through 1975, is available on request.

Area	Bulletin number and price *
Akron, Ohio, Dec. 1976 1  Albany-Schenectady-Troy, N.Y., Sept. 1976  Anaheim-Santa Ana-Garden Grove,	1900-76, 85 cents 1900-59, 55 cents
Calif., Oct. 1976	1900-67, 75 cents 1900-30, 85 cents
Baltimore, Md., Aug. 1976	1900-52, 85 cents 1900-39, 55 cents 1900-11, 95 cents
Boston, Mass., Aug. 1976 Buffalo, N.Y., Oct. 1976	1900-53, 85 cents 1900-70, 75 cents
Canton, Ohio, May 1976Chattanooga, Tenn.—Ga., Sept. 1976Chicago, Ill., May 1976	1900-28, 55 cents 1900-57, 55 cents 1900-32, \$1.05
Chicago, Ill., May 1976	1900-7, 75 cents 1900-62, 95 cents 1900-68, 75 cents
Corpus Christi, Tex., July 1976 Dallas-Fort Worth, Tex., Oct. 1976	1900-41, 55 cents 1900-63, 85 cents
Davenport-Rock Island-Moline, Iowa-Ill., Feb. 1976 Dayton, Ohio, Dec. 1976 Daytona Beach, Fla., Aug. 1976	1900-25, 55 cents 1900-78, 85 cents 1900-45, 45 cents
Denver-Boulder, Colo., Dec. 1976 Detroit, Mich., Mar. 1976 land Fresno, Calif., June 1976	1900-73, 85 cents 1900-15, \$1.25 1900-29, 55 cents
Gainesville, Fla., Sept. 1976 Green Bay, Wis., July 1976	1900-54, 45 cents 1900-37, 55 cents
Greensboro-Winston-Salem-High Point, N.C., Aug. 1976	1900-47, 65 cents 1900-36, 85 cents
Hartford, Conn., Mar. 1976 Houston, Tex., Apr. 1976 Huntsville, Ala., Feb. 1976	1900-14, 55 cents 1900-26, 85 cents 1900-17, 55 cents
Indianapolis, Ind., Oct. 1976  Jackson, Miss., Feb. 1977  Jacksonville, Fla., Dec. 1976  Jacksonville, Fla., Dec. 1976	1900-58, 75 cents 1950-2, \$1.50
Jacksonville, Fla., Dec. 1976 Los Angeles-Long Beach, Calif., Oct. 1976	1900-80, 85 cents 1900-60, \$1.05 1900-77, 85 cents
Louisville, Ky-Ind., Nov. 1976	1900-69, 55 cents

	D 11
	Bulletin number
Area	and price *
Memphis, Tenn.—Ark.—Miss., Nov. 1976 1	1000 75 85
Miami, Fla., Oct. 1976	1900-75, 85 cents 1900-66, 75 cents
Milwaukee, Wis., Apr. 1976	1900-86, 75 cents
Minneapolis-St. Paul, MinnWis., Jan. 1977	1950-3, \$1.60
Nassau-Suffolk, N.Y., June 1976	1900-35, \$1.60
Newark, N.J., Jan. 1976	1900-35, 85 cents
New Orleans, La., Jan. 1976	1900-10, 85 cents
New York, N.Y.—N.J., May 1976	1900-2, 75 cents
Norfolk-Virginia Beach-Portsmouth, Va	1900-40, \$1.05
N.C., May 1976 1	1900-27, 85 cents
Norfolk-Virginia Beach-Portsmouth and	1700-27, 85 Cents
Newport News-Hampton, VaN.C., May 1976 1	1900-33 85 conts
Northeast Pennsylvania, Aug. 1976	
Oklahoma City, Okla., Aug. 1976	
Omaha, NebrIowa, Oct. 1976	1900-61, 55 cents
Paterson-Clifton-Passaic, N.J., June 1976	1900-38, 55 cents
Philadelphia, PaN.J., Nov. 1976	1900-64, \$1.10
Pittsburgh, Pa., Jan. 1977	
Portland, Maine, Dec. 1976	1950-1, \$1.50
Portland, Oreg.—Wash., May 1976	1900-72, 85 cents
Poughkeepsie, N.Y., June 1976	1900-51, 75 cents
Poughkeepsie-Kingston-Newburgh, N.Y., June 1976	1900-50, 45 cents
Providence-Warwick-Pawtucket, R.I	1900-55, 55 cents
Mass., June 1976	1000 31 75
Richmond, Va., June 1976	1900-31, 75 cents
St. Louis, Mo.—Ill., Mar. 1976 1	1900-34, 65 cents
Sacramento, Calif., Dec. 1976	1900-19, \$1.25
Saginaw, Mich., Nov. 1976	1900-71, 55 cents
Salt Lake City-Ogden, Utah, Nov. 1976	1900-74, 75 cents
Sait Lake City-Ogden, Otan, Nov. 1976	1900-65, 55 cents
San Antonio, Tex., May 1976	1900-23, 65 cents
San Diego, Calif., Nov. 1976	1900-79, 55 cents
San Francisco-Oakland, Calif., Mar. 1976	1900-9, 95 cents
San Jose, Calif., Mar. 1976	1900-13, 75 cents
Seattle-Everett, Wash., Jan. 1976	1900-6, 65 cents
South Bend, Ind., Mar. 1976	1900-5, 55 cents
Syracuse, N.Y., July 1976	1900-44, 55 cents
Toledo, Ohio-Mich., May 1976	1900-24, 55 cents
Trenton, N.J., Sept. 1976	1900-56, 55 cents
Washington, D.CMdVa., Mar. 1976	1900-12, 85 cents
Wichita, Kans., Apr. 1976	1900-21, 55 cents
Worcester, Mass., Apr. 1976	1900-16, 55 cents
York, Pa., Feb. 1976	1900-4, 55 cents

 $<sup>^{\#}</sup>$  Prices are determined by the Government Printing Office and are subject to change.  $^1$  Data on establishment practices and supplementary wage provisions are also presented.

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