

HEALTH AND RETIREMENT STUDY

**Cross-Wave Industry/Occupation File
Restricted Data**

1992-2014

Data Description and Usage

Version 4.0.1, August 2017

To the Restricted Data Investigator: This restricted data set is intended for exclusive use by you and the persons specified in the *Agreement for Use of Restricted Data from the Health and Retirement Study* and/or the *Supplemental Agreement with Research Staff for Use of Restricted Data from the Health and Retirement Study*.

If there are any questions about this data set and its use, refer to the HRS Restricted Data Web Site (<http://hrsonline.isr.umich.edu/rda>) or contact the HRS Help Desk (hrsquestions@umich.edu).

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1. Overview

The Health and Retirement Study (HRS) is a national longitudinal study of the economic, health, marital, and family status, as well as public and private support systems, of older Americans. The HRS is a rich source of longitudinal, cross-sectional data for researchers and policymakers who study aging. Funding for the Health and Retirement Study is provided by the National Institute on Aging at NIH (U01 AG009740), with supplemental support from the Social Security Administration. The study is conducted by the Institute for Social Research (ISR) at the University of Michigan.

2. Obtaining the Data

2a. Access to Restricted Data

Although most HRS data sets are available to the public without restriction, certain HRS data sets contain sensitive respondent information and are only available under terms of a formal agreement negotiated between the researcher and HRS. Prospective users of HRS restricted geocode data have two access options:

- [MiCDA Enclave](#) Virtual Desktop Infrastructure (recommended)
- Traditional Licensing Agreement (deprecated)

For instructions on how to proceed, visit the [HRS Restricted Data Web](#) site or contact the HRS Restricted Data Applications Processing Team (hrrsdaapplications@umich.edu) by email.

2b. Restricted Data Agreement

This restricted data set is intended for exclusive use by you and the persons specified in the *Confidentiality Agreement for Use of Restricted Data from the Health and Retirement Study*. Traditional licensing agreements that include multiple users are also bound by the *Supplemental Agreement with Research Staff for Use of Restricted Data from the Health and Retirement Study*.

2c. Publications Based on Restricted Data

Your restricted data agreement specifies that you will inform HRS of any papers, publications, or presentations based on this restricted data set. Please send a copy of such publications in PDF format via e-mail to hrrsquestions@umich.edu with "Attn: Papers and Publications" in the subject line. If you wish, you may include a bibliographical reference.

As an alternative, you may transmit publications in paper format by postal mail:

Health and Retirement Study
Attn: Papers and Publications
The Institute for Social Research, Room 3410
P.O. Box 1248
Ann Arbor, Michigan 48106-1248

3. Data Set Content

This version of the *Cross-Wave Industry/Occupation* data set contains industry and occupation data for HRS, AHEAD, CODA, War Baby, Early Boomer, and Mid Boomer respondents. This information is gathered in the baseline interview and updated in subsequent years if changes occur. To use these data, replace the industry and occupation codes in the public release with the corresponding variables in the restricted data release. Researchers should be aware that not all job categories are represented in the HRS sample. See Appendix B of this document for an overview of industrial classifications and occupation codes reported by respondents in baseline years 1992, 1998, 2004, and 2010.

This version of the *Cross-Wave Industry/Occupation File* matches the current version of the tracker file (Tracker 2014)¹. It has 38,183 records, which are uniquely identified by Household Identifier (HHID) and Person Number (PN).

Note: In July-August 2017, the codebook and syntax files for this restricted data product were extensively revised to provide users with clear explanations of how variables were asked and coded within each wave. Each variable received a new label/description (1), with the old label being kept for reference purposes in the codebook notes section (2). In addition, wherever possible, logic statements were prepended to the variable text in order to clarify which subset of respondents was asked (3).

```

IF FA3 = 1 [WORKING FOR SOMEONE ELSE AT CURRENT JOB] AND ( FA19A = 5/8/9 [NOT
SAME JOB/DK/RF] OR FA19B = 7/8/9 [DENIES/DK/RF]) THEN ASK FA39-FA42
-----
W3609 WAVE C (1994) CURR JOB:FA41B.OCCUPATION(1980 CEN OCC) 1
3 Section: IO Level: Respondent Type: Numeric Width: 8 Decimals: 0

FA41b. (Current Job) What is the official title of your job? (The title that
your employer uses?)
FA42. What sort of work do you do? (Tell me a little more about what you
do.)

Occupation was coded from this response set.

Notes:
The public file variable label is OCCUPATION (FA41B) 2

See 1980 Standard Occupational Codes in Health and Retirement Study Occupation
and Industry Coding (DR-021.pdf) for further information.

.....
1790 3-900. See Occupation Master List (1980 Census
Occupational Classification System)
1 999. Occupation not reported
36392 Blank. INAP (Inapplicable)

```

A user guide, *Health and Retirement Study Occupation and Industry Coding (HRS Documentation Report DR-021)*, explains the rules used in coding industry and occupation information. It is available on the HRS Web site and is also included with this distribution set.

4. If You Need to Know More

This document is intended to serve as a brief overview to provide guidelines for using the *Cross-Wave Industry/Occupation File*. If you have questions or concerns that are not adequately covered here or on our Web site, or if you have any comments, please contact us. We will do our best to provide answers.

¹ The HRS tracker file is created to facilitate the use of HRS data within and across waves. It contains one record for every person who was ever eligible to be interviewed in any wave. The tracker file version used in preparation of this dataset (Tracker 2014, Early) covers all types of interviews (core, exit, and post-exit) for 1992 through the 2014 interviewing year.

4a. HRS Internet Site

Health and Retirement Study public release data and additional information about the study are available on the Internet. To access public data or to find out more about restricted data products and procedures, visit the [HRS Web site](http://hrsonline.isr.umich.edu).

4b. Contact Information

If you need to contact us, you may do so by one of the methods listed below.

Internet: Help Desk at the HRS Web site (<http://hrsonline.isr.umich.edu>)

E-mail: hqsquestions@umich.edu

Postal Service:

Health and Retirement Study
The Institute for Social Research
426 Thompson Street, 3050 ISR
Ann Arbor, Michigan 48104

FAX: (734) 647-1186

Appendix A: Installation (Traditional License)²

1. Distribution Set

The *Cross-Wave Industry/Occupation* data set is packaged for distribution in a .ZIP file, `ioxwave14.zip`. In order to keep the contents secure, the ZIP file has been encrypted using WinZIP 256 bit AES encryption. Extract the data file(s), the program statement file(s) matching your analysis environment, the data description (this file), and the codebook file. If you require a special file format or experience system problems, please contact the [HRS Help Desk](#). If all files are decompressed, they will require approximately 70 MB of free space on your storage device.

1-1. Windows Environment

Copy the ZIP file to the Windows folder where you plan to do your work. Use a third-party³ file compression/decompression tool such as **WinZIP** or **7-zip** to extract the ZIP folder contents. When you are prompted for the pass-phrase, respond with the character string that you received via e-mail. The output will be the files listed in Table 1.

1-2. UNIX/Linux Environment

Copy the ZIP file to the folder where you plan to do your work. Use the ZIP file decompression software installed on your system, (e.g. **7-zip**, **gunzip**) to decrypt and extract the ZIP folder contents. When you are prompted for the pass-phrase, respond with the character string that you received via e-mail. The output will be the files listed in Table 1.

1-3. Macintosh OS X Environment (10.4.x and above)

Copy the ZIP file to the folder where you plan to do your work and use **Stuffit-Expander** to decrypt and extract the ZIP folder contents. When you are prompted for the pass-phrase, respond with the character string that you received via e-mail. The output will be the files listed in Table 1.

Table 1: Contents of Distribution Package (Traditional License)

Directory ⁴	File	Type
c:\ioxwave\data\	IOXWAVE14.da	Data file (ASCII text)
c:\ioxwave\doc\	IOXWAVE14.txt	Codebook file (ASCII text)
c:\ioxwave\sas\	IOXWAVE14.sas	SAS program statements
c:\ioxwave\spss\	IOXWAVE14.sps	SPSS program statements
c:\ioxwave\stata\	IOXWAVE14.dct/.do	Stata dictionary and "do" files

² MiCDA Enclave Virtual Desktop Environment users are given access to pre-built SAS, Stata and SPSS versions of this dataset; therefore the information in this appendix does not apply to such users

³ The built-in Windows decompression utility will not process AES-256bit encrypted zip files; it halts with "an unexpected error is keeping you from copying the file".

⁴ While a specific folder arrangement is not required for using HRS files, we have traditionally suggested a directory structure for the Windows environment. By using this directory structure, you will not have to change the path name references in your data descriptor files. If you use a different directory structure, just change the directory references in the program files.

2. Program Statements

ASCII data files are distributed with associated SPSS, SAS or Stata program statements to read the data and create a system files. Files containing SPSS statements are named with an .sps extension, those with SAS statements with an .sas extension, and those with Stata statements with .do and .dct extensions.

2-1. Using the Files with SAS

To create a SAS system file for this data set, two file types must be present -- .sas program statement files and .da (data) files. Begin by opening the *.sas file in the SAS Program Editor. If the *.sas file is located in "c:\ioxwave\sas" and the data file is located in "c:\ioxwave\data", you can run the file as is. A SAS system file will be saved to directory "c:\ioxwave\sas". If the files are not located in the specified directories, you will need to edit the *.SAS file to reflect the proper path names prior to running the file.

2-2. Using the Files with SPSS

To create an SPSS system file for this data set, two file types must be present -- .sps program statement files and .da (data) files. Begin by opening the *.sps file in SPSS as an SPSS Syntax File. If the *.sps file is located in "c:\ioxwave\spss" and the data file is located in "c:\ioxwave\data", you can run the file as is. An SPSS system file will be saved to directory "c:\ioxwave\spss". If the files are not located in the specified directories, you will need to edit the *.sps file to reflect the proper path names prior to running the file.

2-3. Using the Files with Stata

To create a Stata system file for this data set, three file types must be present -- .dct files, .do files, and .da (data) files. Files with the suffix ".da" contain the raw data for Stata to read. Files with the suffix ".dct" are Stata dictionaries used by Stata to describe the data. Files with the suffix ".do" are short Stata programs ("do files") which you use to import the ASCII data into the Stata environment. Load the .do file into Stata and then submit it. If the *.do and .dct files are located in "c:\ioxwave\stata" and the data file is located in "c:\ioxwave\data", you can run the .do file as is. If the files are not located in these directories, you must edit the *.do and *.dct files to reflect the proper path names before you run the files.

3. Non-Windows Environments

Non-Microsoft users should modify the default Windows file structure syntax to match that of their own operating system. The following examples should work for both Macintosh OS X and any Unix/Linux distribution. Open the SAS program file(s), SPSS syntax file(s) or the Stata do/dct files in an ASCII editor and make the changes indicated below.

SPSS in an OSX environment

In this example, we assume that the user has downloaded the satate dataset and placed the files in a **Desktop** folder called **ioxwave14** with the ASCII data file stored in subfolder **data** and the syntax file in subfolder **spss**. Then the commands in the syntax file would be modified to look like this:

```
FILE HANDLE ioxwave14 /name='Desktop/ioxwave14/data/ioxwave14.da' RECL=1913.
DATA LIST FILE= ioxwave14/
HHID 1-6 (A)
[rest of syntax file goes here]
.
execute.
SAVE /outfile 'Desktop/State14/spss/ioxwave14.sav'.
Execute.
```

STATA in an OS X Environment

In the following example we assume that:

- The username is “user1”
- The zip file containing tracker information has been downloaded to the user’s desktop from the HRS file download site
- The user has decompressed the zip file (use Stuffit for OS X) into a desktop folder named **ioxwave**
- The statistical package is stata

File IOXWAVE14.do should be modified as follows:

Change...

```
infile using c:\ioxwave\stata\IOXWAVE14.dct
```

To...

```
infile using /Users/user1/Desktop/ioxwave/stata/IOXWAVE14.dct
```

Change...

```
save c:\ioxwave\stata\IOXWAVE14.dta
```

To...

```
save /Users/user1/Desktop/ioxwave/stata/IOXWAVE14.dta
```

File IOXWAVE14.dct should be modified as follows

Change...

```
dictionary using c:\ioxwave\data\IOXWAVE14.da {...}
```

To...

```
dictionary using Users/user1/Desktop/ioxwave/data/IOXWAVE14.da {...}
```


Appendix B: Frequencies for *Current Job at Baseline*

1. Baseline 1992, 1998, 2004 (HRS, CODA/War Baby, EBB): 1980 Census Industrial Classification Codes

<i>Code</i>	<i>Description</i>	<i>1992 (V2719)</i>	<i>1998 (F3253)</i>	<i>2004 (JJ166)</i>
10	Agricultural production, crops	59	90	71
11	Agricultural production, livestock	18	62	51
20	Agricultural services, except horticultural	10	17	25
21	Horticultural services	19	43	51
30	Forestry	4	5	5
31	Fishing, hunting, and trapping	7	1	
40	Metal mining	4		
41	Coal mining	12	4	2
42	Crude petroleum and natural gas extraction	8	8	8
50	Nonmetallic mining and quarrying, except fuel	11	3	4
60	All construction	282	314	351
100	Meat products	40	13	12
101	Dairy products	5	3	3
102	Canned and preserved fruits and vegetables	20	9	6
110	Grain mill products	13	7	2
111	Bakery products	17	14	13
112	Sugar and confectionery products	14	6	5
120	Beverage industries	16	5	4
121	Miscellaneous food preparations and kindred products	10	8	5
122	Food industries, n.s.	5	4	6
130	Tobacco manufactures	6		
132	Knitting mills	10	2	4
140	Dyeing and finishing textiles, except wool and knit goods	1	1	
141	Floor coverings, except hard surface	1	2	
142	Yarn, thread, and fabric mills	25	5	5
150	Miscellaneous textile mill products	3	3	2
151	Apparel and accessories, except knit	65	21	9
152	Miscellaneous fabricated textile products	9	10	5
160	Pulp, paper, and paperboard mills	23	16	5
161	Miscellaneous paper and pulp products	46	9	4
162	Paperboard containers and boxes	17	7	9
171	Newspaper publishing and printing	37	18	9
172	Printing, publishing, and allied industries, except newspapers	62	46	43
180	Plastics, synthetics, and resins	5	3	2
181	Drugs	21	12	5
182	Soaps and cosmetics	8	3	4
190	Paints, varnishes, and related products	4	2	1
191	Agricultural chemicals	5	6	2
192	Industrial and miscellaneous chemicals	25	11	9
200	Petroleum refining	7	4	5
201	Miscellaneous petroleum and coal products	1	1	

210	Tires and inner tubes	8	3	
211	Other rubber products, and plastics footwear and belting	10	5	3
212	Miscellaneous plastics products	22	13	20
220	Leather tanning and finishing			
221	Footwear, except rubber and plastic	6	3	
222	Leather products, except footwear	2	2	3
230	Logging	13	11	9
231	Sawmills, planing mills, and millwork	41	13	10
232	Wood buildings and mobile homes	3		
241	Miscellaneous wood products	7	7	10
242	Furniture and fixtures	38	22	14
250	Glass and glass products	20	6	2
251	Cement, concrete, gypsum, and plaster products	13	2	5
252	Structural clay products	5	1	2
261	Pottery and related products	4	4	1
262	Miscellaneous nonmetallic mineral and stone products	7	4	6
270	Blast furnaces, steelworks, rolling and finishing mills	35	14	5
271	Iron and steel foundries	7	5	4
272	Primary aluminum industries	4	1	
280	Other primary metal industries	5	4	
281	Cutlery, handtools, and other hardware	16	5	1
282	Fabricated structural metal products	24	10	7
290	Screw machine products	4	1	1
291	Metal forgings and stampings	17	3	4
292	Ordnance	14	6	1
300	Miscellaneous fabricated metal products	26	18	19
301	Metal industries, n.s.	8	2	3
310	Engines and turbines	10	2	
311	Farm machinery and equipment	5	2	8
312	Construction and material handling machines	12	2	3
320	Metalworking machinery	38	9	8
321	Office and accounting machines	3	1	
322	Electronic computing equipment	18	6	10
331	Machinery, except electrical, n.e.c.	72	38	28
332	Machinery, n.s.	1	2	1
340	Household appliances	3	3	3
341	Radio, T.V., and communication equipment	25	6	10
342	Electrical machinery, equipment, and supplies, n.e.c.	55	26	26
350	Electrical machinery, equipment, and supplies, n.s.	15	8	5
351	Motor vehicles and motor vehicle equipment	96	70	50
352	Aircraft and parts	40	18	11
360	Ship and boat building and repairing	12	5	4
361	Railroad locomotives and equipment	2		
362	Guided missiles, space vehicles, and parts	29	11	9
370	Cycles and miscellaneous transportation equipment	3	1	
371	Scientific and controlling instruments	15	4	4
372	Optical and health services and supplies	23	13	10
380	Photographic equipment and supplies	6	2	1
381	Watches, clocks, and clockwork operated devices	2		
382	Professional equipment, n.s.			

390	Toys, amusement, and sporting goods	3	6	9
391	Miscellaneous manufacturing industries	29	16	16
392	Manufacturing industries, n.s.	30	23	3
400	Railroads	20	9	5
401	Bus service and urban transit	57	30	29
402	Taxicab service	4	2	3
410	Trucking service	86	90	68
411	Warehousing and storage	13	16	8
412	U.S. Postal Service	73	27	29
420	Water transportation	8	7	1
421	Air transportation	34	17	24
422	Pipelines, except natural gas			
432	Services incidental to transportation	13	25	19
440	Radio and television broadcasting	12	8	3
441	Telephone	60	32	32
442	Telegraph and miscellaneous communication services	8	14	12
460	Electric light and power	30	16	22
461	Gas and steam supply systems	15	1	9
462	Electric and gas, and other combinations	12	1	4
470	Water supply and irrigation	29	10	9
471	Sanitary services	25	3	11
472	Utilities, n.s.	10	5	2
500	Motor vehicles and equipment	21	14	17
501	Furniture and home furnishings	8	4	10
502	Lumber and construction materials	14	9	10
510	Sporting goods, toys, and hobby goods	3	2	4
511	Metals and minerals, except petroleum	3	4	2
512	Electrical goods	12	9	5
521	Hardware, plumbing and heating supplies	15	12	2
522	Electrical and hardware products, n.s.	1		
530	Machinery, equipment, and supplies	43	39	48
531	Scrap and waste materials	8	19	9
532	Miscellaneous wholesale, durable goods	6	6	4
540	Paper and paper products	6	5	5
541	Drugs, chemicals, and allied products	11	11	5
542	Apparel, fabrics, and notions	6	7	8
550	Groceries and related products	53	30	16
551	Farm products--raw materials	5	4	5
552	Petroleum products	13	7	8
560	Alcoholic beverages	3	2	2
561	Farm supplies	6	6	7
562	Miscellaneous wholesale, nondurable goods	11	15	15
571	Wholesale trade, n.s.	9	10	5
580	Lumber and building material retailing	14	10	11
581	Hardware stores	10	7	6
582	Retail nurseries and garden stores	2	8	10
590	Mobile home dealers	2	3	
591	Department stores	77	38	51
592	Variety stores	4	1	
600	Miscellaneous general merchandise stores	9	2	4

601	Grocery stores	119	89	63
602	Dairy products stores	4	1	
610	Retail bakeries	9	3	4
611	Food stores, n.e.c.	3	10	11
612	Motor vehicle dealers	53	43	40
620	Auto and home supply stores	10	15	4
621	Gasoline service stations	14	8	6
622	Miscellaneous vehicle dealers	2	7	4
630	Apparel and accessory stores, except shoe	42	22	17
631	Shoe stores	2	2	2
632	Furniture and home furnishings stores	8	28	25
640	Household appliances, T.V., and radio stores	13	12	12
641	Eating and drinking places	139	141	96
642	Drug stores	30	20	13
650	Liquor stores	2	7	2
651	Sporting goods, bicycles, and hobby stores	6	12	6
652	Book and stationery stores	12	11	3
660	Jewelry stores	5	11	5
661	Sewing, needlework, and piece goods stores	9	3	4
662	Mail order houses	11	7	6
670	Vending machine operators	1	3	1
671	Direct selling establishments	6	40	41
672	Fuel and ice dealers	7	8	3
681	Retail florists	11	12	8
682	Miscellaneous retail stores	31	74	63
691	Retail trade, n.s.	31	35	19
700	Banking	121	52	43
701	Savings and loan associations	5	1	2
702	Credit agencies, n.e.c.	27	13	28
710	Security, commodity brokerage, and investment companies	24	34	36
711	Insurance	129	121	97
712	Real estate, including real estate-insurance-law offices	92	205	186
721	Advertising	7	16	20
722	Services to dwellings and other buildings	34	53	71
730	Commercial research, development, and testing labs	12	9	15
731	Personnel supply services	57	32	12
732	Business management and consulting services	17	67	54
740	Computer and data processing services	36	48	33
741	Detective and protective services	39	22	23
742	Business services, n.e.c.	40	88	63
750	Automotive services, except repair	14	18	13
751	Automotive repair shops	21	49	37
752	Electrical repair shops	4	13	8
760	Miscellaneous repair services	13	38	38
761	Private households	71	128	124
762	Hotels and motels	83	37	44
770	Lodging places, except hotels and motels	12	76	50
771	Laundry, cleaning, and garment services	26	19	16
772	Beauty shops	15	40	51
780	Barber shops	3	12	6

781	Funeral service and crematories	1	9	2
782	Shoe repair shops	2		
790	Dressmaking shops	2	9	15
791	Miscellaneous personal services	8	16	20
800	Theaters and motion pictures	12	24	31
801	Bowling alleys, billiard and pool parlors	10	4	2
802	Miscellaneous entertainment and recreation services	83	81	69
812	Offices of physicians	54	44	61
820	Offices of dentists	19	18	19
821	Offices of chiropractors	4	3	7
822	Offices of optometrists	2	2	1
830	Offices of health practitioners, n.e.c.	4	7	12
831	Hospitals	360	133	174
832	Nursing and personal care facilities	139	69	92
840	Health services, n.e.c.	87	129	128
841	Legal services	37	74	59
842	Elementary and secondary schools	722	325	269
850	Colleges and universities	206	77	82
851	Business, trade, and vocational schools	9	7	8
852	Libraries	18	11	9
860	Educational services, n.e.c.	13	37	26
861	Job training and vocational rehabilitation services	4	6	5
862	Child day care services	29	42	33
870	Residential care facilities, without nursing	49	31	17
871	Social services, n.e.c.	102	68	48
872	Museums, art galleries, and zoos	7	5	3
880	Religious organizations	72	87	80
881	Membership organizations	35	30	10
882	Engineering, architectural, and surveying services	26	59	45
890	Accounting, auditing, and bookkeeping services	24	47	42
891	Noncommercial educational and scientific research	14	11	4
892	Miscellaneous professional and related services	6	26	42
900	Executive and legislative offices	16	12	10
901	General government, n.e.c.	71	39	20
910	Justice, public order, and safety	112	87	74
921	Public finance, taxation, and monetary policy	33	9	13
922	Administration of human resources programs	40	15	38
930	Administration of environmental quality and housing programs	30	13	21
931	Administration of economic programs	41	18	13
932	National security and international affairs	59	9	17
998	Don't Know industry			
999	Not Ascertained industry	44	307	37

2. Baseline 1992, 1998, 2004 (HRS, CODA/War Baby, EBB): 1980 3-Digit Census Occupation Codes

<i>Code</i>	<i>Description</i>	<i>1992 (V2720)</i>	<i>1998 (F3255)</i>	<i>2004 (J168)</i>
3	Legislators	5	3	1
4	Chief executives and general administrators, public administration	4	3	3
5	Administrators and officials, public administration	61	32	24
6	Administrators, protective service	11	5	6
7	Financial managers	47	17	35
8	Personnel and labor relations managers	16	7	5
9	Purchasing managers	19	4	7
13	Managers, marketing, advertising, and public relations	40	33	24
14	Administrators, education and related fields	66	41	30
15	Managers, medicine and health	15	15	29
16	Managers, properties and real estate	26	56	65
17	Postmasters and mail superintendents	4	3	
18	Funeral directors	2	1	
19	Managers and administrators, n.e.c.	439	402	298
23	Accountants and auditors	43	47	38
24	Underwriters	3		
25	Other financial officers	25	41	47
26	Management analysts	9	28	25
27	Personnel, training, and labor relations specialists	31	45	35
28	Purchasing agents and buyers, farm products	4		
29	Buyers, wholesale and retail trade, except farm products	9	12	2
33	Purchasing agents and buyers, n.e.c.	20	12	11
34	Business and promotion agents	1	5	5
35	Construction inspectors	5	6	4
36	Inspection and compliance officers, except construction	17	13	12
37	Management related occupations, n.e.c.	29	22	5
43	Architects	14	17	
44	Aerospace	1	1	3
45	Metallurgical and materials	3		
46	Mining			
47	Petroleum	1		
48	Chemical	1	1	1
49	Nuclear	1		
53	Civil	17	13	3
54	Agricultural			
55	Electrical and electronic	24	16	13
56	Industrial	15	12	9
57	Mechanical	17	11	6
58	Marine and naval architects	1		
59	Engineers, n.e.c.	10	8	5
63	Surveyors and mapping scientists	1	3	3
64	Computer systems analysts and scientists	22	49	24
65	Operations and systems researchers and analysts	6	11	2
66	Actuaries	1		

67	Statisticians	1	1	1
68	Mathematical scientists, n.e.c.	1		
69	Physicists and astronomers			
73	Chemists, except biochemists	6	3	2
74	Atmospheric and space scientists			
75	Geologists and geodesists	1	2	
76	Physical scientists, n.e.c.	1	2	2
77	Agricultural and food scientists	2		
78	Biological and life scientists	4	2	2
79	Forestry and conservation scientists	1	3	
83	Medical scientists	2	2	
84	Physicians	6	35	30
85	Dentists	2	9	9
86	Veterinarians	1	1	2
87	Optometrists	1	1	
88	Podiatrists	1	1	
89	Health diagnosing practitioners, n.e.c.	1	5	
95	Registered nurses	123	62	85
96	Pharmacists	11	8	4
97	Dietitians	3	4	3
98	Inhalation therapists	2	1	
99	Occupational therapists	1	2	
103	Physical therapists	1	2	5
104	Speech therapists	3	1	
105	Therapists, n.e.c.	2	9	9
106	Physicians' assistants	1	4	1
113	Earth, environmental, and marine science teachers	1		
114	Biological science teachers	2	6	3
115	Chemistry teachers	2	1	
116	Physics teachers	4	1	
117	Natural science teachers, n.e.c.	1		
118	Psychology teachers	3		
119	Economics teachers	3	1	
123	History teachers	3	1	1
124	Political science teachers	2	1	2
125	Sociology teachers	2		
126	Social science teachers, n.e.c.	2	1	
127	Engineering teachers	1	2	
128	Mathematical science teachers	7	2	2
129	Computer science teachers	2		
133	Medical science teachers	2	1	
134	Health specialties teachers	4	3	5
135	Business, commerce, and marketing teachers	5	3	
136	Agriculture and forestry teachers			
137	Art, drama, and music teachers	5	4	2
138	Physical education teachers	3		
139	Education teachers	4	2	
143	English teachers	9	3	5
144	Foreign language teachers	1	3	
145	Law teachers	1		

146	Social work teachers	1		
147	Theology teachers	2		
148	Trade and industrial teachers	1		
149	Home economics teachers	1		
153	Teachers, postsecondary, n.e.c.	5	3	
154	Postsecondary teachers, subject n.s.	5	5	6
155	Teachers, prekindergarten and kindergarten	21	22	15
156	Teachers, elementary school	169	90	68
157	Teachers, secondary school	108	60	44
158	Teachers, special education	14	14	22
159	Teachers, n.e.c.	19	47	40
163	Counselors, educational and vocational	28	14	6
164	Librarians	19	8	8
165	Archivists and curators	1	1	
166	Economists	3	5	8
167	Psychologists	7	18	29
168	Sociologists	1		
169	Social scientists, n.e.c.	1	2	
173	Urban planners	1	3	
174	Social workers	41	30	46
175	Recreation workers	6	5	1
176	Clergy	21	48	44
177	Religious workers, n.e.c.	11	13	6
178	Lawyers	8	47	48
179	Judges	3	8	4
183	Authors	1	12	17
184	Technical writers	1	4	6
185	Designers	17	34	23
186	Musicians and composers	4	15	18
187	Actors and directors	4	4	5
188	Painters, sculptors, craft-artists, and artist printmakers	2	15	17
189	Photographers	2	3	6
193	Dancers			
194	Artists, performers, and related workers, n.e.c.	2	11	10
195	Editors and reporters	10	13	7
197	Public relations specialists	11	8	10
198	Announcers	1	1	
199	Athletes	6	4	
203	Clinical laboratory technologists and technicians	16	7	11
204	Dental hygienists	1	1	4
205	Health record technologists and technicians	7	2	
206	Radiologic technicians	5	2	3
207	Licensed practical nurses	46	17	14
208	Health technologists and technicians, n.e.c.	16	12	15
213	Electrical and electronic technicians	15	9	11
214	Industrial engineering technicians	1		
215	Mechanical engineering technicians	2	1	
216	Engineering technicians, n.e.c.	17	3	8
217	Drafting occupations	13	4	4
218	Surveying and mapping technicians	1	2	

223	Biological technicians	4	2	3
224	Chemical technicians	6	3	
225	Science technicians, n.e.c.	4	3	3
226	Airplane pilots and navigators	5	2	5
227	Air traffic controllers	1		
228	Broadcast equipment operators	1	1	
229	Computer programmers	5	9	23
233	Tool programmers, numerical control	1	2	
234	Legal assistants	10	16	13
235	Technicians, n.e.c.	18	9	5
243	Supervisors and proprietors, sales occupations	141	196	198
253	Insurance sales occupations	21	34	39
254	Real estate sales occupations	18	81	87
255	Securities and financial services sales occupations	7	21	23
256	Advertising and related sales occupations	7	10	7
257	Sales occupations, other business services	7	12	20
258	Sales engineers	4	1	1
259	Sales representatives, mining, manufacturing, and wholesale	45	66	57
263	Sales workers, motor vehicles and boats	16	18	16
264	Sales workers, apparel	22	11	14
265	Sales workers, shoes	3	1	
266	Sales workers, furniture and home furnishings	12	11	5
267	Sales workers, radio, TV, hi-fi, and appliances	6	3	3
268	Sales workers, hardware and building supplies	9	4	4
269	Sales workers, parts	9	7	3
274	Sales workers, other commodities	76	92	52
275	Sales counter clerks	12	9	9
276	Cashiers	90	67	41
277	Street and door-to-door sales workers	13	44	48
278	News vendors	3	9	5
283	Demonstrators, promoters and models, sales	3	11	10
284	Auctioneers	1	2	
285	Sales support occupations, n.e.c.	2	5	8
303	Supervisors, general office	110	28	52
304	Supervisors, computer equipment operators	2	1	1
305	Supervisors, financial records processing	18	4	3
306	Chief communications operators	1		
307	Supervisors, distribution, scheduling, and adjusting clerks	25	10	18
308	Computer operators	27	9	2
309	Peripheral equipment operators			
313	Secretaries	240	112	123
314	Stenographers	3	8	3
315	Typists	39	8	7
316	Interviewers	10	6	10
317	Hotel clerks	5	7	8
318	Transportation ticket and reservation agents	6	5	2
319	Receptionists	56	40	35
323	Information clerks, n.e.c.	8	8	12
325	Classified-ad clerks			
326	Correspondence clerks	2	1	

327	Order clerks	17	15	13
328	Personnel clerks, except payroll and timekeeping	8	4	5
329	Library clerks	15	5	9
335	File clerks	7	7	10
336	Records clerks	17	12	21
337	Bookkeeping, accounting, and auditing clerks	114	113	108
338	Payroll and timekeeping clerks	9	9	5
339	Billing clerks	7	17	14
343	Cost and rate clerks	4	3	2
344	Billing, posting, and calculating machine operators	5	3	
345	Duplicating machine operators	2	1	
346	Mail preparing and paper handling machine operators	2		
347	Office machine operators, n.e.c.	4	1	
348	Telephone operators	6	7	7
349	Telegraphers			
353	Communications equipment operators, n.e.c.			
354	Postal clerks, except mail carriers	19	8	6
355	Mail carriers, postal service	28	6	16
356	Mail clerks, except postal service	8	9	9
357	Messengers	5	10	4
359	Dispatchers	16	7	9
363	Production coordinators	18	9	12
364	Traffic, shipping, and receiving clerks	34	23	8
365	Stock and inventory clerks	40	27	25
366	Meter readers	2	1	1
368	Weighers, measurers, and checkers	8	2	5
369	Samplers			
373	Expeditors	5	9	5
374	Material recording, scheduling, and distributing clerks, n.e.c.	3	3	1
375	Insurance adjusters, examiners, and investigators	12	17	10
376	Investigators and adjusters, except insurance	34	24	26
377	Eligibility clerks, social welfare	6	2	9
378	Bill and account collectors	10	8	7
379	General office clerks	49	59	22
383	Bank tellers	30	16	10
384	Proofreaders	1	3	
385	Data-entry keyers	20	16	16
386	Statistical clerks	5	3	2
387	Teachers' aides	65	28	23
389	Administrative support occupations, n.e.c.	71	42	25
403	Launderers and Ironers	1	1	
404	Cooks, private household	4	1	
405	Housekeepers and butlers	18	2	6
406	Child care workers, private household	10	19	39
407	Private household cleaners and servants	35	87	36
413	Supervisors, firefighting and fire prevention occupations	6	3	2
414	Supervisors, police and detectives	9	3	8
415	Supervisors, guards	12	4	3
416	Fire inspection and fire prevention occupations	4	1	
417	Firefighting occupations	5	2	1

418	Police and detectives, public service	17	11	9
423	Sheriffs, bailiffs, and other law enforcement officers	11	3	5
424	Correctional institution officers	3	9	10
425	Crossing guards	5	7	
426	Guards and police, except public service	58	43	35
427	Protective service occupations, n.e.c.	5	2	5
433	Supervisors, food preparation and service occupations	21	8	21
434	Bartenders	12	10	9
435	Waiters and waitresses	37	22	13
436	Cooks, except short order	90	45	31
437	Short-order cooks	6	2	
438	Food counter, fountain, and related occupations	7	6	1
439	Kitchen workers, food preparation	10	17	18
443	Waiters'/waitresses' assistants	15	8	
444	Miscellaneous food preparation occupations	45	27	36
445	Dental assistants	8	7	4
446	Health aides, except nursing	32	25	14
447	Nursing aides, orderlies, and attendants	144	103	92
448	Supervisors, cleaning and building service workers	23	13	17
449	Maids and housemen	59	21	30
453	Janitors and cleaners	202	114	135
454	Elevator operators			
455	Pest control occupations	2	3	1
456	Supervisors, personal service occupations	7	2	7
457	Barbers	2	11	6
458	Hairdressers and cosmetologists	16	48	45
459	Attendants, amusement and recreation facilities	14	10	11
463	Guides	2	6	4
464	Ushers	1	2	
465	Public transportation attendants	4	3	8
466	Baggage porters and bellhops	1	2	1
467	Welfare service aides	43	13	56
468	Child care workers, except private household	47	96	57
469	Personal service occupations, n.e.c.	22	20	10
473	Farmers, except horticultural	3	113	75
474	Horticultural specialty farmers	6	3	
475	Managers, farms, except horticultural	5	8	9
476	Managers, horticultural specialty farms	4		
477	Supervisors, farm workers	4	4	4
479	Farm workers	50	17	26
483	Marine life cultivation workers			
484	Nursery workers	1	3	3
485	Supervisors, related agricultural occupations	4	2	7
486	Groundskeepers and gardeners, except farm	38	50	55
487	Animal caretakers, except farm	3	5	1
488	Graders and sorters, agricultural products	3	1	1
489	Inspectors, agricultural products			
494	Supervisors, forestry and logging workers	2	3	
495	Forestry workers, except logging	1	1	2
496	Timber cutting and logging occupations	2	4	2

497	Captains and other officers, fishing vessels			
498	Fishers			
499	Hunters and trappers			
503	Supervisors, mechanics and repairers	36	13	13
505	Automobile mechanics, except apprentices	24	34	23
506	Automobile mechanic apprentices			
507	Bus, truck, and stationary engine mechanics	21	7	8
508	Aircraft engine mechanics	3	1	2
509	Small engine repairers	3	4	5
514	Automobile body and related repairers	6	3	8
515	Aircraft mechanics, except engine	1		
516	Heavy equipment mechanics	16	11	9
517	Farm equipment mechanics	3	1	2
518	Industrial machinery repairers	47	17	15
519	Machinery maintenance occupations	1	2	1
523	Electronic repairers, communications and industrial	9	4	7
525	Data processing equipment repairers	3	2	3
526	Household appliance and power tool repairers	2	9	4
527	Telephone line installers and repairers	5	1	2
529	Telephone installers and repairers	8	11	6
533	Miscellaneous electrical and electronic equipment repairers	8	6	3
534	Heating, air conditioning, and refrigeration mechanics	6	6	11
535	Camera, watch, and musical instrument repairers	4	4	
536	Locksmiths and safe repairers	1	2	1
538	Office machine repairers	3	4	2
539	Mechanical controls and valve repairers	4		
543	Elevator installers and repairers	1	3	
544	Millwrights	10	3	2
547	Mechanics and repairers, n.e.c.	30	21	13
549	Mechanics and repairers, n.s.	6	11	4
553	Supervisors, brickmasons, stonemasons, and tile setters	1	1	7
554	Supervisors, carpenters and related workers	5	4	6
555	Supervisors, electricians and power transmission installers	10	4	9
556	Supervisors, painters, paperhangers, and plasterers	4	1	8
557	Supervisors, plumbers, pipefitters, and steamfitters	6	5	
558	Supervisors, n.e.c.	25	23	48
563	Brickmasons and stonemasons, except apprentices	7	9	5
564	Brickmason and stonemason apprentices	1		
565	Tile setters, hard and soft	2	3	6
566	Carpet installers	3	1	
567	Carpenters, except apprentices	23	61	43
569	Carpenter apprentices			
573	Drywall installers	4	5	
575	Electricians, except apprentices	27	22	18
576	Electrician apprentices			
577	Electrical power installers and repairers	8	4	1
579	Painters, construction and maintenance	11	19	11
583	Paperhangers	5	4	
584	Plasterers	1		
585	Plumbers, pipefitters, and steamfitters, except apprentices	15	18	12

587	Plumber, pipefitter, and steamfitter apprentices	1		
588	Concrete and terrazzo finishers	6	5	3
589	Glaziers	2	1	4
593	Insulation workers	1	1	1
594	Paving, surfacing, and tamping equipment operators	1	1	
595	Roofers	5	1	2
596	Sheetmetal duct installers	2	2	1
597	Structural metal workers	3	3	1
598	Drillers, earth	1	1	
599	Construction trades, n.e.c.	7	5	8
613	Supervisors, extractive occupations	2	2	1
614	Drillers, oil well	1		
615	Explosives workers	2		
616	Mining machine operators	2	1	
617	Mining occupations, n.e.c.			
633	Supervisors production occupations	78	33	37
634	Tool and die makers, except apprentices	19	8	1
635	Tool and die maker apprentices			
636	Precision assemblers, metal	7	2	
637	Machinists, except apprentices	21	8	5
639	Machinist apprentices			
643	Boilermakers	5		
644	Precision grinders, fitters, and tool sharpeners	4		
645	Patternmakers and model makers, metal	3		
646	Lay-out workers			
647	Precious stones and metals workers	1	1	2
649	Engravers, metal	1	1	1
653	Sheet metal workers, except apprentices	12	1	
654	Sheet metal worker apprentices			
655	Miscellaneous precision metal workers	1		
656	Patternmakers and model makers, wood	4		
657	Cabinet makers and bench carpenters	1	4	1
658	Furniture and wood finishers	2	1	
659	Miscellaneous precision woodworkers	1		
666	Dressmakers	9	16	19
667	Tailors	6	7	3
668	Upholsterers	7	4	
669	Shoe repairers	2		
673	Apparel and fabric patternmakers			
674	Misc. precision apparel and fabric workers	1	2	
675	Hand molders and shapers, except jewelers	2	3	
676	Patternmakers, lay-out workers, and cutters	4	2	
677	Optical goods workers	3	2	2
678	Dental laboratory and medical appliance technicians	4	4	4
679	Bookbinders	2	1	
683	Electrical and electronic equipment assemblers	18	5	8
684	Miscellaneous precision workers, n.e.c.	1	1	1
686	Butchers and meat cutters	13	5	2
687	Bakers	4	8	7
688	Food batchmakers	5	3	

689	Inspectors, testers, and graders	7	2	5
693	Adjusters and calibrators	1		
694	Water and sewage treatment plant operators	9	3	
695	Power plant operators	2	2	
696	Stationary engineers	10	4	1
699	Miscellaneous plant and system operators	8	1	
703	Lathe and turning machine set-up operators	2	1	
704	Lathe and turning machine operators	8	4	2
705	Milling and planing machine operators	1		
706	Punching and stamping press machine operators	4	4	3
707	Rolling machine operators	1	1	
708	Drilling and boring machine operators	2	1	
709	Grinding, abrading, buffing, and polishing machine operators	16	7	2
713	Forging machine operators			
714	Numerical control machine operators	3		
715	Miscellaneous metal, plastic, stone, and glass working machine operators	5	4	2
717	Fabricating machine operators, n.e.c.	1	2	
719	Molding and casting machine operators	5	2	7
723	Metal plating machine operators	1	2	4
724	Heat treating equipment operators	1		
725	Miscellaneous metal and plastic processing machine	1		
726	Wood lathe, routing, and planing machine operators	1	2	1
727	Sawing machine operators	7	2	
728	Shaping and joining machine operators	1		
729	Nailing and tacking machine operators	1		
733	Misc. woodworking machine operators	2	2	3
734	Printing machine operators	15	7	5
735	Photoengravers and lithographers	5	2	
736	Typesetters and compositors	3	3	1
737	Miscellaneous printing machine operators	3	1	
738	Winding and twisting machine operators	6	2	1
739	Knitting, looping, taping, and weaving machine operators	4	3	2
743	Textile cutting machine operators	1		
744	Textile sewing machine operators	56	19	14
745	Shoe machine operators	2	2	
747	Pressing machine operators	10	1	1
748	Laundering and dry cleaning machine operators	6	7	10
749	Miscellaneous textile machine operators	4	4	
753	Cementing and gluing machine operators	4	4	
754	Packaging and filling machine operators	30	9	9
755	Extruding and forming machine operators	5	1	4
756	Mixing and blending machine operators	6	7	2
757	Separating, filtering, and clarifying machine operators	2	2	
758	Compressing and compacting machine operators	3		
759	Painting and paint spraying machine operators	10	4	2
763	Roasting and baking machine operators, food	2		
764	Washing, cleaning, and pickling machine operators	2		
765	Folding machine operators	3	1	1
766	Furnace, kiln, and oven operators, except food	10	3	1

768	Crushing and grinding machine operators	3	3	1
769	Slicing and cutting machine operators	23	7	8
773	Motion picture projectionists			
774	Photographic process machine operators	8	3	2
777	Miscellaneous machine operators	66	23	16
779	Machine operators, n.s.	22	20	9
783	Welders and cutters	37	14	7
784	Solderers and blazers	2		
785	Assemblers	68	44	32
786	Hand cutting and trimming occupations	1	1	
787	Hand molding, casting, and forming occupations	1	2	1
789	Hand painting, coating, and decorating occupations	3	6	2
793	Hand engraving and printing occupations	1		
794	Hand grinding and polishing occupations	1	1	
795	Miscellaneous hand working occupations	3	3	2
796	Production inspectors, checkers, and examiners	44	30	13
797	Production testers	5	3	2
798	Production samplers and weighers			
799	Graders and sorters, except agricultural	17	7	3
803	Supervisors, motor vehicle operators	5	1	5
804	Truck drivers, heavy	146	110	79
805	Truck drivers, light	23	27	28
806	Driver-sales workers	17	6	3
808	Bus drivers	57	30	32
809	Taxicab drivers and chauffeurs	14	22	21
813	Parking lot attendants	3	1	3
814	Motor transportation occupations, n.e.c.	1	3	
823	Railroad conductors and yardmasters	5	1	
824	Locomotive operating occupations	3	3	1
825	Railroad brake, signal, and switch operators	1		
826	Rail vehicle operators, n.e.c.	2		
828	Ship captains and mates, except fishing boats	1	2	
829	Sailors and deckhands	1		
833	Marine engineers			
834	Bridge, lock, and lighthouse tenders			
843	Supervisors, material moving equipment operators	4	1	4
844	Operating engineers	15	10	5
845	Longshore equipment operators			
848	Hoist and winch operators	2		
849	Crane and tower operators	11	6	1
853	Excavating and loading machine operators	13	9	5
855	Grader, dozer, and scraper operators	13	8	5
856	Industrial truck and tractor equipment operators	30	25	10
859	Misc. material moving equipment operators	8	3	3
863	Supervisors, handlers, equipment cleaners, and laborers,	2	2	4
864	Helpers, mechanics and repairers	3	1	1
865	Helpers, construction trades	6	2	2
866	Helpers, surveyor	1		
867	Helpers, extractive occupations			
869	Construction laborers	30	25	58

873	Production helpers	4	2	1
875	Garbage collectors	3	2	
876	Stevedores	1	2	
877	Stock handlers and baggers	28	25	41
878	Machine feeders and offbearers	8	2	2
883	Freight, stock, and material handlers, n.e.c.	18	18	12
885	Garage and service station related occupations	5	3	
887	Vehicle washers and equipment cleaners	12	9	6
888	Hand packers and packagers	26	19	16
889	Laborers, except construction	44	26	23
900	Members of the Armed Forces	7	3	4
998	Don't Know occupation	1		
999	Not Ascertained occupation	11	42	51

3. Baseline 2010 (MBB): 2007 Industrial Classification Codes

<i>Code</i>	<i>Description</i>	<i>2010 (MJ166_2010)</i>
170	Crop production	64
180	Animal production	65
190	Forestry, except logging	2
270	Logging	4
280	Fishing, hunting, and trapping	1
290	Support activities for agriculture and forestry	4
370	Oil and gas extraction	9
380	Coal mining	
390	Metal ore mining	3
470	Nonmetallic mineral mining and quarrying	3
480	Not specified type of mining	
490	Support activities for mining	10
570	Electric power generation, transmission, and distribution	27
580	Natural gas distribution	1
590	Electric and gas, and other combinations	8
670	Water, steam, air-conditioning, and irrigation systems	11
680	Sewage treatment facilities	7
690	Not specified utilities	2
770	Construction	392
1070	Animal food, grain, and oilseed milling	8
1080	Sugar and confectionery products	3
1090	Fruit and vegetable preserving and specialty food manufacturing	5
1170	Dairy product manufacturing	10
1180	Animal slaughtering and processing	13
1190	Retail bakeries	3
1270	Bakeries, except retail	15
1280	Seafood and other miscellaneous foods, n.e.c.	12
1290	Not specified food industries	
1370	Beverage manufacturing	9
1390	Tobacco manufacturing	1
1470	Fiber, yarn, and thread mills	1
1480	Fabric mills, except knitting mills	1
1490	Textile and fabric finishing and coating mills	3
1570	Carpet and rug mills	1
1590	Textile product mills, except carpet and rug	5
1670	Knitting fabric mills, and apparel knitting mills	5
1680	Cut and sew apparel manufacturing	18
1690	Apparel accessories and other apparel manufacturing	
1770	Footwear manufacturing	
1790	Leather tanning and finishing and other allied products manufacturing	
1870	Pulp, paper, and paperboard mills	5
1880	Paperboard containers and boxes	8
1890	Miscellaneous paper and pulp products	3
1990	Printing and related support activities	20
2070	Petroleum refining	7
2090	Miscellaneous petroleum and coal products	1

2170	Resin, synthetic rubber and fibers, and filaments manufacturing	2
2180	Agricultural chemical manufacturing	
2190	Pharmaceutical and medicine manufacturing	14
2270	Paint, coating, and adhesive manufacturing	4
2280	Soap, cleaning compound, and cosmetics manufacturing	9
2290	Industrial and miscellaneous chemicals	24
2370	Plastics product manufacturing	28
2380	Tire manufacturing	4
2390	Rubber product, except tire, manufacturing	2
2470	Pottery, ceramics, and plumbing fixture manufacturing	3
2480	Structural clay product manufacturing	
2490	Glass and glass product manufacturing	9
2570	Cement, concrete, lime, and gypsum product manufacturing	14
2590	Miscellaneous nonmetallic mineral product manufacturing	4
2670	Iron and steel mills and steel product manufacturing	6
2680	Aluminum production and processing	1
2690	Nonferrous metal (except aluminum) production and processing	2
2770	Foundries	4
2780	Metal forgings and stampings	4
2790	Cutlery and hand tool manufacturing	2
2870	Structural metals, and boiler, tank, and shipping container manufacturing	13
2880	Machine shops; turned product; screw, nut, and bolt manufacturing	10
2890	Coating, engraving, heat treating and allied activities	10
2970	Ordinance	2
2980	Miscellaneous fabricated metal products manufacturing	12
2990	Not specified metal industries	3
3070	Agricultural implement manufacturing	11
3080	Construction, and mining and oil and gas field machinery manufacturing	5
3090	Commercial and service industry machinery manufacturing	3
3170	Metalworking machinery manufacturing	7
3180	Engines, turbines, and power transmission equipment manufacturing	1
3190	Machinery manufacturing, n.e.c.	24
3290	Not specified machinery manufacturing	1
3360	Computer and peripheral equipment manufacturing	6
3370	Communications, and audio and video equipment manufacturing	5
3380	Navigational, measuring, electromedical, and control instruments manufacturing	10
3390	Electronic component and product manufacturing, n.e.c.	18
3470	Household appliance manufacturing	1
3490	Electrical lighting and electrical equipment manufacturing, and other electrical component manufacturing, n.e.c.	13
3570	Motor vehicles and motor vehicle equipment manufacturing	46
3580	Aircraft and parts manufacturing	36
3590	Aerospace product and parts manufacturing	12
3670	Railroad rolling stock manufacturing	
3680	Ship and boat building	6
3690	Other transportation equipment manufacturing	1
3770	Sawmills and wood preservation	4
3780	Veneer, plywood, and engineered wood products	
3790	Prefabricated wood buildings and mobile homes	2
3870	Miscellaneous wood products 3219 exc.	4
3890	Furniture and fixtures manufacturing	26

3890	Furniture and related product manufacturing	26
3960	Medical equipment and supplies manufacturing	23
3970	Sporting and athletic goods, and doll, toy and game manufacturing	7
3980	Miscellaneous manufacturing, n.e.c.	26
3990	Not specified manufacturing industries Part of 31, 32, 33	6
4070	Motor vehicles, parts and supplies, merchant wholesalers	17
4080	Furniture and home furnishing, merchant wholesalers	2
4090	Lumber and other construction materials, merchant wholesalers	9
4170	Professional and commercial equipment and supplies, merchant wholesalers	14
4180	Metals and minerals, except petroleum, merchant wholesalers	
4190	Electrical and electronic goods, merchant wholesalers	5
4260	Hardware, plumbing and heating equipment, and supplies, merchant wholesalers	6
4270	Machinery, equipment, and supplies, merchant wholesalers	13
4280	Recyclable material, merchant wholesalers	14
4290	Miscellaneous durable goods, merchant wholesalers	8
4370	Paper and paper products, merchant wholesalers	4
4380	Drugs, sundries, and chemical and allied products, merchant wholesalers	11
4390	Apparel, fabrics, and notions, merchant wholesalers	12
4470	Groceries and related products, merchant wholesalers	35
4480	Farm product raw materials, merchant wholesalers	4
4490	Petroleum and petroleum products, merchant wholesalers	3
4560	Alcoholic beverages, merchant wholesalers	5
4570	Farm supplies, merchant wholesalers	6
4580	Miscellaneous nondurable goods, merchant wholesalers	15
4585	Wholesale electronic markets, agents and brokers	
4590	Not specified wholesale trade	4
4670	Automobile dealers	36
4680	Other motor vehicle dealers	4
4690	Auto parts, accessories, and tire stores	9
4770	Furniture and home furnishings stores	15
4780	Household appliance stores	2
4790	Radio, TV, and computer stores	2
4870	Building material and supplies dealers	21
4880	Hardware stores	6
4890	Lawn and garden equipment and supplies stores	13
4970	Grocery stores	72
4980	Specialty food stores	4
4990	Beer, wine, and liquor stores	4
5070	Pharmacies and drug stores	23
5080	Health and personal care, except drug, stores	11
5090	Gasoline stations	17
5170	Clothing stores	28
5180	Shoe stores	4
5190	Jewelry, luggage, and leather goods stores	5
5270	Sporting goods, camera, and hobby and toy stores	11
5280	Sewing, needlework, and piece goods stores	3
5290	Music stores	2
5370	Book stores and news dealers	1
5380	Department stores and discount stores	69
5390	Miscellaneous general merchandise stores	9

5470	Retail florists	
5480	Office supplies and stationery stores	2
5490	Used merchandise stores	20
5570	Gift, novelty, and souvenir shops	5
5580	Miscellaneous retail stores	17
5590	Electronic shopping	10
5591	Electronic auctions	
5592	Mail order houses	2
5670	Vending machine operators	3
5680	Fuel dealers	
5690	Other direct selling establishments	45
5790	Not specified retail trade	17
6070	Air transportation	19
6080	Rail transportation	12
6090	Water transportation	3
6170	Truck transportation	89
6180	Bus service and urban transit	80
6190	Taxi and limousine service	16
6270	Pipeline transportation	1
6280	Scenic and sightseeing transportation	1
6290	Services incidental to transportation	23
6370	Postal Service	45
6380	Couriers and messengers	20
6390	Warehousing and storage	13
6470	Newspaper publishers	21
6480	Periodical, book, and directory publishers	7
6490	Software publishers	
6570	Motion pictures and video industries	10
6590	Sound recording industries	
6670	Broadcasting, except Internet	13
6670	Radio and television broadcasting and cable subscription programming	13
6672	Internet publishing and broadcasting and web search portals	4
6680	Wired telecommunications carriers	24
6690	Other telecommunications services	2
6695	Data processing, hosting, and related services	
6770	Libraries and archives	12
6780	Other information services	
6870	Banking and related activities	47
6880	Savings institutions, including credit unions	4
6890	Non-depository credit and related activities	25
6970	Securities, commodities, funds, trusts, and other financial investments	53
6990	Insurance	105
6990	Insurance carriers and related activities	105
7070	Real estate	187
7080	Automotive equipment rental and leasing	11
7170	Video tape and disk rental	
7180	Other consumer goods rental	5
7190	Commercial, industrial, and other intangible assets rental and leasing	3
7270	Legal services	82
7280	Accounting, tax preparation, bookkeeping, and payroll services	62

7290	Architectural, engineering, and related services	54
7370	Specialized design services	11
7380	Computer systems design and related services	53
7390	Management, scientific, and technical consulting services	44
7460	Scientific research and development services	20
7470	Advertising and related services	23
7480	Veterinary services	7
7490	Other professional, scientific, and technical services	19
7570	Management of companies and enterprises	
7580	Employment services	13
7590	Business support services	33
7670	Travel arrangements and reservation services	14
7680	Investigation and security services	34
7690	Services to buildings and dwellings	111
7770	Landscaping services	63
7780	Other administrative and other support services	11
7790	Waste management and remediation services	22
7860	Elementary and secondary schools	339
7870	Colleges and universities, including junior colleges	112
7880	Business, technical, and trade schools and training	7
7890	Other schools and instruction, and educational support services	34
7970	Offices of physicians	65
7980	Offices of dentists	18
7990	Offices of chiropractors	6
8070	Offices of optometrists	1
8080	Offices of other health practitioners	16
8090	Outpatient care centers	65
8170	Home health care services	150
8180	Other health care services	32
8190	Hospitals	257
8270	Nursing care facilities	135
8290	Residential care facilities, without nursing	37
8370	Individual and family services	93
8380	Community food and housing, and emergency services	10
8390	Vocational rehabilitation services	4
8470	Child day care services	107
8560	Independent artists, performing arts, spectator sports, and related industries	51
8570	Museums, art galleries, historical sites, and similar institutions	16
8580	Bowling centers	
8590	Other amusement, gambling, and recreation industries	65
8660	Traveler accommodation	60
8670	Recreational vehicle parks and camps, and rooming and boarding houses	6
8680	Restaurants and other food services	163
8690	Drinking places, alcoholic beverages	5
8770	Automotive repair and maintenance	47
8780	Car washes	7
8790	Electronic and precision equipment repair and maintenance	10
8870	Commercial and industrial machinery and equipment repair and maintenance	16
8880	Personal and household goods repair and maintenance	31
8890	Footwear and leather goods repair	

8970	Barber shops	5
8980	Beauty salons	56
8990	Nail salons and other personal care services	17
9070	Dry cleaning and laundry services	14
9080	Funeral homes, and cemeteries and crematories	9
9090	Other personal services	9
9160	Religious organizations	77
9170	Civic, social, advocacy organizations, and grant-making and giving services	15
9180	Labor unions	2
9190	Business, professional, political, and similar organizations	11
9290	Private households	165
9370	Executive offices and legislative bodies	15
9380	Public finance activities	13
9390	Other general government and support	18
9470	Justice, public order, and safety activities	97
9480	Administration of human resource programs	45
9490	Administration of environmental quality and housing programs	11
9570	Administration of economic programs and space research	27
9590	National security and international affairs	18

4. Baseline 2010 (MBB): 2010 Census 3-Digit Occupational Classification Codes

<i>Code</i>	<i>Description</i>	<i>2010 (MJ168_2010)</i>
10	Chief executives	21
20	General and operations managers	20
30	Legislators	2
40	Advertising and promotions managers	6
50	Marketing and sales managers	24
60	Public relations and fundraising managers	4
100	Administrative services managers	6
110	Computer and information systems managers	26
120	Financial managers	50
135	Compensation and benefits managers	4
136	Human resources managers	12
137	Training and development managers	1
140	Industrial production managers	22
150	Purchasing managers	8
160	Transportation, storage, and distribution managers	8
205	Farmers, ranchers, and other agricultural managers	95
220	Construction managers	49
230	Education administrators	39
300	Architectural and engineering managers	21
310	Food service managers	22
325	Funeral service managers	
330	Gaming managers	
340	Lodging managers	9
350	Medical and health services managers	39
360	Natural sciences managers	
400	Postmasters and mail superintendents	2
410	Property, real estate, and community association managers	51
420	Social and community service managers	19
425	Emergency management directors	
430	Managers, all other	67
500	Agents and business managers of artists, performers, and athletes	
510	Buyers and purchasing agents, farm products	1
520	Wholesale and retail buyers, except farm products	3
530	Purchasing agents, except wholesale, retail, and farm products	16
540	Claims adjusters, appraisers, examiners, and investigators	16
565	Compliance officers	13
600	Cost estimators	5
630	Human resources workers	23
640	Compensation, benefits, and job analysis specialists	7
650	Training and development specialists	14
700	Logisticians	2
710	Management analysts	30
725	Meeting, convention, and event planners	3
726	Fundraisers	1
735	Market research analysts and marketing specialists	
740	Business operations specialists, all other	11

800	Accountants and auditors	46
810	Appraisers and assessors of real estate	8
820	Budget analysts	5
830	Credit analysts	
840	Financial analysts	4
850	Personal financial advisors	22
860	Insurance underwriters	2
900	Financial examiners	
910	Credit counselors and loan officers	13
930	Tax examiners and collectors, and revenue agents	3
940	Tax preparers	12
950	Financial specialists, all other	
1005	Computer and information research scientists	
1006	Computer systems analysts	12
1007	Information security analysts	
1010	Computer programmers	19
1020	Software developers, applications and systems software	15
1030	Web developers	5
1050	Computer support specialists	10
1060	Database administrators	9
1105	Network and computer systems administrators	4
1106	Computer network architects	
1107	Computer occupations, all other	
1200	Actuaries	
1210	Mathematicians	1
1220	Operations research analysts	1
1230	Statisticians	4
1240	Miscellaneous mathematical science occupations	
1300	Architects, except naval	16
1310	Surveyors, cartographers, and photogrammetrists	2
1320	Aerospace engineers	3
1330	Agricultural engineers	
1340	Biomedical engineers	1
1350	Chemical engineers	
1360	Civil engineers	5
1400	Computer hardware engineers	1
1410	Electrical and electronics engineers	10
1420	Environmental engineers	5
1430	Industrial engineers, including health and safety	16
1440	Marine engineers and naval architects	
1450	Materials engineers	1
1460	Mechanical engineers	8
1500	Mining and geological engineers, including mining safety engineers	
1510	Nuclear engineers	1
1520	Petroleum engineers	1
1530	Engineers, all other	
1540	Drafters	1
1550	Engineering technicians, except drafters	20
1560	Surveying and mapping technicians	1
1600	Agricultural and food scientists	

1610	Biological scientists	3
1640	Conservation scientists and foresters	
1650	Medical scientists	2
1660	Life scientists, all other	
1700	Astronomers and physicists	
1710	Atmospheric and space scientists	1
1720	Chemists and materials scientists	7
1740	Environmental scientists and geoscientists	4
1760	Physical scientists, all other	1
1800	Economists	2
1815	Survey researchers	10
1820	Psychologists	13
1830	Sociologists	
1840	Urban and regional planners	1
1860	Miscellaneous social scientists and related workers	1
1900	Agricultural and food science technicians	1
1910	Biological technicians	1
1920	Chemical technicians	
1930	Geological and petroleum technicians	3
1940	Nuclear technicians	
1950	Social science research assistants	
1965	Miscellaneous life, physical, and social science technicians	5
2000	Counselors	41
2010	Social workers	32
2015	Probation officers and correctional treatment specialists	7
2016	Social and human service assistants	20
2025	Miscellaneous community and social service specialists	3
2040	Clergy	41
2050	Directors, religious activities and education	5
2060	Religious workers, all other	5
2100	Lawyers	56
2105	Judicial law clerks	1
2110	Judges, magistrates, and other judicial workers	4
2145	Paralegals and legal assistants	10
2160	Miscellaneous legal support workers	11
2200	Postsecondary teachers	58
2300	Preschool and kindergarten teachers	25
2310	Elementary and middle school teachers	69
2320	Secondary school teachers	61
2330	Special education teachers	30
2340	Other teachers and instructors	31
2400	Archivists, curators, and museum technicians	
2430	Librarians	9
2440	Library technicians	2
2540	Teacher assistants	58
2550	Other education, training, and library workers	7
2600	Artists and related workers	17
2630	Designers	21
2700	Actors	1
2710	Producers and directors	7

2720	Athletes, coaches, umpires, and related workers	8
2740	Dancers and choreographers	1
2750	Musicians, singers, and related workers	13
2760	Entertainers and performers, sports and related workers, all other	2
2800	Announcers	
2810	News analysts, reporters and correspondents	5
2825	Public relations specialists	8
2830	Editors	4
2840	Technical writers	4
2850	Writers and authors	13
2860	Miscellaneous media and communication workers	8
2900	Broadcast and sound engineering technicians and radio operators	2
2910	Photographers	8
2920	Television, video, and motion picture camera operators and editors	2
2960	Media and communication equipment workers, all other	
3000	Chiropractors	2
3010	Dentists	4
3030	Dietitians and nutritionists	6
3040	Optometrists	1
3050	Pharmacists	5
3060	Physicians and surgeons	19
3110	Physician assistants	1
3120	Podiatrists	
3140	Audiologists	
3150	Occupational therapists	8
3160	Physical therapists	5
3200	Radiation therapists	
3210	Recreational therapists	
3220	Respiratory therapists	2
3230	Speech-language pathologists	3
3235	Exercise physiologists	
3245	Therapists, all other	3
3250	Veterinarians	2
3255	Registered nurses	105
3256	Nurse anesthetists	1
3257	Nurse midwives	
3258	Nurse practitioners	2
3260	Health diagnosing and treating practitioners, all other	1
3300	Clinical laboratory technologists and technicians	10
3310	Dental hygienists	2
3320	Diagnostic related technologists and technicians	8
3400	Emergency medical technicians and paramedics	2
3420	Health practitioner support technologists and technicians	16
3500	Licensed practical and licensed vocational nurses	24
3510	Medical records and health information technicians	9
3520	Opticians, dispensing	1
3535	Miscellaneous health technologists and technicians	8
3540	Other healthcare practitioners and technical occupations	2
3600	Nursing, psychiatric, and home health aides	142
3610	Occupational therapy assistants and aides	1

3620	Physical therapist assistants and aides	5
3630	Massage therapists	12
3640	Dental assistants	5
3645	Medical assistants	11
3646	Medical transcriptionists	4
3647	Pharmacy aides	3
3648	Veterinary assistants and laboratory animal caretakers	1
3649	Phlebotomists	6
3655	Miscellaneous healthcare support occupations	6
3700	First-line supervisors of correctional officers	5
3710	First-line supervisors of police and detectives	3
3720	First-line supervisors of fire fighting and prevention workers	1
3730	First-line supervisors of protective service workers, all other	10
3740	Firefighters	2
3750	Fire inspectors	
3800	Bailiffs, correctional officers, and jailers	16
3820	Detectives and criminal investigators	4
3830	Fish and game wardens	
3840	Parking enforcement workers	1
3850	Police and sheriff's patrol officers	11
3860	Transit and railroad police	2
3900	Animal control workers	2
3910	Private detectives and investigators	4
3930	Security guards and gaming surveillance officers	43
3940	Crossing guards	6
3945	Transportation security screeners	
3955	Lifeguards and other recreational, and all other protective service workers	5
4000	Chefs and head cooks	2
4010	First-line supervisors of food preparation and serving workers	44
4020	Cooks	54
4030	Food preparation workers	16
4040	Bartenders	4
4050	Combined food preparation and serving workers, including fast food	14
4060	Counter attendants, cafeteria, food concession, and coffee shop	3
4110	Waiters and waitresses	21
4120	Food servers, nonrestaurant	7
4130	Dining room and cafeteria attendants and bartender helpers	26
4140	Dishwashers	7
4150	Hosts and hostesses, restaurant, lounge, and coffee shop	2
4160	Food preparation and serving related workers, all other	
4200	First-line supervisors of housekeeping and janitorial workers	35
4210	First-line supervisors of landscaping, lawn service, and groundskeeping workers	15
4220	Janitors and building cleaners	174
4230	Maids and housekeeping cleaners	146
4240	Pest control workers	6
4250	Grounds maintenance workers	67
4300	First-line supervisors of gaming workers	4
4320	First-line supervisors of personal service workers	16
4340	Animal trainers	2
4350	Nonfarm animal caretakers	11

4400	Gaming services workers	10
4410	Motion picture projectionists	1
4420	Ushers, lobby attendants, and ticket takers	3
4430	Miscellaneous entertainment attendants and related workers	6
4460	Embalmers and funeral attendants	4
4465	Morticians, undertakers, and funeral directors	
4500	Barbers	4
4510	Hairdressers, hairstylists, and cosmetologists	45
4520	Miscellaneous personal appearance workers	2
4530	Baggage porters, bellhops, and concierges	4
4540	Tour and travel guides	1
4600	Childcare workers	130
4610	Personal care aides	119
4620	Recreation and fitness workers	18
4640	Residential advisors	4
4650	Personal care and service workers, all other	3
4700	First-line supervisors of retail sales workers	159
4710	First-line supervisors of non-retail sales workers	52
4720	Cashiers	35
4740	Counter and rental clerks	10
4750	Parts salespersons	3
4760	Retail salespersons	98
4800	Advertising sales agents	5
4810	Insurance sales agents	31
4820	Securities, commodities, and financial services sales agents	8
4830	Travel agents	5
4840	Sales representatives, services, all other	23
4850	Sales representatives, wholesale and manufacturing	74
4900	Models, demonstrators, and product promoters	23
4920	Real estate brokers and sales agents	64
4930	Sales engineers	
4940	Telemarketers	5
4950	Door-to-door sales workers, news and street vendors, and related workers	27
4965	Sales and related workers, all other	9
5000	First-line supervisors of office and administrative support workers	96
5010	Switchboard operators, including answering service	2
5020	Telephone operators	1
5030	Communications equipment operators, all other	
5100	Bill and account collectors	11
5110	Billing and posting clerks	18
5120	Bookkeeping, accounting, and auditing clerks	76
5130	Gaming cage workers	1
5140	Payroll and timekeeping clerks	5
5150	Procurement clerks	5
5160	Tellers	4
5165	Financial clerks, all other	
5200	Brokerage clerks	4
5210	Correspondence clerks	
5220	Court, municipal, and license clerks	11
5230	Credit authorizers, checkers, and clerks	3

5240	Customer service representatives	51
5250	Eligibility interviewers, government programs	12
5260	File Clerks	10
5300	Hotel, motel, and resort desk clerks	2
5310	Interviewers, except eligibility and loan	17
5320	Library assistants, clerical	8
5330	Loan interviewers and clerks	2
5340	New accounts clerks	2
5350	Order clerks	4
5360	Human resources assistants, except payroll and timekeeping	8
5400	Receptionists and information clerks	45
5410	Reservation and transportation ticket agents and travel clerks	5
5420	Information and record clerks, all other	9
5500	Cargo and freight agents	
5510	Couriers and messengers	23
5520	Dispatchers	6
5530	Meter readers, utilities	3
5540	Postal service clerks	12
5550	Postal service mail carriers	16
5560	Postal service mail sorters, processors, and processing machine operators	4
5600	Production, planning, and expediting clerks	6
5610	Shipping, receiving, and traffic clerks	13
5620	Stock clerks and order fillers	66
5630	Weighers, measurers, checkers, and samplers, recordkeeping	3
5700	Secretaries and administrative assistants	152
5800	Computer operators	3
5810	Data entry keyers	9
5820	Word processors and typists	4
5830	Desktop publishers	
5840	Insurance claims and policy processing clerks	14
5850	Mail clerks and mail machine operators, except postal service	7
5860	Office clerks, general	43
5900	Office machine operators, except computer	1
5910	Proofreaders and copy markers	1
5920	Statistical assistants	
5940	Office and administrative support workers, all other	
6005	First-line supervisors of farming, fishing, and forestry workers	3
6010	Agricultural inspectors	
6020	Animal breeders	
6040	Graders and sorters, agricultural products	1
6050	Miscellaneous agricultural workers	27
6100	Fishers and related fishing workers	1
6110	Hunters and trappers	
6120	Forest and conservation workers	
6130	Logging workers	3
6200	First-line supervisors of construction trades and extraction workers	72
6210	Boilermakers	
6220	Brickmasons, blockmasons, and stonemasons	3
6230	Carpenters	38
6240	Carpet, floor, and tile installers and finishers	6

6250	Cement masons, concrete finishers, and terrazzo workers	7
6260	Construction laborers	87
6300	Paving, surfacing, and tamping equipment operators	1
6310	Pile-driver operators	
6320	Operating engineers and other construction equipment operators	14
6330	Drywall installers, ceiling tile installers, and tapers	4
6355	Electricians	21
6360	Glaziers	
6400	Insulation workers	
6420	Painters, construction and maintenance	18
6430	Paperhangers	1
6440	Pipelayers, plumbers, pipefitters, and steamfitters	24
6460	Plasterers and stucco masons	2
6500	Reinforcing iron and rebar workers	
6515	Roofers	6
6520	Sheet metal workers	2
6530	Structural iron and steel workers	1
6540	Solar photovoltaic installers	
6600	Helpers, construction trades	5
6660	Construction and building inspectors	7
6700	Elevator installers and repairers	1
6710	Fence erectors	1
6720	Hazardous materials removal workers	2
6730	Highway maintenance workers	1
6740	Rail-track laying and maintenance equipment operators	2
6750	Septic tank servicers and sewer pipe cleaners	
6765	Miscellaneous construction and related workers	
6800	Derrick, rotary drill, and service unit operators, oil, gas, and mining	1
6820	Earth drillers, except oil and gas	
6830	Explosives workers, ordnance handling experts, and blasters	
6840	Mining machine operators	
6910	Roof bolters, mining	
6920	Roustabouts, oil and gas	
6930	Helpers—extraction workers	
6940	Other extraction workers	1
7000	First-line supervisors of mechanics, installers, and repairers	33
7010	Computer, automated teller, and office machine repairers	7
7020	Radio and telecommunications equipment installers and repairers	5
7030	Avionics technicians	1
7040	Electric motor, power tool, and related repairers	4
7050	Electrical and electronics installers and repairers, transportation	
7100	Electrical and electronics repairers, industrial and utility	1
7110	Electronic equipment installers and repairers, motor vehicles	
7120	Electronic home entertainment equipment installers and repairers	1
7130	Security and fire alarm systems installers	2
7140	Aircraft mechanics and service technicians	7
7150	Automotive body and related repairers	12
7160	Automotive glass installers and repairers	1
7200	Automotive service technicians and mechanics	34
7210	Bus and truck mechanics and diesel engine specialists	11

7220	Heavy vehicle and mobile equipment service technicians and mechanics	8
7240	Small engine mechanics	6
7260	Miscellaneous vehicle and mobile equipment mechanics, installers, and repairers	2
7300	Control and valve installers and repairers	
7315	Heating, air conditioning, and refrigeration mechanics and installers	19
7320	Home appliance repairers	3
7330	Industrial and refractory machinery mechanics	23
7340	Maintenance and repair workers, general	13
7350	Maintenance workers, machinery	2
7360	Millwrights	
7410	Electrical power-line installers and repairers	1
7420	Telecommunications line installers and repairers	1
7430	Precision instrument and equipment repairers	3
7440	Wind turbine service technicians	
7510	Coin, vending, and amusement machine servicers and repairers	3
7520	Commercial divers	
7540	Locksmiths and safe repairers	2
7550	Manufactured building and mobile home installers	
7560	Riggers	
7600	Signal and track switch repairers	
7610	Helpers—installation, maintenance, and repair workers	3
7630	Other installation, maintenance, and repair workers	5
7700	First-line supervisors of production and operating workers	46
7710	Aircraft structure, surfaces, rigging, and systems assemblers	2
7720	Electrical, electronics, and electromechanical assemblers	10
7730	Engine and other machine assemblers	1
7740	Structural metal fabricators and fitters	2
7750	Miscellaneous assemblers and fabricators	34
7800	Bakers	5
7810	Butchers and other meat, poultry, and fish processing workers	10
7830	Food and tobacco roasting, baking, and drying machine operators and tenders	3
7840	Food batchmakers	7
7850	Food cooking machine operators and tenders	1
7855	Food processing workers, all other	
7900	Computer control programmers and operators	10
7920	Extruding and drawing machine setters, operators, and tenders, metal and plastic	
7930	Forging machine setters, operators, and tenders, metal and plastic	
7940	Rolling machine setters, operators, and tenders, metal and plastic	1
7950	Cutting, punching, and press machine setters, operators, and tenders, metal and plastic	12
7960	Drilling and boring machine tool setters, operators, and tenders, metal and plastic	1
8000	Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic	
8010	Lathe and turning machine tool setters, operators, and tenders, metal and plastic	3
8020	Milling and planing machine setters, operators, and tenders, metal and plastic	1
8030	Machinists	3
8040	Metal furnace operators, tenders, pourers, and casters	1

8060	Model makers and patternmakers, metal and plastic	1
8100	Molders and molding machine setters, operators, and tenders, metal and plastic	5
8120	Multiple machine tool setters, operators, and tenders, metal and plastic	
8130	Tool and die makers	5
8140	Welding, soldering, and brazing workers	24
8150	Heat treating equipment setters, operators, and tenders, metal and plastic	
8160	Layout workers, metal and plastic	
8200	Plating and coating machine setters, operators, and tenders, metal and plastic	1
8210	Tool grinders, filers, and sharpeners	1
8220	Metal workers and plastic workers, all other	15
8250	Prepress technicians and workers	1
8255	Printing press operators	11
8256	Print binding and finishing workers	
8300	Laundry and dry-cleaning workers	11
8310	Pressers, textile, garment, and related materials	3
8320	Sewing machine operators	23
8330	Shoe and leather workers and repairers	
8340	Shoe machine operators and tenders	
8350	Tailors, dressmakers, and sewers	8
8360	Textile bleaching and dyeing machine operators and tenders	1
8400	Textile cutting machine setters, operators, and tenders	
8410	Textile knitting and weaving machine setters, operators, and tenders	2
8420	Textile winding, twisting, and drawing out machine setters, operators, and tenders	
8430	Extruding and forming machine setters, operators, and tenders, synthetic and glass fibers	1
8440	Fabric and apparel patternmakers	
8450	Upholsterers	7
8460	Textile, apparel, and furnishings workers, all other	
8500	Cabinetmakers and bench carpenters	6
8510	Furniture finishers	1
8520	Model makers and patternmakers, wood	
8530	Sawing machine setters, operators, and tenders, wood	1
8540	Woodworking machine setters, operators, and tenders, except sawing	
8550	Woodworkers, all other	2
8600	Power plant operators, distributors, and dispatchers	1
8610	Stationary engineers and boiler operators	2
8620	Water and wastewater treatment plant and system operators	1
8630	Miscellaneous plant and system operators	3
8640	Chemical processing machine setters, operators, and tenders	3
8650	Crushing, grinding, polishing, mixing, and blending workers	3
8710	Cutting workers	2
8720	Extruding, forming, pressing, and compacting machine setters, operators, and tenders	1
8730	Furnace, kiln, oven, drier, and kettle operators and tenders	1
8740	Inspectors, testers, sorters, samplers, and weighers	26
8750	Jewelers and precious stone and metal workers	2
8760	Medical, dental, and ophthalmic laboratory technicians	4
8800	Packaging and filling machine operators and tenders	12
8810	Painting workers	9

8830	Photographic process workers and processing machine operators	
8840	Semiconductor processors	
8850	Adhesive bonding machine operators and tenders	1
8860	Cleaning, washing, and metal pickling equipment operators and tenders	
8900	Cooling and freezing equipment operators and tenders	
8910	Etchers and engravers	
8920	Molders, shapers, and casters, except metal and plastic	4
8930	Paper goods machine setters, operators, and tenders	3
8940	Tire builders	2
8950	Helpers—production workers	
8965	Production workers, all other	12
9000	Supervisors of transportation and material moving workers	26
9030	Aircraft pilots and flight engineers	3
9040	Air traffic controllers and airfield operations specialists	1
9050	Flight attendants	3
9110	Ambulance drivers and attendants, except emergency medical technicians	
9120	Bus drivers	57
9130	Driver/sales workers and truck drivers	132
9140	Taxi drivers and chauffeurs	31
9150	Motor vehicle operators, all other	10
9200	Locomotive engineers and operators	1
9230	Railroad brake, signal, and switch operators	1
9240	Railroad conductors and yardmasters	2
9260	Subway, streetcar, and other rail transportation workers	1
9300	Sailors and marine oilers	
9310	Ship and boat captains and operators	
9330	Ship engineers	
9340	Bridge and lock tenders	
9350	Parking lot attendants	
9360	Automotive and watercraft service attendants	
9410	Transportation inspectors	
9415	Transportation attendants, except flight attendants	
9420	Other transportation workers	1
9500	Conveyor operators and tenders	1
9510	Crane and tower operators	2
9520	Dredge, excavating, and loading machine operators	1
9560	Hoist and winch operators	1
9600	Industrial truck and tractor operators	32
9610	Cleaners of vehicles and equipment	12
9620	Laborers and freight, stock, and material movers, hand	35
9630	Machine feeders and offbearers	1
9640	Packers and packagers, hand	16
9650	Pumping station operators	1
9720	Refuse and recyclable material collectors	6
9730	Mine shuttle car operators	1
9740	Tank car, truck, and ship loaders	
9750	Material moving workers, all other	3