

# CAREER PATHWAY MAPS

A NEW WAY OF THINKING ABOUT INVESTING IN WORKFORCE TRAINING TO MEET JOB DEMAND

WORKING DRAFT | JANUARY 2016



MINNEAPOLIS SAINT PAUL REGIONAL WORKFORCE INNOVATION NETWORK

MANUFACTURING | HEALTHCARE | INFORMATION TECHNOLOGY | CONSTRUCTION | GOVERNMENT | EARLY CHILDHOOD EDUCATION | WORKFORCE DEVELOPMENT

Learn more about us at [MSPWIN.ORG](http://MSPWIN.ORG)

As part of MSPWin's work to expand and scale career pathway investments, we commissioned *InsightWorks LLC* to create maps that would help us better understand occupational progressions in seven industries, as well as the number of current job openings and wages. While far from a perfect reflection of the job market, we believe these maps provide insight into the most pressing needs of employers and guidance about where we should invest training resources.

In the next iteration of these working drafts, we plan to customize them for workers and employers, as well as incorporate information on relevant training programs.

If you have suggestions for how we can make these maps more accurate or useful, please let us know at [information@mbspwin.org](mailto:information@mbspwin.org).



Bryan F. Lindsley  
Executive Director of MSPWin

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## DATA SOURCES

### OCCUPATIONS IN DEMAND (OID)

Produced by the Minnesota Department of Employment and Economic Development (DEED), the Occupations in Demand (OID) data tool ranks occupations by current demand and provides long-term growth projections and salary information. Data are updated annually and based on 10-year employment projections.

Data can be unavailable due to a high sampling error, a small sample size, a new occupation or program code where insufficient data prevents reporting, or other data-related reasons. Self-employed, contract workers, unpaid family workers, and workers on unpaid leave are excluded.

### WANTED ANALYTICS™

WANTED Analytics scours real-time job postings to provide up-to-date information on current openings and recent trends.

Public, nonprofit, and heavily-unionized sectors; temp agencies; and contracted employment may be under-represented by WANTED Analytics.

All data are for the seven-county MSP metropolitan area.

## KEY

These maps provides up to eight data points for each occupation in addition to its connection to other occupations.

Where data are not listed, it is because they are not available.

## ABOUT THESE CHARTS

The charts below map common career progressions in seven sectors in the MSP metropolitan area, starting at the entry level and progressing to the AA/AS or BA/BS level. Not all occupations and progressions are shown; preference was given to those in highest demand as indicated by the DEED Occupations in Demand (OID) tool. Occupations on the left are entry-level (or close to it), moving to higher-level occupations to the right.

Each sector has its own structure (or lack thereof) which influences how well the maps “fit” reality. In all cases, these progressions are illustrative of general dynamics in the labor market—incomplete pictures intended to provide some insight for sector partnerships and those interested in building and supporting career pathways programming.

Draft maps were developed with the initial consultation of employers, education and workforce development professionals, and other experts.

Thanks to those individuals in each sector who shared their time and expertise. Special thanks to Aaron Corcoran of MCTC for providing the WANTED Analytics data as well as additional context and expertise.

Research and design by Nicholas Maryns, InsightWorks LLC | [insightworks.llc@gmail.com](mailto:insightworks.llc@gmail.com)

## HELP US IMPROVE THESE MAPS

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### MEDIAN HOURLY WAGE

Hourly wages assume full time employment at 2,080 hours per year.

DEED: Wages are based on a biannual survey of Minnesota employers. Self-employed, contract workers, unpaid family workers, and workers on unpaid leave are excluded.

BLS: Based on federal Bureau of Labor Statistics estimates, as provided by WANTED Analytics.

### ANNUAL OPENINGS

DEED: Annualized figure based on a 10-year projection from 2010 to 2020.

WANTED ANALYTICS: Based on job postings from the most recent twelve-month period.

<b>COMPUTER-CONTROLLED MACHINE TOOL OPERATORS</b>			
OPENINGS	105 DEED	WAGE	\$19.64 DEED
	916 WANTED		\$15.07 BLS
HS/EQUIVALENT		MODERATE OJT	

**EDUCATION AND TRAINING LEVELS**  
Based on federal Bureau of Labor Statistics estimates of entry-level education and training requirements. Minnesota's minimum education level may differ somewhat.

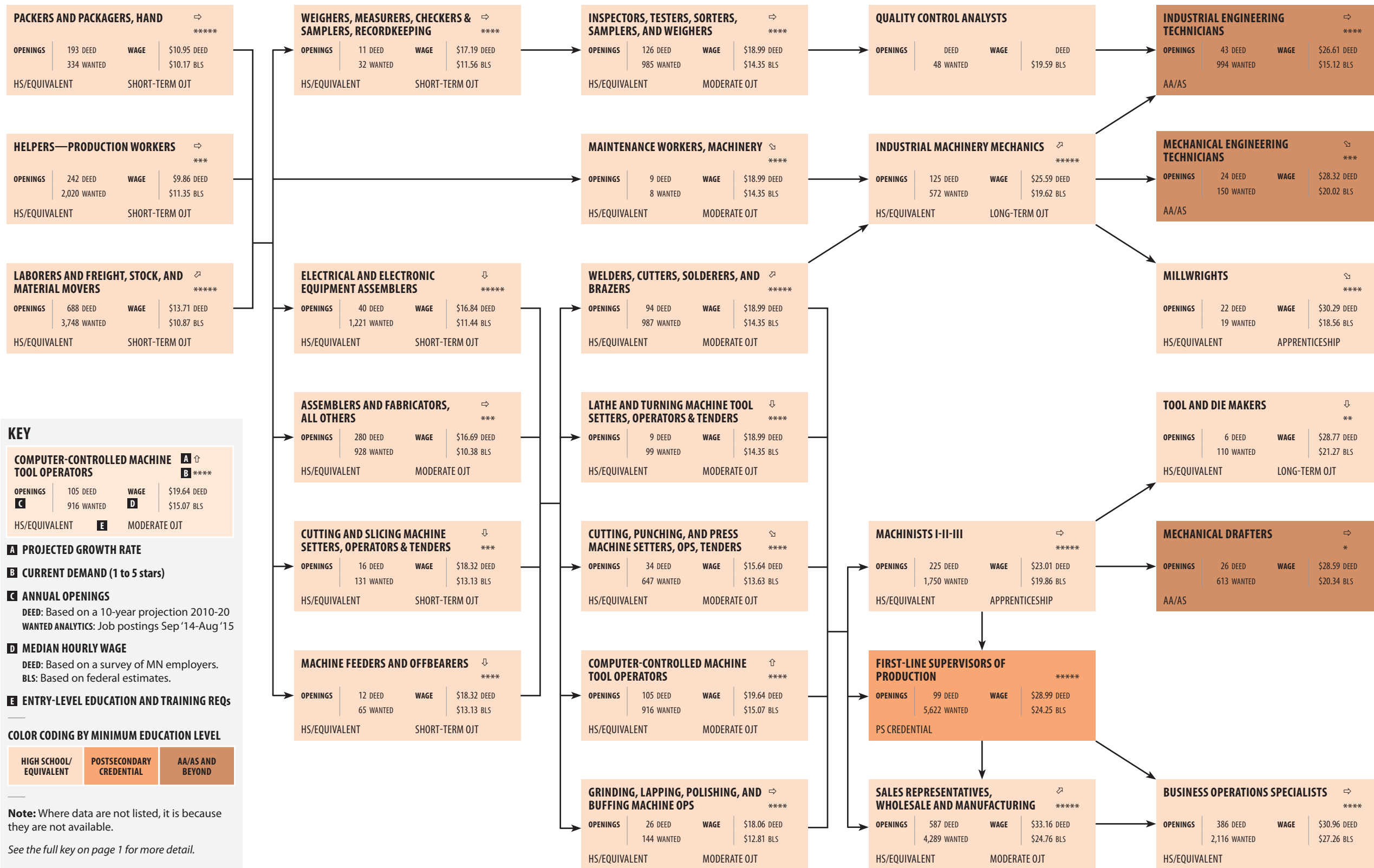
### PROJECTED GROWTH RATE (OID)

Measures how fast an occupation is expected to create jobs between 2010 and 2020, relative to average occupational growth in the labor market.

- ↑ WELL ABOVE AVERAGE
- ↗ ABOVE AVERAGE
- AVERAGE
- ↘ BELOW AVERAGE
- ↓ WELL BELOW AVERAGE

### CURRENT DEMAND (OID)

Represents how favorable current demand conditions are for an occupation relative to other occupations in the same region. Occupations are rated using a composite measure based on job vacancies, employment size, and unemployment in the occupation, and then assigned an indicator from 'Five Stars' (more favorable current demand conditions) to 'One Star' (less favorable current demand conditions).



### TOP FIVE OCCUPATIONS, BY OPENING

The top five occupations comprise **17,895** openings, or **62.3%** of all openings listed on this page.\*

RANK	OCCUPATION	OPENINGS	% OF TOTAL
1	FIRST-LINE SUPERVISORS OF PRODUCTION	5,622	19.7%
2	SALES REPRESENTATIVES, WHOLESALE AND MANUFACTURING	4,289	15.0%
3	LABORERS AND FREIGHT, STOCK, AND MATERIAL MOVERS	3,748	13.1%
4	BUSINESS OPERATIONS SPECIALISTS	2,116	7.4%
5	HELPERS—PRODUCTION WORKERS	2,020	7.1%
26 OCCUPATIONS MAPPED		28,548 TOTAL OPENINGS	

\* Based on WANTED Analytics numbers.

### ABOUT THIS CHART

This chart maps common career progressions in manufacturing, starting at the entry level. Not all occupations and progressions are shown; preference was given to those in highest demand as indicated by the Minnesota Department of Employment and Economic Development (DEED) Occupations in Demand (OID) tool. Occupations on the left are entry-level (or close to it), moving to higher-level occupations to the right.

### SOME NOTES ON THE MANUFACTURING SECTOR

- Some occupations within manufacturing, such as machinists and millwrights, can be considered career progressions of their own, built on apprenticeships and stackable credentials.

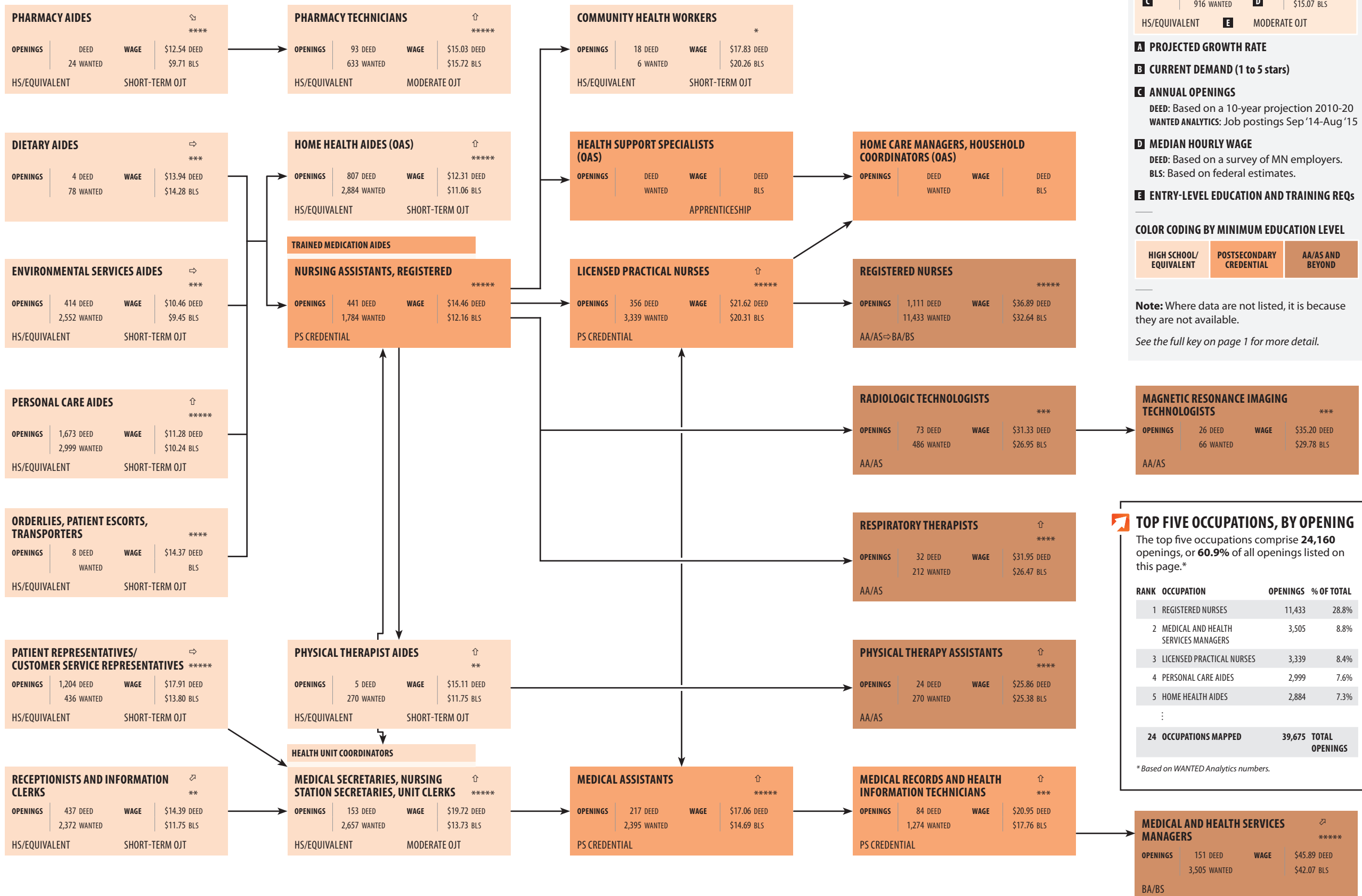
### INDIVIDUALS CONSULTED

Erick Ajax and Curt Jasper, **E.J. Ajax and Sons**  
 Paul Schulz and Mike Bell, **EMERGE Community Development**  
 Nancy James, **HIRED**  
 Rassoul Dastmozd, **Saint Paul College**

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### KEY

**COMPUTER-CONTROLLED MACHINE TOOL OPERATORS**

OPENINGS	105 DEED	WAGE	\$19.64 DEED
	916 WANTED		\$15.07 BLS

HS/EQUIVALENT    MODERATE OJT

**A PROJECTED GROWTH RATE**  
**B CURRENT DEMAND (1 to 5 stars)**  
**C ANNUAL OPENINGS**  
 DEED: Based on a 10-year projection 2010-20  
 WANTED ANALYTICS: Job postings Sep '14-Aug '15  
**D MEDIAN HOURLY WAGE**  
 DEED: Based on a survey of MN employers.  
 BLS: Based on federal estimates.  
**E ENTRY-LEVEL EDUCATION AND TRAINING REQs**

**COLOR CODING BY MINIMUM EDUCATION LEVEL**

HIGH SCHOOL/EQUIVALENT	POSTSECONDARY CREDENTIAL	AA/AS AND BEYOND
------------------------	--------------------------	------------------

**Note:** Where data are not listed, it is because they are not available.  
 See the full key on page 1 for more detail.

### TOP FIVE OCCUPATIONS, BY OPENING

The top five occupations comprise **24,160** openings, or **60.9%** of all openings listed on this page.\*

RANK	OCCUPATION	OPENINGS	% OF TOTAL
1	REGISTERED NURSES	11,433	28.8%
2	MEDICAL AND HEALTH SERVICES MANAGERS	3,505	8.8%
3	LICENSED PRACTICAL NURSES	3,339	8.4%
4	PERSONAL CARE AIDES	2,999	7.6%
5	HOME HEALTH AIDES	2,884	7.3%
24 OCCUPATIONS MAPPED		39,675 TOTAL OPENINGS	

\* Based on WANTED Analytics numbers.

### ABOUT THIS CHART

This chart maps common career progressions in healthcare, starting at the entry level. Not all occupations and progressions are shown; preference was given to those in highest demand as indicated by the Minnesota Department of Employment and Economic Development (DEED) Occupations in Demand (OID) tool. Occupations on the left are entry-level (or close to it), moving to higher-level occupations to the right.

### SOME NOTES ON THE HEALTHCARE SECTOR

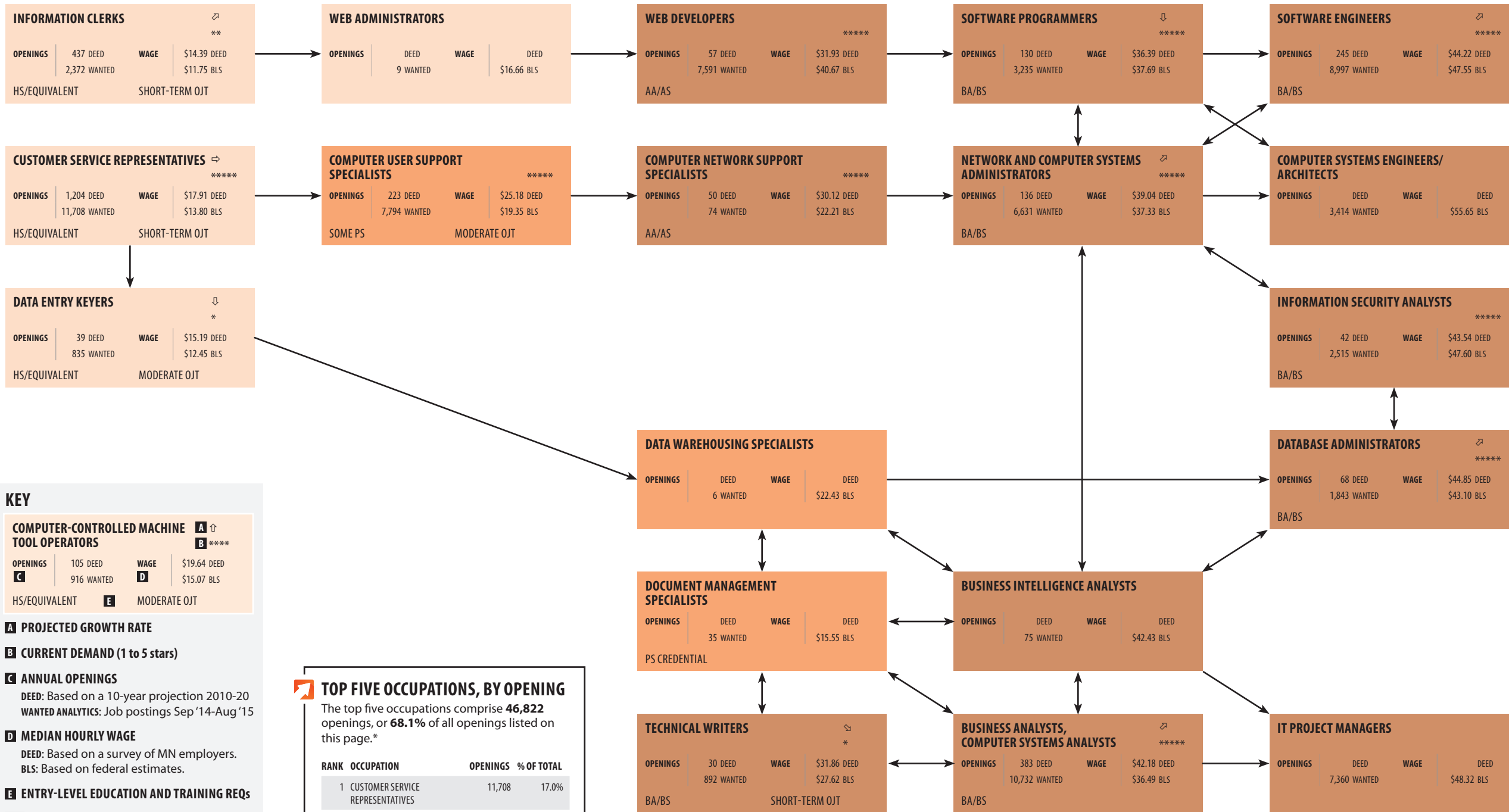
- Healthcare workers can take a variety of routes through their career; arrows denote some of the most common. Routes tend to vary by setting (e.g. hospital, home care, assisted living).
- Older Adult Services** is experiencing pronounced change and growth due to large demographic shifts in Minnesota. Jobs in this field are often residential and/or home-based, providing many entry-level opportunities in areas like environmental services, dietary services, and recreation/activities.
- (OAS)** denotes occupations particularly common to Older Adult Services (also called **Aging Services** or **Long-Term Care**). This can include a variety of settings, including home care, assisted living, care centers, and hospice.
- Historically, **Registered Nurses** required a two-year degree, but guidelines from the Institute of Medicine will require 80 percent of new RNs to obtain a four-year degree by 2020.
- Trained Medication Aide** is not typically an occupation itself, but an added certification that can be obtained, often by Nursing Assistants.
- An apprenticeship model is currently being built for **Home Health Aides**.
- Health Support Specialist** is a new career (with an apprenticeship model) developed in Minnesota. It builds on the **Nursing Assistant, Registered (NAR)** with additional duties (culinary care, activities, environmental services, memory care, etc.) that make it a well-rounded role well-suited to homecare and **older adult services** settings. Due to its newness, data on Health Support Specialists is harder to come by.

### INDIVIDUALS CONSULTED

Laura Beeth and Regina Pekarek, **Fairview Health Services**  
 Valerie Defor and Mary Rosenthal, **Healthforce Minnesota**  
 Jane Graupman, Merle Greene, Michael Donahue, **International Institute of Minnesota**  
 Lori Meyer, Adam Suomala, Sally Nadeau, **LeadingAge MN**  
 Sandra Bensen, **Aging Services of Minnesota**

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**KEY**

**COMPUTER-CONTROLLED MACHINE TOOL OPERATORS**

OPENINGS	105 DEED	916 WANTED	WAGE	\$19.64 DEED	\$15.07 BLS
HS/EQUIVALENT	MODERATE OJT				

- A** PROJECTED GROWTH RATE
- B** CURRENT DEMAND (1 to 5 stars)
- C** ANNUAL OPENINGS  
DEED: Based on a 10-year projection 2010-20  
WANTED ANALYTICS: Job postings Sep '14-Aug '15
- D** MEDIAN HOURLY WAGE  
DEED: Based on a survey of MN employers.  
BLS: Based on federal estimates.
- E** ENTRY-LEVEL EDUCATION AND TRAINING REQs

**COLOR CODING BY MINIMUM EDUCATION LEVEL**

HIGH SCHOOL/EQUIVALENT	POSTSECONDARY CREDENTIAL	AA/AS AND BEYOND
------------------------	--------------------------	------------------

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See the full key on page 1 for more detail.

**TOP FIVE OCCUPATIONS, BY OPENING**

The top five occupations comprise **46,822** openings, or **68.1%** of all openings listed on this page.\*

RANK	OCCUPATION	OPENINGS	% OF TOTAL
1	CUSTOMER SERVICE REPRESENTATIVES	11,708	17.0%
2	BUSINESS ANALYSTS, COMPUTER SYSTEMS ANALYSTS	10,732	15.6%
3	SOFTWARE ENGINEERS	8,997	13.1%
4	COMPUTER USER SUPPORT SPECIALISTS	7,794	11.3%
5	WEB DEVELOPERS	7,591	11.0%
:			
<b>18</b>	<b>OCCUPATIONS MAPPED</b>	<b>68,758</b>	<b>TOTAL OPENINGS</b>

\* Based on WANTED Analytics numbers.

## ABOUT THIS CHART

This chart maps common career progressions in information technology, starting at the entry level. Not all occupations and progressions are shown; preference was given to those in highest demand as indicated by the Minnesota Department of Employment and Economic Development (DEED) Occupations in Demand (OID) tool. Occupations on the left are entry-level (or close to it), moving to higher-level occupations to the right.

## SOME NOTES ON THE INFORMATION TECHNOLOGY SECTOR

Perhaps more than in any other sector, information technology resists being thought of in traditional terms. This is due to the relative newness of the sector and the sector's unique and perhaps skeptical view of traditional structures and ways of doing business. There is a fluidity and lack of structure within IT that makes mapping career progressions a challenge. In particular:

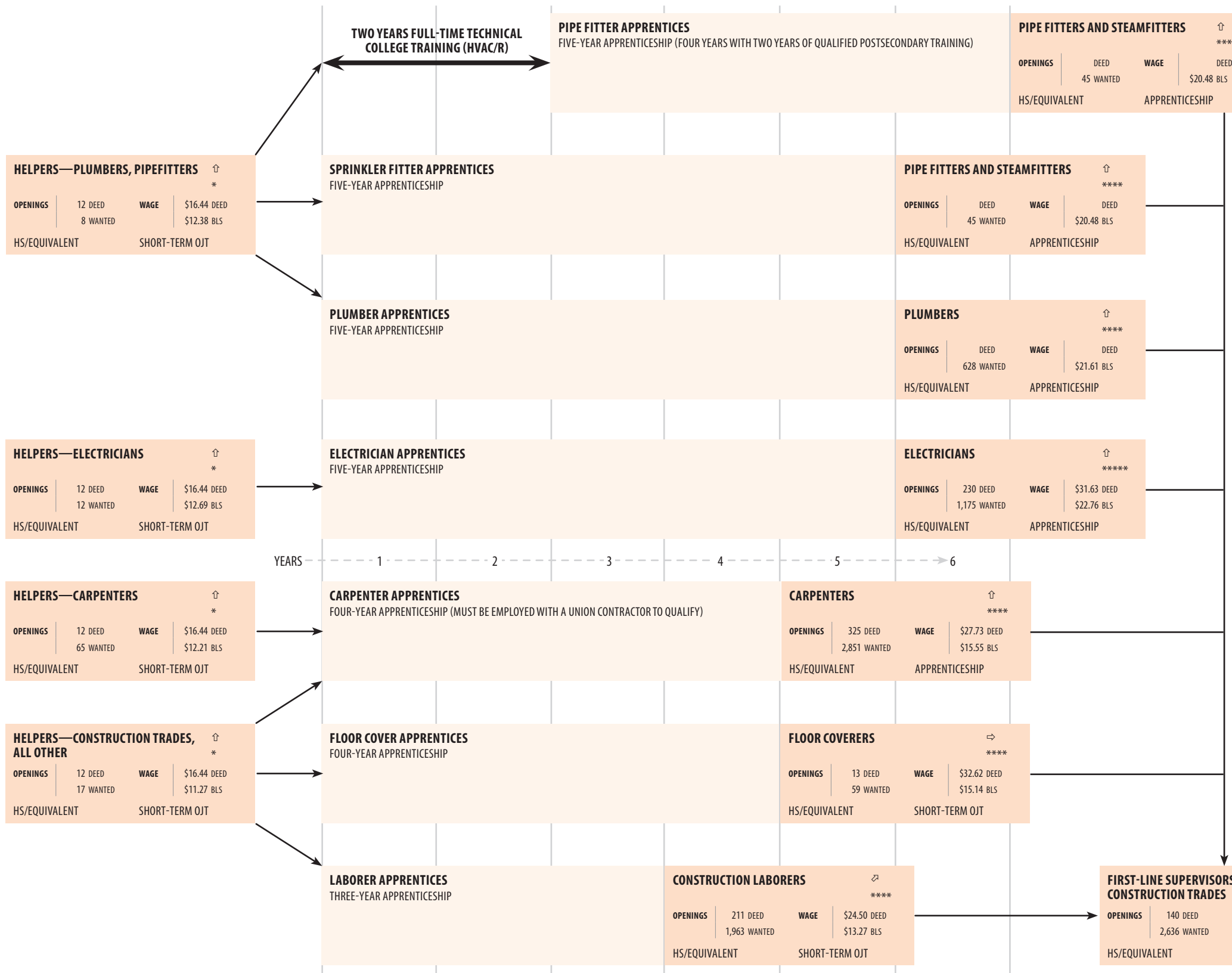
- Occupational titles are not standardized and talent sets can vary dramatically, which helps explain the large discrepancies between OID and WANTED Analytics data.
- There is the perception in IT that the quality of postsecondary degrees and credentials is inconsistent, and so there is an overall skepticism about their value. It is more important that a worker can directly demonstrate that they can do the work (and perhaps more importantly, that they possess the necessary "soft" skills, such as teamwork).
- One challenge for entry-level workers is that many employers are risk-averse and less willing to take on workers that lack significant work experience (even when they have postsecondary credentials). However, some employers are more open to growing their own talent.
- IT workers have more potential than those in other sectors to define their own progressions through self-study and by taking initiative in the workplace.
- Entry-level IT workers can start out in non-IT roles ancillary to other IT positions (e.g. administrative assistants at IT companies). They gain increasing exposure to the technical and business sides of IT, slowly making a transition into IT.

## INDIVIDUALS CONSULTED

Colleen Atwell, Charles Eaton, Tim Herbert, **COMPTIA/Creating IT Futures Foundation**  
 Tim Barrett, **Minnesota High Tech Association**  
 Deb Bahr-Helgen, Marie Larson, and Jamil Corbin, **Minneapolis Employment and Training Program**  
 Carlye Peterson, **Minneapolis Public Schools**  
 Mark Hurlburt, **Prime Digital Academy**  
 Jason Savage, **BTM Global**

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### TOP FIVE OCCUPATIONS, BY OPENING

The top five occupations comprise **9,253** openings, or **98.7%** of all openings listed on this page.\*

RANK	OCCUPATION	OPENINGS	% OF TOTAL
1	CARPENTERS	2,851	30.1%
2	FIRST-LINE SUPERVISORS OF CONSTRUCTION TRADES	2,636	27.9%
3	CONSTRUCTION LABORERS	1,963	20.8%
4	ELECTRICIANS	1,175	12.4%
5	PLUMBERS	628	6.6%
12 OCCUPATIONS MAPPED		9,459 TOTAL OPENINGS	

\* Based on WANTED Analytics numbers.

### KEY

**COMPUTER-CONTROLLED MACHINE TOOL OPERATORS** (HS/EQUIVALENT, MODERATE OJT)  
 OPENINGS: 105 DEED, 916 WANTED | WAGE: \$19.64 DEED, \$15.07 BLS

**A PROJECTED GROWTH RATE**  
**B CURRENT DEMAND (1 to 5 stars)**  
**C ANNUAL OPENINGS**  
 DEED: Based on a 10-year projection 2010-20  
 WANTED ANALYTICS: Job postings Sep '14-Aug '15  
**D MEDIAN HOURLY WAGE**  
 DEED: Based on a survey of MN employers.  
 BLS: Based on federal estimates.  
**E ENTRY-LEVEL EDUCATION AND TRAINING REQs**

**COLOR CODING BY MINIMUM EDUCATION LEVEL**

HIGH SCHOOL/EQUIVALENT	POSTSECONDARY CREDENTIAL	AA/AS AND BEYOND
------------------------	--------------------------	------------------

**Note:** Where data are not listed, it is because they are not available.  
 See the full key on page 1 for more detail.

### ABOUT THIS CHART

This chart maps common career progressions in the construction trades, starting at the entry level. Not all trades and progressions are shown; preference was given to those in highest demand as indicated by the Minnesota Department of Employment and Economic Development (DEED) Occupations in Demand (OID) tool. Occupations on the left are entry-level (or close to it), moving to higher-level occupations to the right.

### SOME NOTES ON THE CONSTRUCTION SECTOR

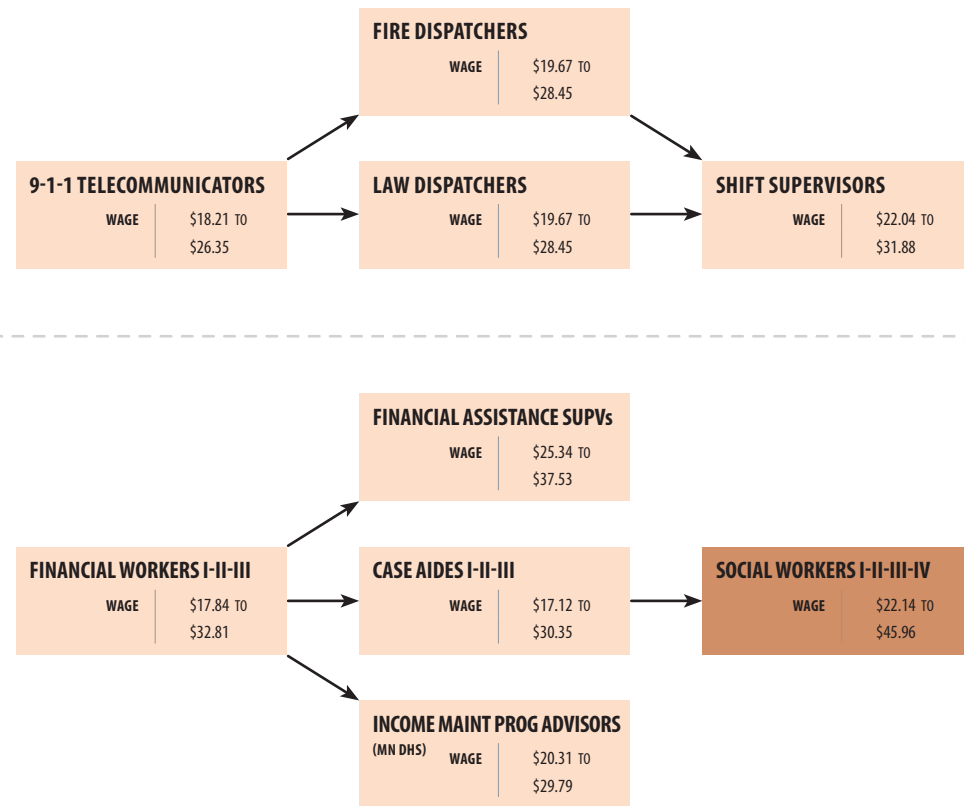
- The construction sector can be broken down into three main areas: Commercial/Industrial, Highway/Heavy, and Residential. The first two are heavily unionized; residential construction is less so.
- Labor unions are organized by trade, and unions differ with regard to how workers obtain employment and membership with the union. Generally, there are two main approaches:
  - The individual finds employment with a contractor first, and then goes to the union for membership and to enter an apprenticeship.
  - The individual seeks membership and apprenticeship with the union; once accepted the union finds work for the individual.
- Pre-apprenticeship construction laborers are important entry-level workers that can progress to other trades.
- Pre-apprenticeship programs are key entry-level "on-ramps" that train individuals in basic construction (e.g. OSHA, etc.) and employability skills, and expose individuals to a variety of trade.
- For non-union construction workers (e.g. in residential construction settings) career progression is facilitated by a blend on-the-job training (OJT) and postsecondary training.
- Data on employment and openings can be challenging to obtain consistently across the trades, as unions vary in what they collect, project, and share. Many jobs, particularly those facilitated directly by the unions, likely do not appear in WANTED Analytics.

### INDIVIDUALS CONSULTED

George Garnett, **Summit Academy OIC**  
 Don Mullin, **Saint Paul Building and Construction Trades Council**  
 Rassoul Dastmozd and Sarah Lechowich, **Saint Paul College**

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## RAMSEY COUNTY

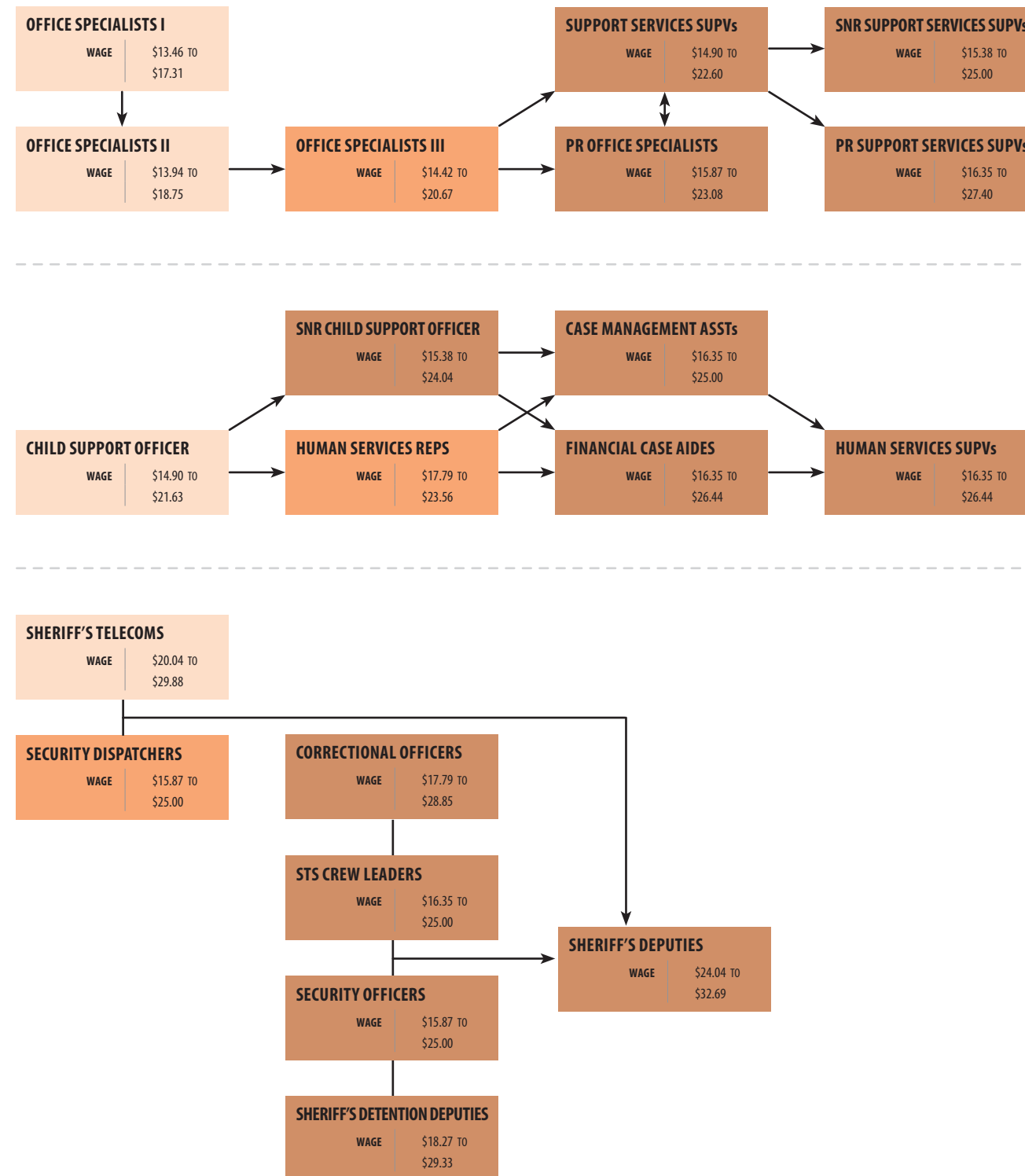


### COLOR CODING BY MINIMUM EDUCATION LEVEL



ENTRY-LEVEL OCCUPATIONS → HIGHER-LEVEL OCCUPATIONS

## HENNEPIN COUNTY



ENTRY-LEVEL OCCUPATIONS → HIGHER-LEVEL OCCUPATIONS

### ABOUT THIS CHART

This chart maps selected career progressions in government, starting at the entry level. Not all occupations and progressions are shown (nor are all levels of government represented—the initial focus has been on Hennepin and Ramsey Counties and the Metropolitan Council/Metro Transit). Progressions shown are those that have been selected by the employer for further focus and development. Occupations on the left are entry-level (or close to it), moving to higher-level occupations to the right.

### SOME NOTES ON COUNTY GOVERNMENT CAREER PROGRESSIONS

- Where an occupation is a progression unto itself (e.g. Case Aides I-II-III) the hourly wage range spans all levels of the position, from the minimum wage at level I to the maximum wage at level III (or IV where applicable).
- Additional pathways have been researched by the counties and could be mapped further.
- Wage information for Ramsey County was taken from its Human Resources website; for Hennepin County, wage information was provided by the individuals below.
- Since the occupations mapped here are specific to the counties, they are not directly accounted for in the Minnesota Department of Employment and Economic Development (DEED) Occupations in Demand (OID) tool, nor by WANTED Analytics. Therefore information on openings, projected demand and growth were not readily available.
- Minimum education requirements are based on input from the individuals below.

### INDIVIDUALS CONSULTED

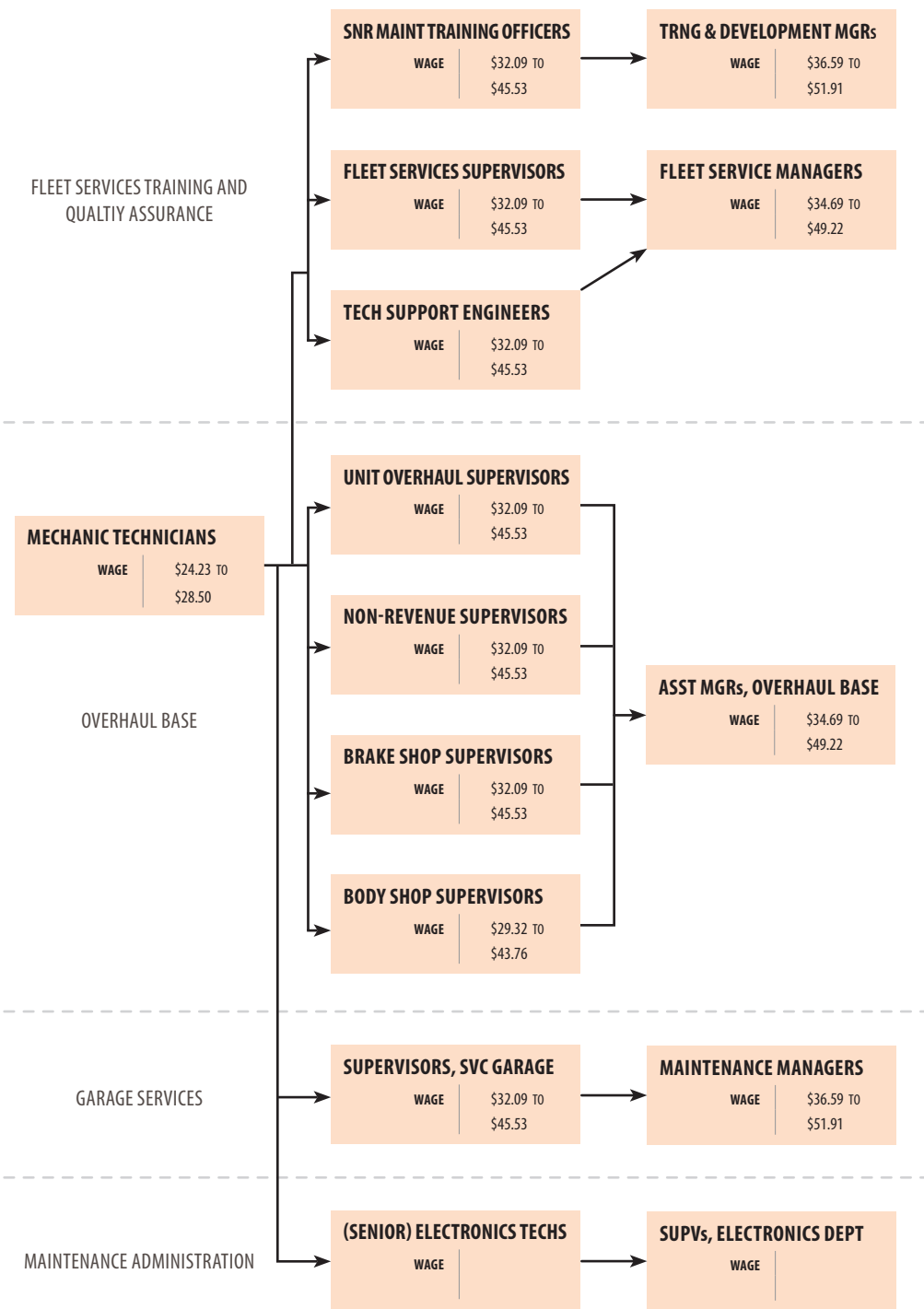
Heather Worthington, Ryan O'Connor, Tina Currie, Scott Williams, **Ramsey County**  
 John Thorson, Kari Boe Schmitz, Will Christenson, **Hennepin County**  
 Mike Christensen, **Minneapolis Community and Technical College**

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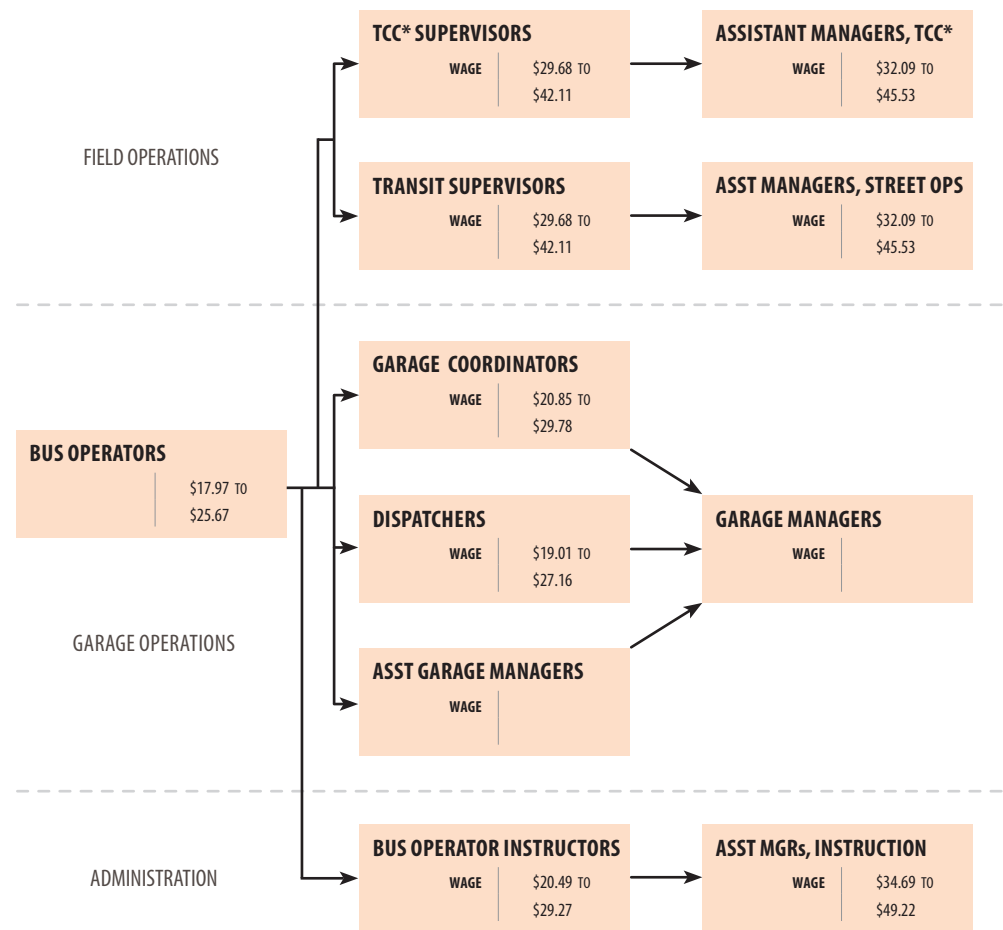
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**METROPOLITAN COUNCIL/METRO TRANSIT — MAINTENANCE TECHNICIAN**



**METROPOLITAN COUNCIL/METRO TRANSIT — BUS OPERATOR**



\*Transit Control Center

ENTRY-LEVEL OCCUPATIONS → HIGHER-LEVEL OCCUPATIONS

ENTRY-LEVEL OCCUPATIONS → HIGHER-LEVEL OCCUPATIONS

**ABOUT THIS CHART**

This chart maps selected career progressions in government, starting at the entry level. Not all occupations and progressions are shown (nor are all levels of government represented—the initial focus has been on Hennepin and Ramsey Counties and the Metropolitan Council/Metro Transit). Progressions shown are those that have been selected by the employer for further focus and development. Occupations on the left are entry-level (or close to it), moving to higher-level occupations to the right.

**SOME NOTES ON METROPOLITAN COUNCIL CAREER PROGRESSIONS**

- Wage information was obtained from the Metropolitan Council Human Resources website.
- Since the occupations mapped here are specific to the counties, they are not directly accounted for in the Minnesota Department of Employment and Economic Development (DEED) Occupations in Demand (OID) tool, nor by WANTED Analytics. Therefore information on openings, projected demand and growth were not readily available.
- Occupations are not color-coded by minimum education level because the level varies depending on relevant work experience.

**INDIVIDUALS CONSULTED**

Allison Bell, Jan Homan, Aaron Koski, **Metro Transit**  
Marcy Syman and Todd Rowley, **Metropolitan Council**

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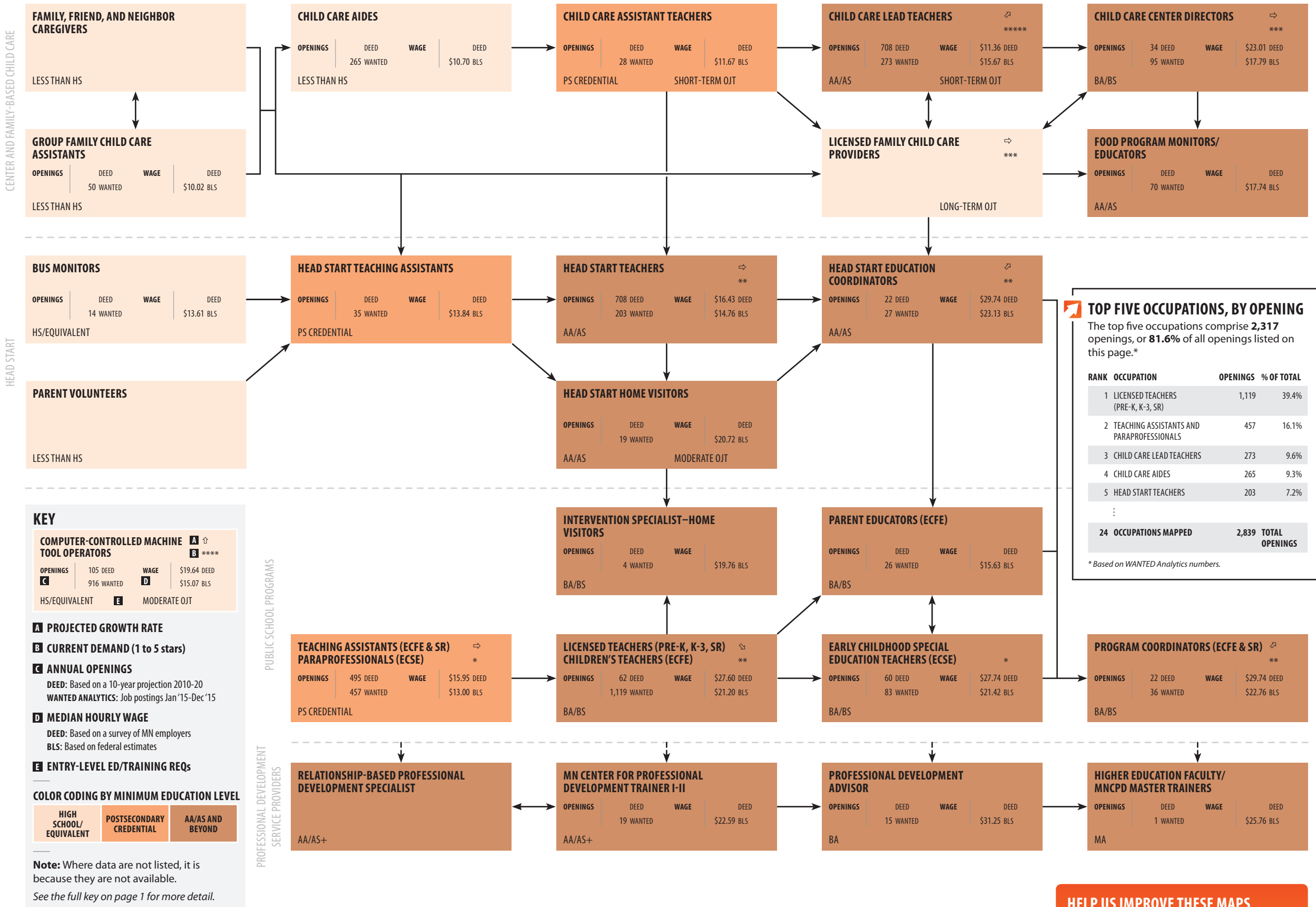
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## ABOUT THIS CHART

This chart maps common career progressions in early childhood education, from entry-level on the left to higher-level occupations on the right.

## EARLY CHILDHOOD EDUCATION NOTES

- "Early childhood" is commonly defined as ages 0-8.
- As a field, early childhood education has a **whole child orientation** that considers child *care* to be an critical facet of *education* and acknowledges the connection to other early childhood areas like health care and human services.
- This map delineates a few major "lanes" that represent major systems (as opposed to settings, like schools, child care centers, and homes, which cut across systems). Occupational changes from one system to another are more fluid than this map might suggest, particularly at early stages in one's career.
- **Center-Based Child Care** is licensed by DHS and includes both for-profit and non-profit providers. There are often few formal education/training requirements for staff.
- **Family-Based Child Care** providers are small, home-operated small businesses. They are licensed by counties but owners are not required to have much formal education/training.
- The federal Office of **Head Start** administers grant funding and oversight to the agencies that provide Head Start services in communities across the state. Minnesota provides funding to support additional slots. Head Start can provide services in centers or at home and also in partnership with family child care, centers, and schools.
- **Public Pre-K** programs, including **Early Childhood Family Education (ECFE)**, **Early Childhood Special Education (ECSE)**, and **School Readiness (SR)** are administered by school districts.
- Professional requirements and pay vary widely across systems and settings, which can influence worker supply. For example, the expansion of all day kindergarten in Minnesota drew many child care professionals into the K-12 system, which tends to pay better. Efforts are currently underway to increase parity in pay across systems.
- The **Minnesota Center for Professional Development (MNCPD) Career Lattice** provides a framework used to recognize informal training, formal education, and credentials for early childhood professionals, and is a mechanism for supporting skill and career advancement.
- **Minnesota's Knowledge and Competency Framework for Early Childhood Professionals** clearly articulates skill and knowledge expectations for early childhood educators. It is currently being integrated with training from DHS and postsecondary institutions.
- Common credentials in early childhood education include: the entry-level **Minnesota Child Care Credential (MNCCC)**, which fulfills **Parent Aware** training requirements; the **Child Development Associate Credential (CDA)**, which is nationally-recognized and often unlocks higher reimbursement rates from government program; the **MnAEYC Director's Credential**, which is also nationally-recognized and is available for credit or non-credit for those working as Child Care Center Directors or Family Child Care Providers.
- Experienced professionals in early childhood education can serve as **Professional Development Service Providers**, often in a part-time capacity. Full-time opportunities are growing as the field increasingly acknowledges the effectiveness of ongoing professional development.



### TOP FIVE OCCUPATIONS, BY OPENING

The top five occupations comprise 2,317 openings, or 81.6% of all openings listed on this page.\*

RANK	OCCUPATION	OPENINGS	% OF TOTAL
1	LICENSED TEACHERS (PRE-K, K-3, SR)	1,119	39.4%
2	TEACHING ASSISTANTS AND PARAPROFESSIONALS	457	16.1%
3	CHILD CARE LEAD TEACHERS	273	9.6%
4	CHILD CARE AIDES	265	9.3%
5	HEAD START TEACHERS	203	7.2%
...			
24	OCCUPATIONS MAPPED	2,839	TOTAL OPENINGS

\* Based on WANTED Analytics numbers.

### KEY

**COMPUTER-CONTROLLED MACHINE TOOL OPERATORS**

OPENINGS	105 DEED	WAGE	\$19.64 DEED
	916 WANTED		\$15.07 BLS

HS/EQUIVALENT | MODERATE OJT

**PROJECTED GROWTH RATE**  
**CURRENT DEMAND (1 to 5 stars)**  
**ANNUAL OPENINGS**  
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**ENTRY-LEVEL ED/TRAINING REQs**

**COLOR CODING BY MINIMUM EDUCATION LEVEL**

HIGH SCHOOL/EQUIVALENT	POSTSECONDARY CREDENTIAL	AA/AS AND BEYOND
------------------------	--------------------------	------------------

**Note:** Where data are not listed, it is because they are not available.  
 See the full key on page 1 for more detail.

ENTRY-LEVEL OCCUPATIONS

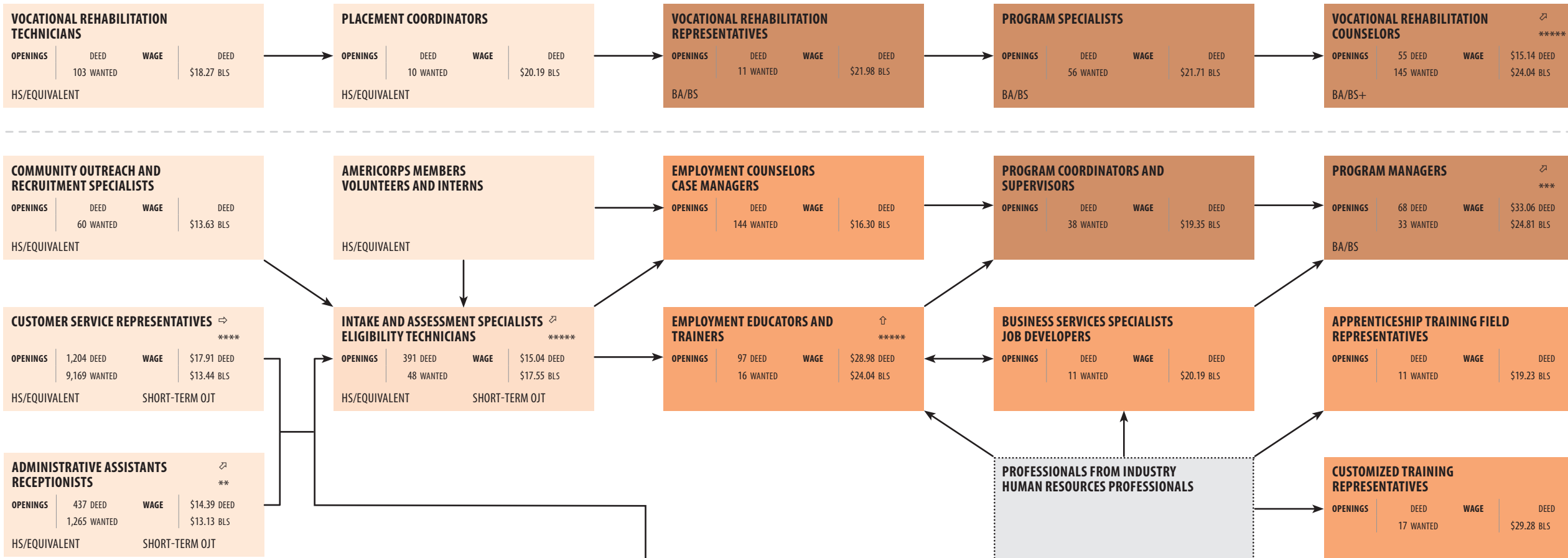
HIGHER-LEVEL OCCUPATIONS

**HELP US IMPROVE THESE MAPS**  
 Please let us know how this tool can be more helpful or accurate at [information@mbspwin.org](mailto:information@mbspwin.org)

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**KEY**

**COMPUTER-CONTROLLED MACHINE TOOL OPERATORS**  
 OPENINGS: 105 DEED WANTED | WAGE: \$19.64 DEED BLS  
 916 WANTED | WAGE: \$15.07 DEED BLS  
 HS/EQUIVALENT MODERATE OJT

**A PROJECTED GROWTH RATE**

**B CURRENT DEMAND (1 to 5 stars)**

**C ANNUAL OPENINGS**  
 DEED: Based on a 10-year projection 2010-20  
 WANTED ANALYTICS: Job postings Jan '15-Dec '15

**D MEDIAN HOURLY WAGE**  
 DEED: Based on a survey of MN employers  
 BLS: Based on federal estimates

**E ENTRY-LEVEL ED/TRAINING REQs**

**COLOR CODING BY MINIMUM EDUCATION LEVEL**

HIGH SCHOOL/EQUIVALENT	POSTSECONDARY CREDENTIAL	AA/AS AND BEYOND
------------------------	--------------------------	------------------

**TOP FIVE OCCUPATIONS, BY OPENING**

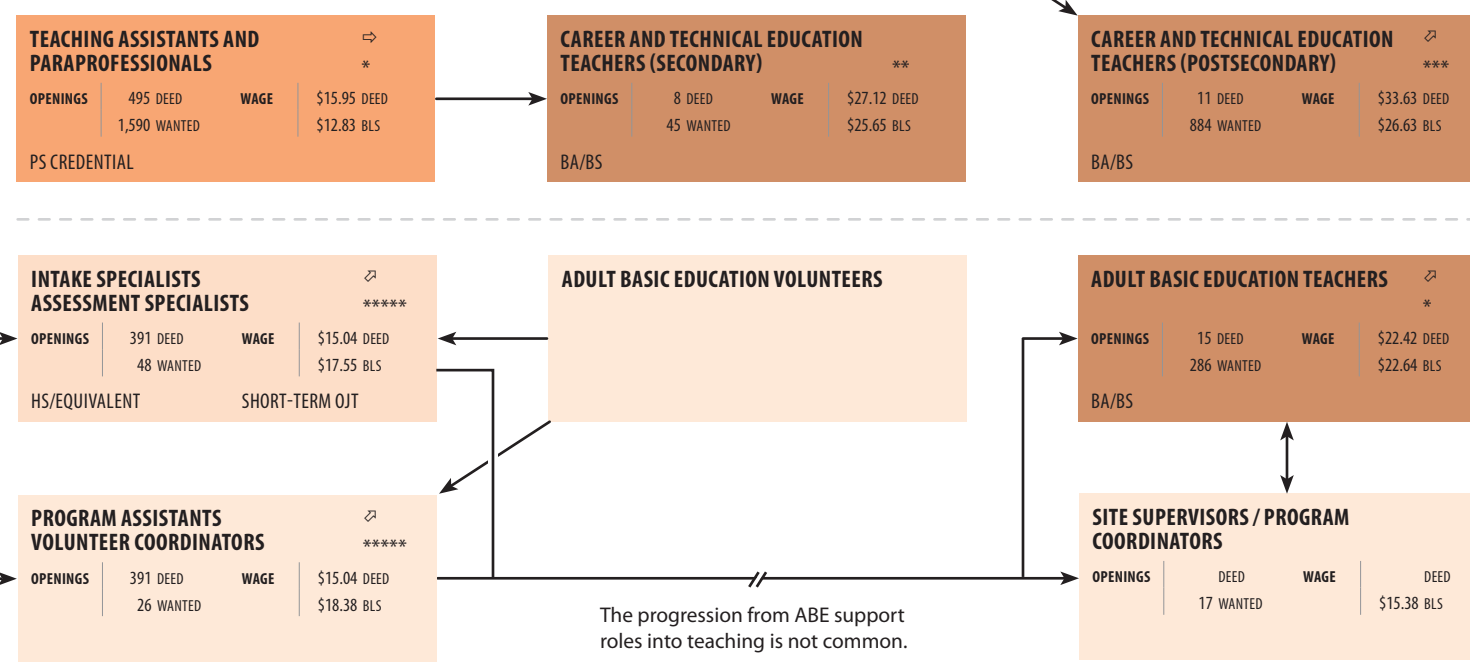
The top five occupations comprise **3,049** openings, or **85.9%** of all openings listed on this page.\*

RANK	OCCUPATION	OPENINGS	% OF TOTAL
1	TEACHING ASSISTANTS AND PARAPROFESSIONALS	1,590	44.8%
2	CAREER AND TECHNICAL EDUCATION TEACHERS (POST-SECONDARY)	884	24.9%
3	ADULT BASIC EDUCATION TEACHERS	286	8.1%
4	VOCATIONAL REHABILITATION COUNSELORS	145	4.1%
5	EMPLOYMENT COUNSELORS AND CASE MANAGERS	144	4.1%
22 OCCUPATIONS MAPPED		3,551	TOTAL OPENINGS

\* Based on WANTED Analytics numbers, excluding customer service representatives, administrative assistants, and receptionists.

CAREER AND TECHNICAL EDUCATION (CTE)

ADULT BASIC EDUCATION (ABE)



ENTRY-LEVEL OCCUPATIONS

HIGHER-LEVEL OCCUPATIONS

**HELP US IMPROVE THESE MAPS**  
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**ABOUT THIS CHART**

This chart maps common career progressions in workforce development, from entry-level on the left to higher-level occupations on the right.

**WORKFORCE DEVELOPMENT NOTES**

- "Workforce development" spans a number of systems, populations, and approaches, which are reflected here.
- While educational requirements for professionals in CTE, ABE, and VR are often well-defined (**CTE and ABE Teachers** usually require a BA/BS and a teacher's license; **Vocational Rehabilitation Counselors** often require an MA/MS, requirements in "traditional" workforce development (e.g. CBOs, local governments) vary widely. Generally, entry-level requirements include experience working with diverse populations, experience within other human services systems (e.g. TANF/MFIP), and/or industry-specific knowledge and connections.
- The ability to build and manage partnerships across systems and with employers is increasingly in demand at all occupational levels.
- Some employers find value in the **Global Career Development Facilitator (GCDF)** credential, which indicates competencies in career counseling and development, using labor market information, working with diverse populations, and program management. In the Twin Cities, the Normandale Community College offers the credential.
- **Adult Basic Education Teachers** are generally employed by school districts and must have a four-year degree and a teaching license. However, community-based organizations and county correctional facilities do hire some ABE teachers without requiring a license, though many of these teachers have a stand-alone adult education certification and/or a four-year degree.
- **Career and Technical Education Teachers** at the secondary level must have a four-year degree and a teaching license. At the postsecondary level the requirements vary by industry and are based on established industry and higher education standards.

**INDIVIDUALS CONSULTED**

- Julie Brekke, **Project for Pride in Living**
- Denise Felder, **Minnesota State Colleges and Universities**
- Nancy James, **HIRED**
- Anne Kilzer, **MN Workforce Council Association**
- Steve Kuntz, Marci Jasper, Maureen McAvoy, **MN Department of Employment and Economic Development—Vocational Rehabilitation Services**
- Judy Mortrude, **Center for Law and Social Policy**
- Nola Speiser, **MN Department of Employment and Economic Development**
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