

# Construction

## Drive for Five

# Workforce Development

# Gateway Occupations

December 13, 2024

**Prepared by RealTime Talent for:**

Anoka County Workforce Development Board  
Dakota-Scott Workforce Development Board  
Hennepin-Carver Workforce Development Board  
Minneapolis Workforce Development Board  
Ramsey County Workforce Innovation Board  
Washington County Workforce Development Board

# Construction (Trades)

MSP Metro Region



Industry Sector Employment: 90,549

Location Quotient (LQ): 0.82 (Low)

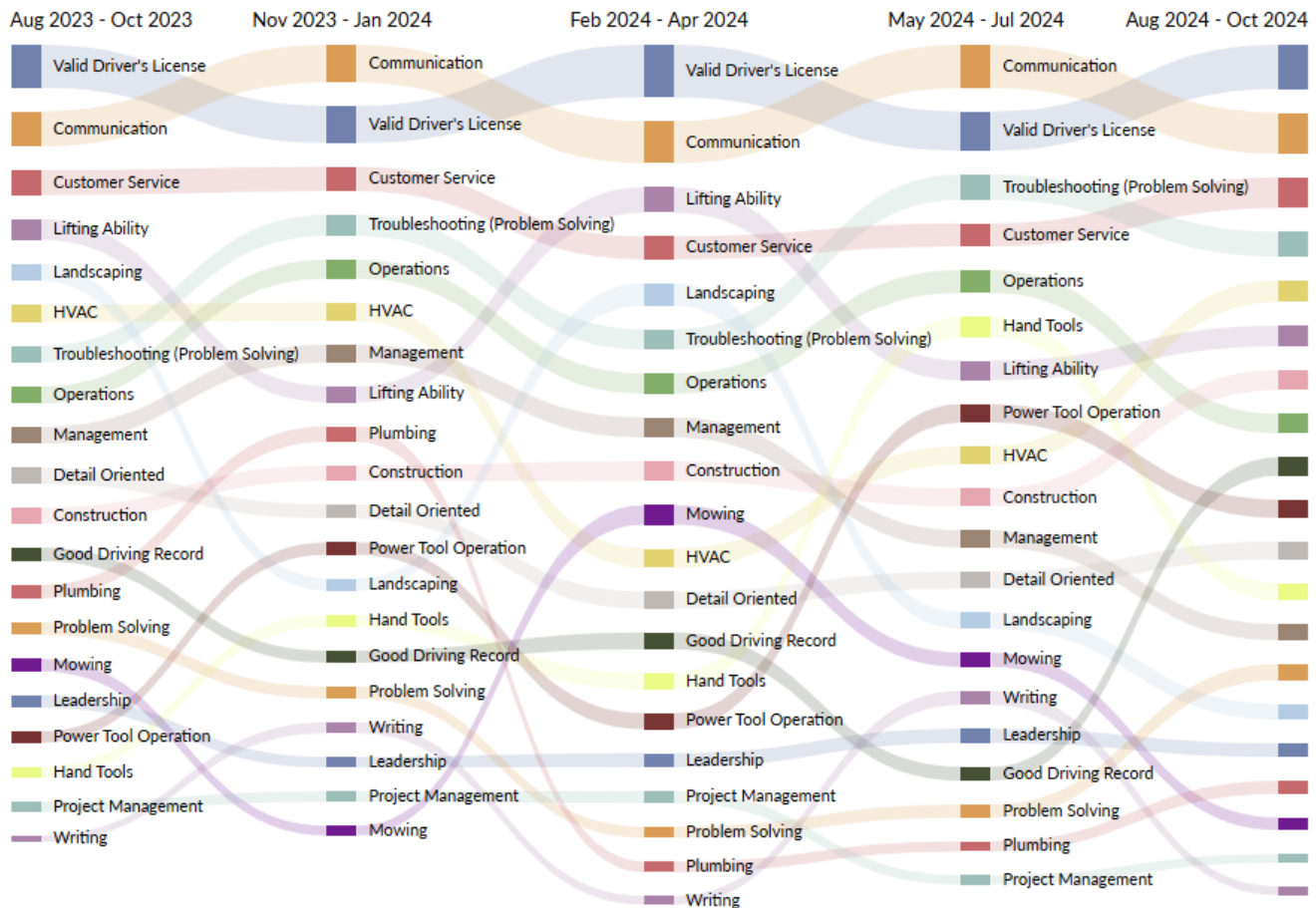
Average Annual Wages: \$89,807

## Featured Gateway Occupations in the Construction Industry Sector

SOC	Occupation	Current		5-Year Demand Forecast, Industry				Total Empl, All Industries	Share of Total Occ Employment in Construction Industry (23)	Typical Education, Training, and Experience Requirements
		Cons. Industry Empl	Cons. Industry Avg Ann Wages by Occ	Exits	Transfers	Empl Change	Total Demand			
47-2061	Construction Laborers	12,394	\$66,600	2,249	3,845	301	6,395	14,263	87%	None
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	6,365	\$99,500	1,152	1,766	46	2,963	7,649	83%	HS or GED, 5+ years experience
47-2111	Electricians	5,747	\$87,000	1,097	2,120	182	3,399	7,165	80%	HS or GED, Apprenticeship
47-2152	Plumbers, Pipefitters, and Steamfitters	4,243	\$90,800	708	1,416	10	2,134	5,056	84%	HS or GED, Apprenticeship
49-9021	HVAC and Refrigeration Mechanics and Installers	2,446	\$77,300	457	898	63	1,419	3,217	76%	Postsecondary Certificate, Long-Term OJT
<b>Architecture and Construction Career Cluster*</b>		<b>64,870</b>	<b>n/a</b>	<b>16,687</b>	<b>29,186</b>	<b>394</b>	<b>46,268</b>	<b>105,925</b>	<b>61.2%</b>	
<b>All Construction Industry</b>		<b>90,549</b>	<b>\$89,807</b>	<b>14,246</b>	<b>24,380</b>	<b>204</b>	<b>38,831</b>	<b>1,852,263</b>	<b>4.9%</b>	

\*Occupation cluster exits, transfers, employment change, and total demand represent data across all industries of employment, not only the Construction Industry.

## Top Skills and Credentials Sought by Companies Recruiting for Gateway Occupations



# Construction (Trades)

MSP Metro Region



Industry Sector Employment: 90,549      Location Quotient (LQ): 0.82 (Low)      Average Annual Wages: \$89,807

## Industry Location Quotient and Priority Gateway Occupations by Location

### Anoka – Industry LQ: 1.30 (High)

- 1) Construction Laborers (LQ 1.32)
- 2) Electricians (LQ 1.38)
- 3) Supervisors of Construction Workers (LQ 1.14)
- 4) Plumbers, Pipefitters, and Steamfitters (LQ 1.10)
- 5) HVAC and Refrigeration Mechanics (LQ 0.75)

#### Additional High LQ Occupations in Demand:

- 1) Control Valve Installers and Repairers (LQ 1.48)
- 2) Mechanical Door Repairers (LQ 2.11)

### Washington – Industry LQ: 0.98 (Average)

- 1) Construction Laborers (LQ 1.19)
- 2) Supervisors of Construction Workers (LQ 0.95)
- 3) Electricians (LQ 0.57)
- 4) Plumbers, Pipefitters, and Steamfitters (LQ 1.02)
- 5) HVAC and Refrigeration Mechanics (LQ 0.68)

#### Additional High LQ Occupations in Demand:

- 1) Supervisors of Landscaping and Groundskeeping Workers (LQ 1.11)

### Minneapolis – Industry LQ: 0.43 (Low)

- 1) Construction Laborers (LQ 0.54)
- 2) Supervisors of Construction Workers (LQ 0.52)
- 3) Electricians (LQ 0.52)
- 4) Plumbers, Pipefitters, and Steamfitters (LQ 0.56)
- 5) HVAC and Refrigeration Mechanics (LQ 0.38)

#### Additional High LQ Occupations in Demand:

- 1) Architectural and Civil Drafters (LQ 1.64)
- 2) Surveying and Mapping Technicians (LQ 1.66)

### Ramsey - Industry LQ: 0.70 (Low)

- 1) Construction Laborers (LQ 0.72)
- 2) Supervisors of Construction Workers (LQ 0.69)
- 3) Plumbers, Pipefitters, and Steamfitters (LQ 1.16)
- 4) Electricians (LQ 0.68)
- 5) HVAC and Refrigeration Mechanics (LQ 0.81)

### Hennepin-Carver – Industry LQ: 0.89 (Low)

- 1) Construction Laborers (LQ 0.89)
- 2) Supervisors of Construction Workers (LQ 0.83)
- 3) Electricians (LQ 1.08)
- 4) Plumbers, Pipefitters, and Steamfitters (LQ 0.99)
- 5) HVAC and Refrigeration Mechanics (LQ 0.70)

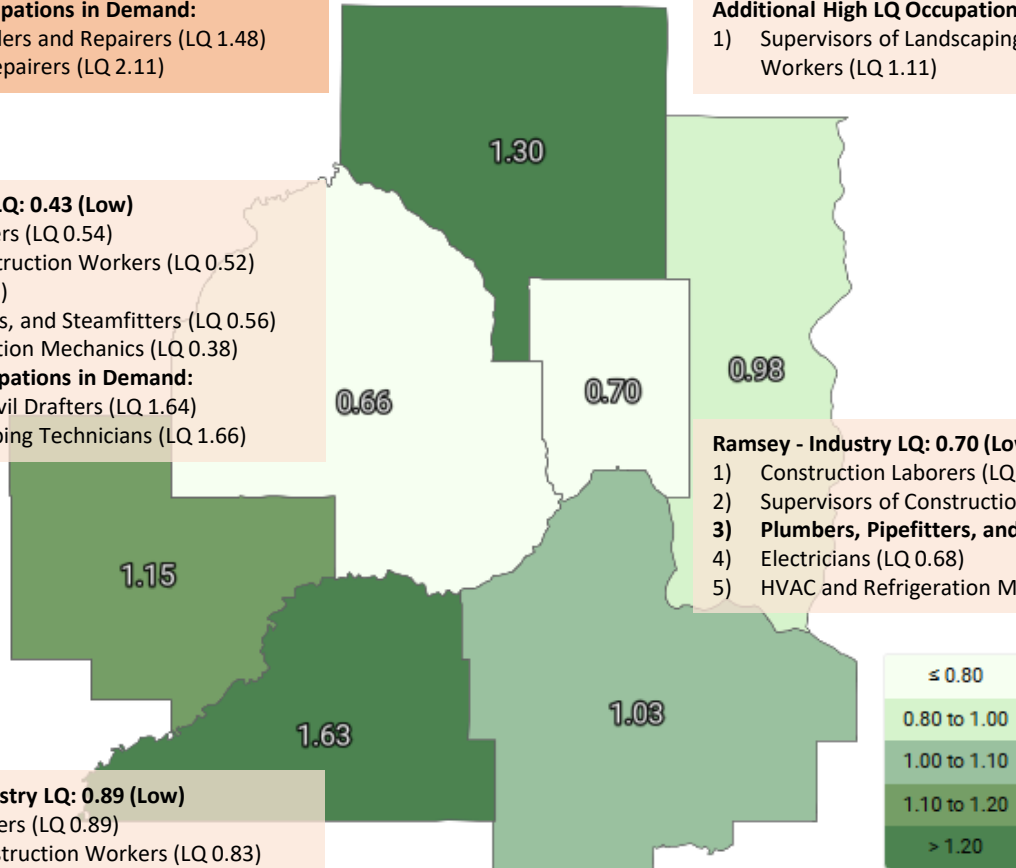
#### Additional High LQ Occupations in Demand:

- 1) Architectural and Civil Drafters (LQ 1.64)
- 2) Mechanical Door Repairers (LQ 1.19)

### MSP Metro Overview – Industry LQ: 0.82 (Low)

- 1) Construction Laborers (LQ 0.90)
- 2) Supervisors of Construction Workers (LQ 0.80)
- 3) Electricians (LQ 0.81)
- 4) Plumbers, Pipefitters, and Steamfitters (LQ 0.94)
- 5) HVAC and Refrigeration Mechanics (LQ 0.65)

Read more about the icons to the left, which reference alignment to Special Initiatives and the Green Economy, on pages 13 and 14.



# Construction Laborers

MSP Metro Region



An overview of gateway career opportunities in Construction (Trades) in the 7- County MSP Metro

Occupation	Description	Employed	Mean Annual Wages	Key Facts
<b>Construction Laborers</b>	May clean and prepare sites, dig trenches, set braces to support excavations, erect scaffolding, and clean up rubble, debris, and other waste materials.	<b>14,263</b>	<b>\$65,800</b>	<b>Unemployment:</b> 5.7% (814 people) <b>Underemployed:</b> 2,170 people <b>Forecast annual growth:</b> +0.4% <b>Likely talent shortage:</b> No

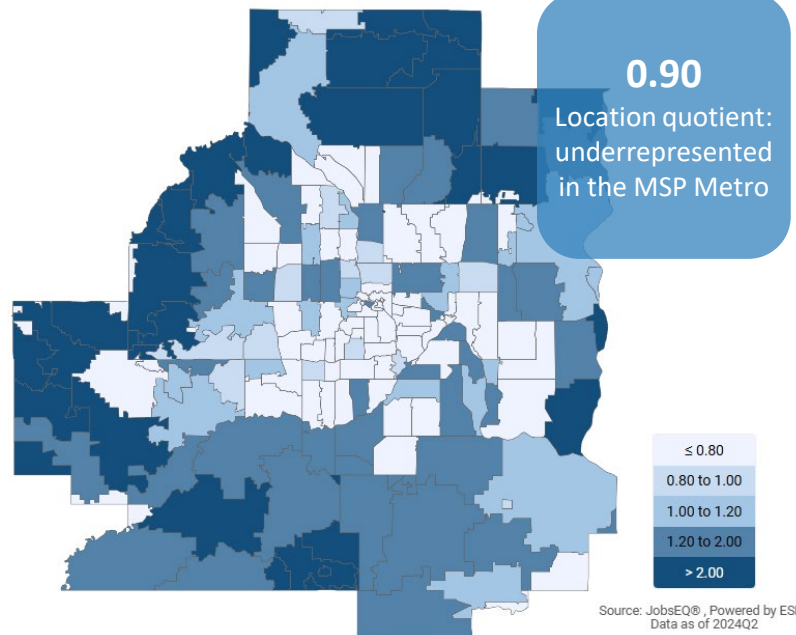
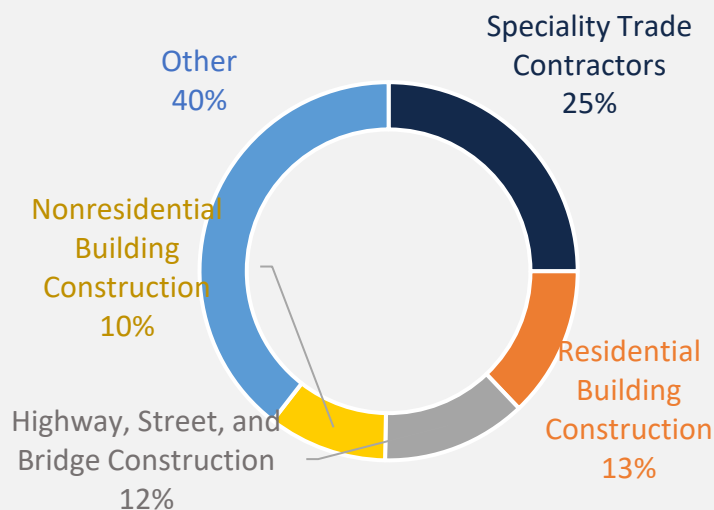
## Preferred Education and Experience Advertised in Online Job Postings

Education Level	Unique Postings	% of Total
No Education Listed	527	73%
High school or GED	186	26%
Associate's degree	5	1%
Bachelor's degree	11	2%
Master's degree	1	0%
Ph.D. or professional degree	0	0%

Minimum Experience	Unique Postings	% of Total
No Experience Listed	558	78%
0 - 1 Years	102	14%
2 - 3 Years	50	7%
4 - 6 Years	7	1%
7 - 9 Years	0	0%
10+ Years	3	0%

## Employment Concentration

### Industries of Employment



Alignment to Special Initiatives:





An overview of gateway career opportunities in Construction (Trades) in the 7- County MSP Metro

## Top Technical and Digital Skills in Demand (Job Postings)

- Microsoft Office Suite (Excel)
- Microsoft Outlook
- Disassembler
- Geographic Information Systems
- AutoCAD

## Top Specialized Skills and Experience in Demand (Job Postings)

- Construction
- Hand Tools / Power Tools
- Carpentry
- Landscaping
- Trenching
- General Mathematics
- Demolition
- Excavation
- Heavy Equipment Operation
- Sawing

## Top Job Titles by Volume

- General Laborers
- Construction Laborers
- Laborers
- Construction Workers
- Skilled Laborers

## Top Common Skills in Demand (Job Postings)

- Lifting Ability/ Loading/ Unloading
- Communication
- Good Driving Record
- Detail Oriented
- Customer Service

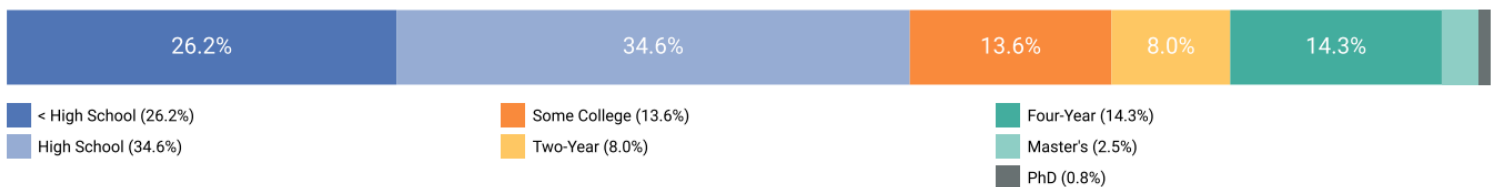
## Average Wages by Experience (Positions Currently Held)



## Top Credentials and Qualifications in Demand

- Valid Driver's License (D, A, C, B)
- 10-Hour OSHA General Industry Card
- Cardiopulmonary Resuscitation
- Forklift Certification

## Educational Attainment of Workforce



Alignment to Special Initiatives:





# Construction Supervisors



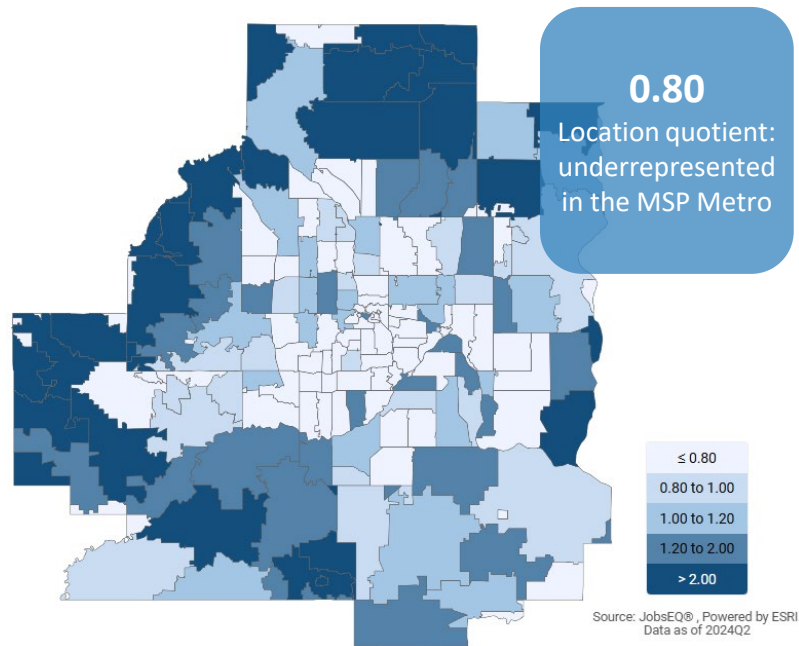
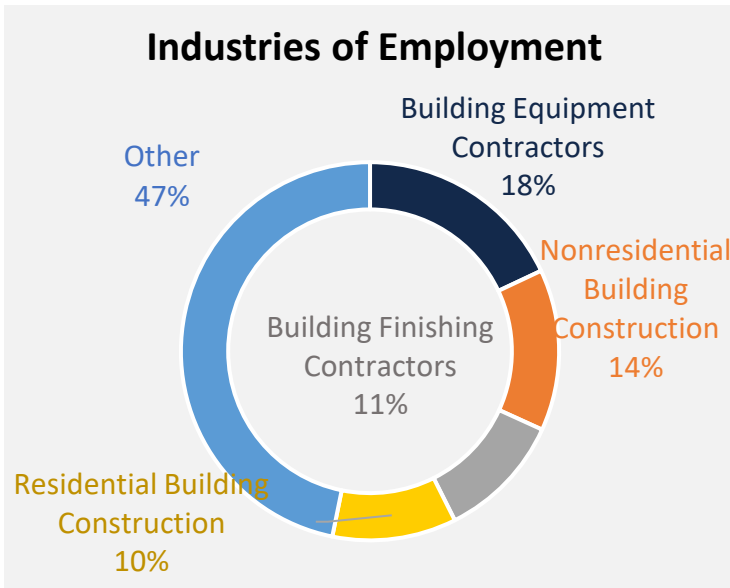
An overview of gateway career opportunities in Construction (Trades) in the 7- County MSP Metro

Occupation	Description	Employed	Mean Annual Wages	Key Facts
<b>Carpenters</b>	Supervise, coordinate, or schedule the activities of construction or extractive workers. Assign work to employees, based on material or worker requirements of jobs.	<b>7,649</b>	<b>\$100,100</b>	<b>Unemployment:</b> 1.9% (133 people) <b>Underemployed:</b> 1,749 people <b>Forecast annual growth:</b> +0.1% <b>Likely annual talent shortage:</b> Yes

## Preferred Education and Experience Advertised in Online Job Postings

Education Level	Unique Postings	% of Total	Minimum Experience	Unique Postings	% of Total
No Education Listed	390	76%	No Experience Listed	313	61%
High school or GED	102	20%	0 - 1 Years	21	4%
Associate's degree	13	3%	2 - 3 Years	92	18%
Bachelor's degree	39	8%	4 - 6 Years	73	14%
Master's degree	3	1%	7 - 9 Years	10	2%
Ph.D. or professional degree	1	0%	10+ Years	7	1%

## Employment Concentration



Alignment to Special Initiatives:



# Construction Supervisors



An overview of gateway career opportunities in Construction (Trades) in the 7- County MSP Metro

## Top Technical and Digital Skills in Demand (Job Postings)

- Microsoft Office Suite (Excel)
- Google Workspace
- Procore
- AutoCAD
- Autodesk Revit

## Top Specialized Skills and Experience in Demand (Job Postings)

- Construction
- Subcontracting
- Project Management
- Residential Roofing
- OSHA / Safety Standards
- Renovation
- Hand Tools / Power Tools
- Carpentry
- Commercial Roofing
- Sheet Metal

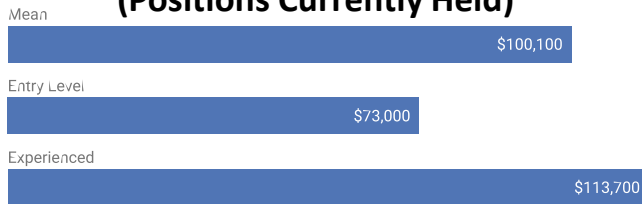
## Top Job Titles by Volume

- Subcontractors
- Construction Foremen
- Roofing Foremen
- Foremen
- Concrete Foremen
- Commercial Roofing Foremen

## Top Common Skills in Demand (Job Postings)

- Communication
- Leadership
- Customer Service
- Operations
- Management

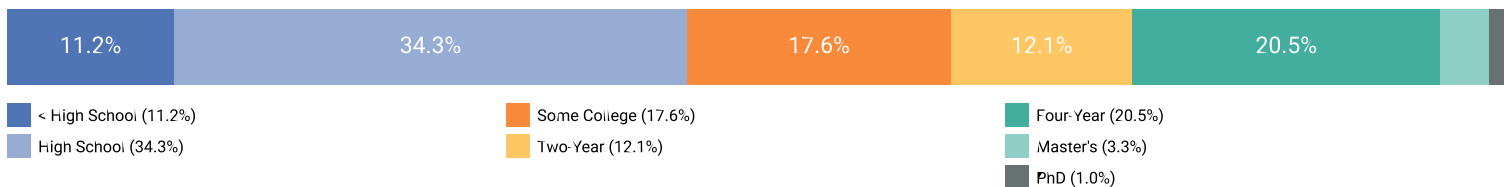
## Average Wages by Experience (Positions Currently Held)



## Top Credentials and Qualifications in Demand

- Valid Driver's License (D, A)
- First Aid Certification
- Cardiopulmonary Resuscitation
- 10-Hour OSHA General Industry Card

## Educational Attainment of Workforce



Alignment to Special Initiatives:



# Electricians



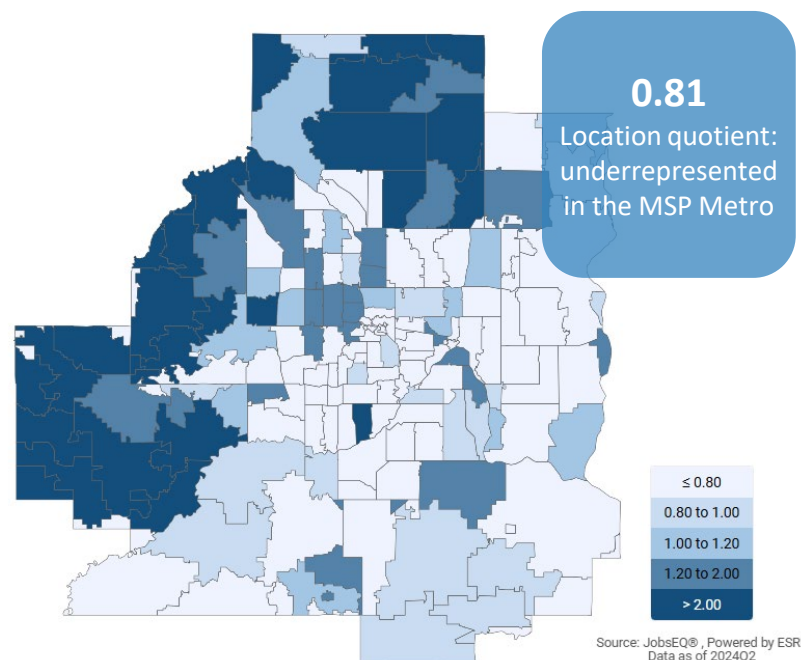
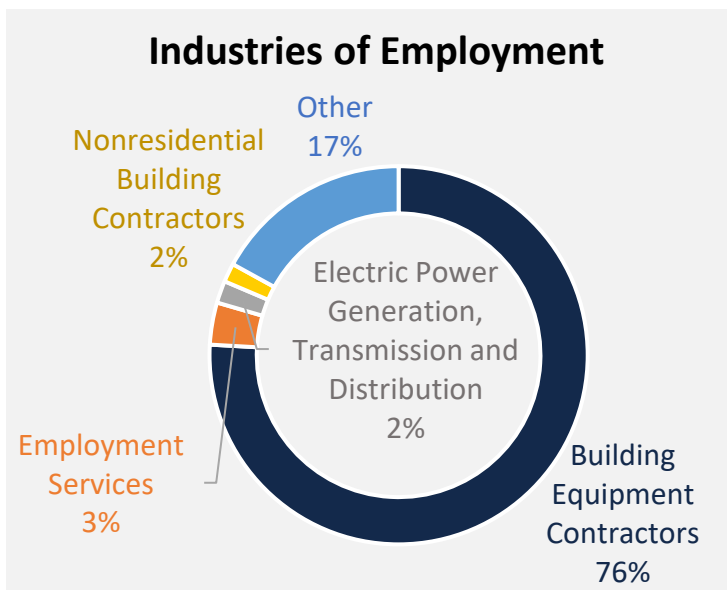
An overview of gateway career opportunities in Construction (Trades) in the 7- County MSP Metro

Occupation	Description	Employed	Mean Annual Wages	Key Facts
<b>Electricians</b>	Install, maintain, and repair electrical wiring, equipment, and fixtures. Ensure that work is in accordance with relevant codes.	<b>7,165</b>	<b>\$87,800</b>	<b>Unemployment:</b> 1.7% (104 people) <b>Underemployed:</b> 1,222 people <b>Forecast annual growth:</b> +0.5% <b>Likely annual talent shortage:</b> Yes

## Preferred Education and Experience Advertised in Online Job Postings

Education Level	Unique Postings	% of Total	Minimum Experience	Unique Postings	% of Total
No Education Listed	379	65%	No Experience Listed	356	61%
High school or GED	165	28%	0 - 1 Years	33	6%
Associate's degree	36	6%	2 - 3 Years	105	18%
Bachelor's degree	29	5%	4 - 6 Years	75	13%
Master's degree	5	1%	7 - 9 Years	9	2%
Ph.D. or professional degree	0	0%	10+ Years	5	1%

## Employment Concentration



Alignment to Special Initiatives:





An overview of gateway career opportunities in Construction (Trades) in the 7- County MSP Metro

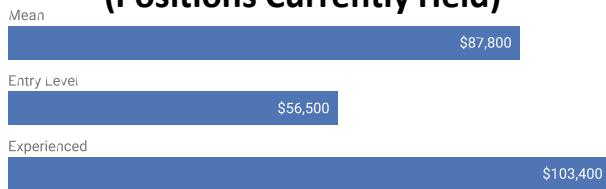
## Top Technical and Digital Skills in Demand (Job Postings)

- Microsoft Office Suite (Excel)
- Exacq (Video Surveillance)
- Accubid (Estimating Software)
- SAP Applications
- AutoCAD

## Top Job Titles by Volume

- Journeyman Electricians
- Electricians
- Low Voltage Technicians
- Master Electricians
- Maintenance Electricians
- Low Voltage Installers

## Average Wages by Experience (Positions Currently Held)



## Top Specialized Skills and Experience in Demand (Job Postings)

- Electrical Wiring
- Electrical Systems
- Low Voltage
- Blueprinting
- Hand Tools / Power Tools
- Programmable Logic Controllers
- Network Switches
- Wire and Cable Pulling
- Electrical Systems
- Relays

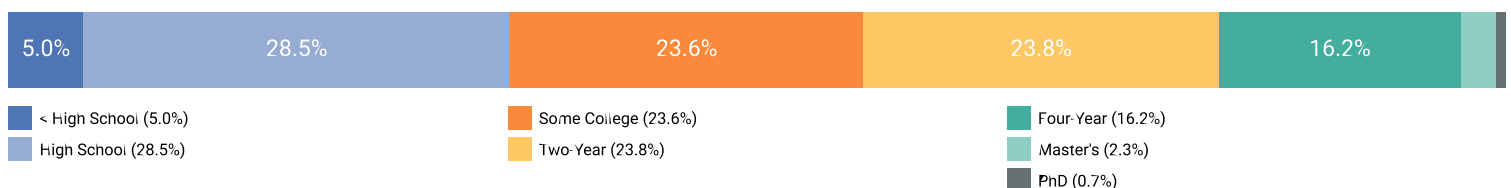
## Top Common Skills in Demand (Job Postings)

- Troubleshooting
- Communication
- Customer Service
- Operations
- Problem Solving

## Top Credentials and Qualifications in Demand

- Valid Driver's License (D)
- 30-Hour OSHA General Industry Card
- Journeyman Status
- Hazardous Materials Cert – Awareness Lvl

## Educational Attainment of Workforce



Alignment to Special Initiatives:

# Plumbers, Pipefitters, and Steamfitters



An overview of gateway career opportunities in Construction (Trades) in the 7- County MSP Metro

While plumbers, pipefitters, and steamfitters share a SOC code, each title maintains a unique set of knowledge, skills and responsibilities and are considered separate licensed trades. The unique needs of each of these roles should be considered in any workforce development initiative through close collaboration with unions and industry leaders.

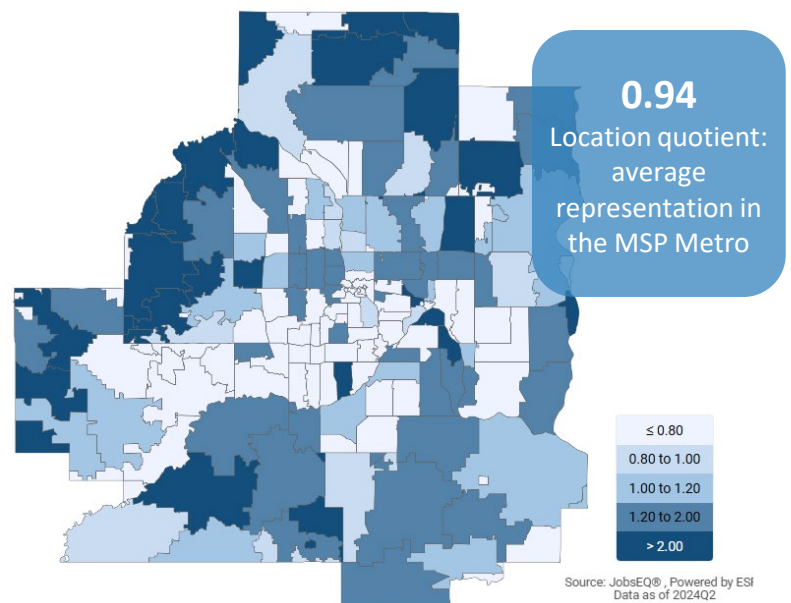
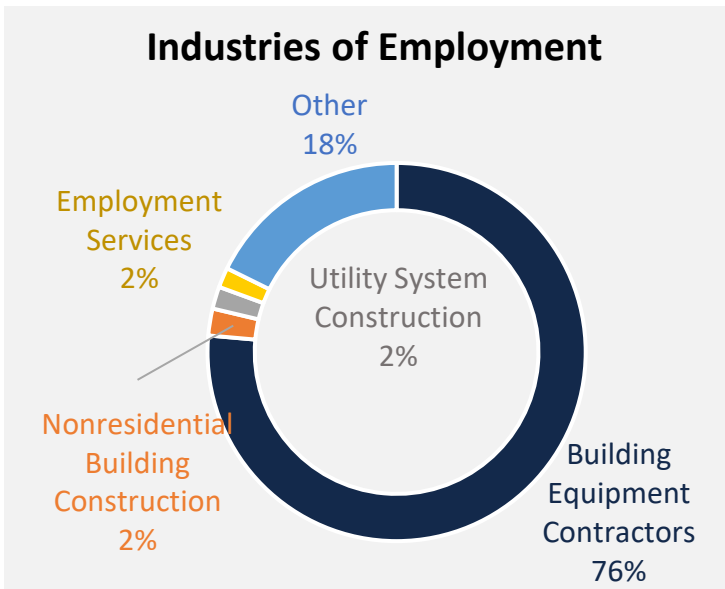
Occupation	Description	Employed	Mean Annual Wages	Key Facts
<b>Plumbers, Pipefitters, and Steamfitters</b>	Maintain or repair plumbing by replacing defective washers, replacing or mending broken pipes, or opening clogged drains.	<b>5,056</b>	<b>\$90,600</b>	<b>Unemployment:</b> 1.9% (82 people) <b>Underemployed:</b> 704 people <b>Forecast annual growth:</b> +0.0% <b>Likely annual talent shortage:</b> Yes

## Preferred Education and Experience Advertised in Online Job Postings

Education Level	Unique Postings	% of Total
No Education Listed	166	70%
High school or GED	62	26%
Associate's degree	10	4%
Bachelor's degree	4	2%
Master's degree	0	0%
Ph.D. or professional degree	0	0%

Minimum Experience	Unique Postings	% of Total
No Experience Listed	157	66%
0 - 1 Years	21	9%
2 - 3 Years	39	16%
4 - 6 Years	19	8%
7 - 9 Years	1	0%
10+ Years	1	0%

## Employment Concentration



Alignment to Special Initiatives:



An overview of gateway career opportunities in Construction (Trades) in the 7- County MSP Metro

### Top Technical and Digital Skills in Demand (Job Postings)

- Microsoft Office Suite (Outlook)
- AutoCAD
- Application Programming Interface (API)
- Procore

### Top Specialized Skills and Experience in Demand (Job Postings)

- Plumbing Systems
- Construction
- Valves (Piping)
- Hand Tools / Power Tools
- HVAC
- Renovation
- Plumbing Codes
- Fluid Conveyance
- Boilers
- Blueprint Reading

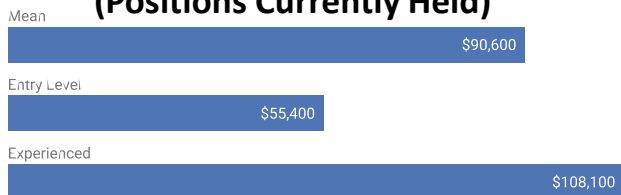
### Top Job Titles by Volume

- Plumbers
- Journeyman Plumbers
- Pipefitters
- Licensed Plumbers
- Plumbing Apprentices
- Pipeline Technicians

### Top Common Skills in Demand (Job Postings)

- Communication
- Customer Service
- Troubleshooting
- Detail-Oriented
- Lifting Ability

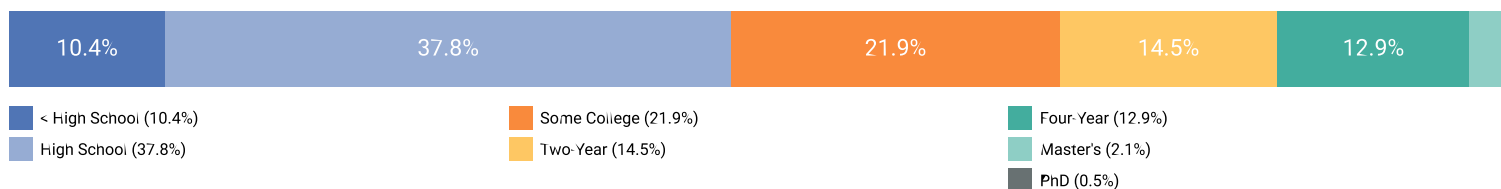
### Average Wages by Experience (Positions Currently Held)



### Top Credentials and Qualifications in Demand

- Valid Driver's License (D, A)
- HVAC Certification
- NICET Level I / II
- EPA Universal Certification

### Educational Attainment of Workforce



Alignment to Special Initiatives:



# HVAC and Refrigeration Mechanics and Installers

## MSP Metro Region



An overview of gateway career opportunities in Construction (Trades) in the 7- County MSP Metro

HVAC Techs, Mechanics, and Installers are represented by SOC 49-9021. An emerging career, Building Automation Systems (BAS) Techs is embedded within official classifications of SOC 49-9021. BAS Tech opportunities are new and emerging and a subset job title within this occupation to watch in the years ahead.

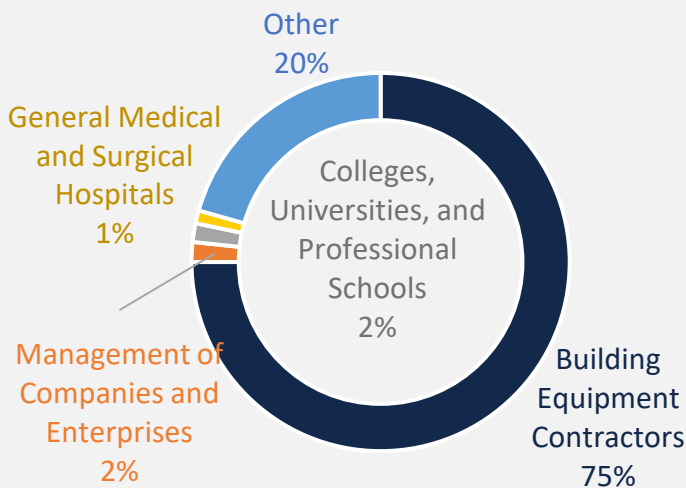
Occupation	Description	Employed	Mean Annual Wages	Key Facts
<b>HVAC and Refrigeration Mechanics and Installers</b>	Apply knowledge of various building trades to computer control systems to manage building environments. Engage customers to maintain systems.	<b>3,217</b>	<b>\$78,400</b>	<b>Unemployment:</b> 1.5% (38 people) <b>Underemployed:</b> 457 people <b>Forecast annual growth:</b> +0.4% <b>Likely annual talent shortage:</b> Yes

### Preferred Education and Experience Advertised in Online Job Postings

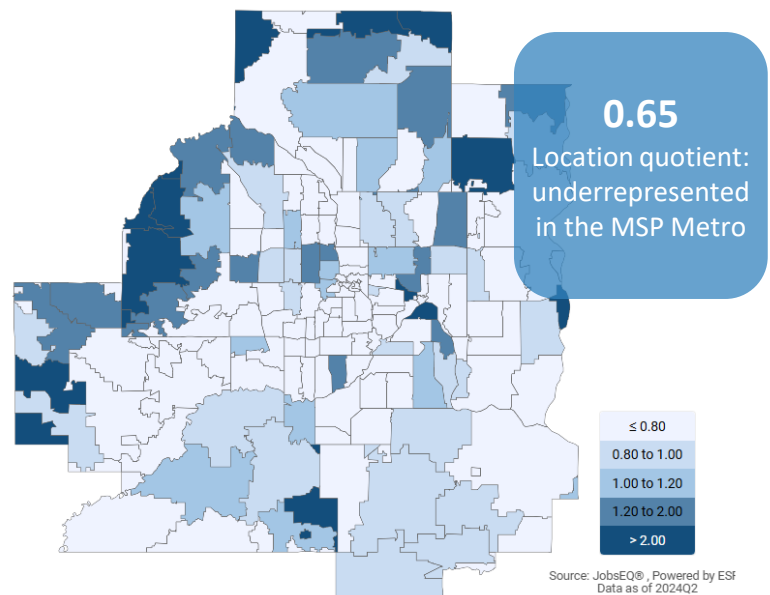
Education Level	Unique Postings	% of Total
No Education Listed	419	59%
High school or GED	219	31%
Associate's degree	70	10%
Bachelor's degree	56	8%
Master's degree	2	0%
Ph.D. or professional degree	1	0%

Minimum Experience	Unique Postings	% of Total
No Experience Listed	274	39%
0 - 1 Years	87	12%
2 - 3 Years	182	26%
4 - 6 Years	139	20%
7 - 9 Years	13	2%
10+ Years	14	2%

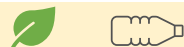
### Industries of Employment



### Employment Concentration



Alignment to Special Initiatives:





An overview of gateway career opportunities in Construction (Trades) in the 7- County MSP Metro

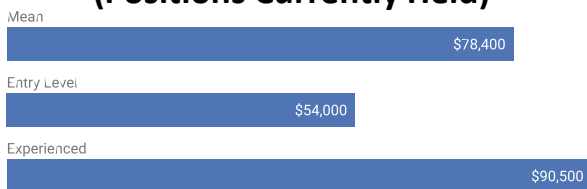
## Top Technical and Digital Skills in Demand (Job Postings)

- Microsoft Office Suite (Excel)
- Inventory Control Systems
- Autodesk Revit
- AutoCAD
- CRM Software

## Top Job Titles by Volume

- HVAC Technicians
- HVAC Service Technicians
- HVAC Installers
- HVAC Refrigeration Technicians
- HVAC Controls Technicians
- Refrigeration Technicians

## Average Wages by Experience (Positions Currently Held)



## Top Specialized Skills and Experience in Demand (Job Postings)

- HVAC Controls
- Boilers
- Preventive Maintenance
- Refrigerant
- Plumbing
- Ventilation
- Building Automation
- Building Management System
- Systems Integration
- BACnet

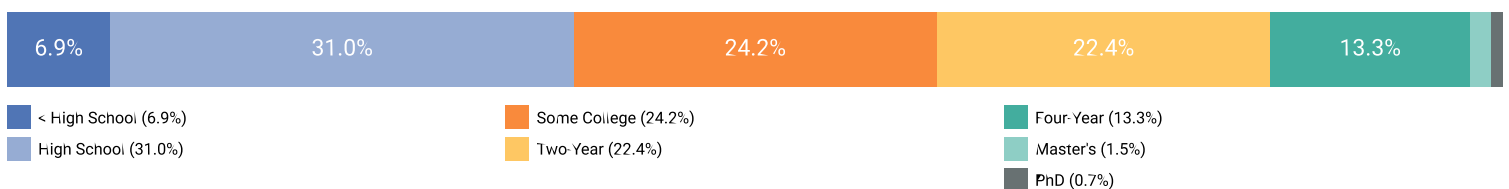
## Top Common Skills in Demand (Job Postings)

- Troubleshooting
- Customer Service
- Communication
- Operations
- Sales

## Top Credentials and Qualifications in Demand

- Valid Driver's License (D)
- EPA Universal Certification
- 30-Hour OSHA General Industry Card
- NATE Certification

## Educational Attainment of Workforce (HVAC)



Alignment to Special Initiatives:





### Definitions

#### Industry Sectors

**Construction (Trades)** – In alignment with the Minnesota Department of Employment and Economic Development (MN DEED), this industry sector has been defined in this report by NAICS 23.

**Educational Services** – In alignment with MN DEED, this industry sector is defined as NAICS 61.




**Caring Professions (Health Care and Social Assistance)** – In alignment with MN DEED, this industry sector is defined as NAICS 62.

**Information Technology** – In alignment with MN DEED, this sector is defined as the cluster of occupations including all Computer and Mathematical Occupations (SOC 15-0000), Computer and Information Systems Managers (SOC 11-3021) and Computer Hardware Engineers (SOC 17-2061).

**Manufacturing** – In alignment with MN DEED, this industry sector is defined as NAICS 31; however, additional similar workforce needs are likely to exist in the related Wholesale Trade (NAICS 42), Transportation and Warehousing (NAICS 48) industries that are not included in the industry-level analysis in this report but are represented within occupation-level analysis.

#### Special Initiatives

##### Green Job Categories

-  New and Emerging
-  Increased Demand
-  Enhanced Skills

 M-SPIRE (NSF Finalist)

 Med Tech 3.0

 CHIPS Act

#### Occupational Selections

Featured Gateway Occupations in each industry sector are identified by their representation in a related career cluster of occupations aligned in core function area to the industry, with 50% or more of occupational employment being concentrated in that industry sector. Featured Gateway Occupations must also meet the following wage, demand and credential requirements:

**WAGES** - Have an average annual wage at or above \$48,300, which is the estimated full-time worker's salary needed to meet local basic needs (cost of living) based on MN DEED's published living wage for a household of 1 full-time, 1 part-time worker and one child. These estimates are as of 2023 in the seven county Minneapolis-Saint Paul Metropolitan Planning Region (PR), which is \$72,444 (or \$23.22 per hour). More information can be found at: <https://mn.gov/deed/data/data-tools/col/>

**DEMAND** – Meet at least two of the following four criteria: forecast higher than average regional growth over the next five years; 2) Forecast needed replacement of over half of the workforce employed as of 2024Q2 estimates over the next five years; 3) Have an unemployment rate over 3% as of 2024Q2 estimates; 4) Have an average 30-day job posting volume above 200 postings in the region.

**REQUIREMENTS** – Typically require no more than a two-year degree (certificate, credential, high school diploma, or no formal educational experience).




An overview of opportunities in Green Construction Careers in the 7- County MSP Metro

### Implications of a Green Economy

Green economic activities and technologies have differentially impacted and, in some cases, redefined occupations. The National Center for O\*NET Development refers to this process as the “greening” of occupations and defines this as follows:

The “greening” of occupations refers to the extent to which green economy activities and technologies increase the demand for existing occupations, shape the work and worker requirements needed for occupational performance, or generate unique work and worker requirements.

Out of this definition, O\*NET developed three general occupational categories to describe the differing consequences of green economy activities and technologies on how occupations are performed. The Green occupational categories assigned to the occupations are:

-  **Green New & Emerging** — The impact of green economy activities and technologies is sufficient to create the need for unique work and worker requirements, which results in the generation of new occupations.
-  **Green Increased Demand** — These occupations encompass "indirect jobs" to the green economy, including energy consulting or research and other related business services.
-  **Green Enhanced Skills** — The impact of green economy activities and technologies results in a significant change to the work and worker requirements of an existing O\*NET-SOC occupation.

This report focuses on jobs that have been identified as "Green Occupations" by O\*NET and are heavily concentrated within the Construction Industry (NAICS 23). These occupations span all three categories above.

Green Occupations in Construction are found in the following O\*NET's Green Economy Sectors:

- **Green Construction** — This sector covers activities related to constructing new green buildings, retrofitting residential and commercial buildings, and installing other green construction technology.
- **Renewable Energy Generation** — This sector covers activities related to developing and using energy sources such as solar, wind, geothermal, and biomass. This sector also includes traditional, non-renewable sources of energy undergoing significant green technological changes (e.g., oil, coal, gas, and nuclear).
- **Research, Design, and Consulting Services** — This sector encompasses "indirect jobs" to the green economy which includes activities such as energy consulting or research and other related business services.

Workforce implications to existing Construction roles in these sectors of the Green Economy revolve around energy reduction, green retrofitting, use of green building materials, inspecting greener building materials, and reducing energy costs in all stages of the constructions process.