



CONSTRUCTION

2016

THE COLUMBIA-WILLAMETTE WORKFORCE COLLABORATIVE

Working together to support and develop regional talent.



ABOUT THE COLUMBIA-WILLAMETTE WORKFORCE COLLABORATIVE

The Columbia-Willamette Workforce Collaborative (Collaborative) is a partnership between the Clackamas Workforce Partnership, Workforce Southwest Washington (formerly the Southwest Washington Workforce Development Council) and Worksystems: the three Workforce Development Boards covering the Portland-Vancouver Metropolitan Area. The Collaborative delivers a unified approach to serving industry, supporting economic development, and guiding public workforce training investments to better address the needs of our combined labor shed.

We know that people are willing to travel throughout the region for the best opportunities and that employers need the most qualified workers regardless of where they live. By working together, we can cultivate our regional talent pool and build the foundation for a strong economy.

ABOUT THIS REPORT

The Collaborative is focused on aligning and investing resources to support the workforce needs of four sectors: Advanced Manufacturing, Health Care, Software/IT, and Construction. Sectors are chosen based on factors such as their economic significance to the region, current number of openings and job growth projections, average wages that support self-sufficiency, and career ladder opportunities across the skill continuum. By examining labor market intelligence (such as the data contained in this report) and vetting the information with business partners, we are able to better understand industry trends, identify current and emergent workforce needs, and develop customized solutions for each sector.

ACKNOWLEDGEMENTS

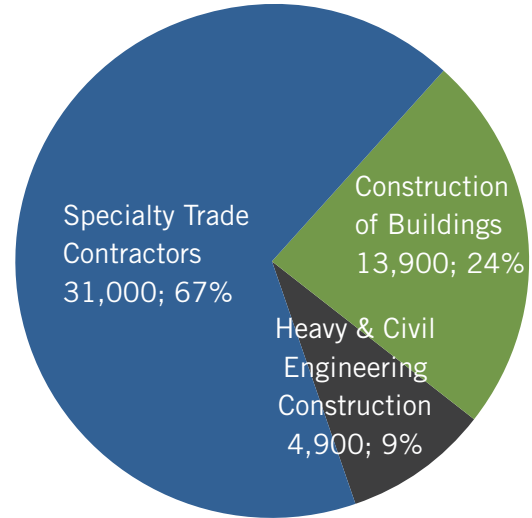
Much of the data in this report was provided by the Oregon Employment Department and the Washington Employment Security Department, key partners in the region's workforce development system. The Collaborative is dedicated to assuring this information is regularly updated and presented in a way that advances the region's capacity to understand and align regional workforce supply with business demand in key industry sectors.

OVERVIEW

With 60,000 jobs and a payroll of \$3.3 billion, Construction accounts for 6 percent of the greater Portland region’s private-sector employment and 7 percent of payroll.

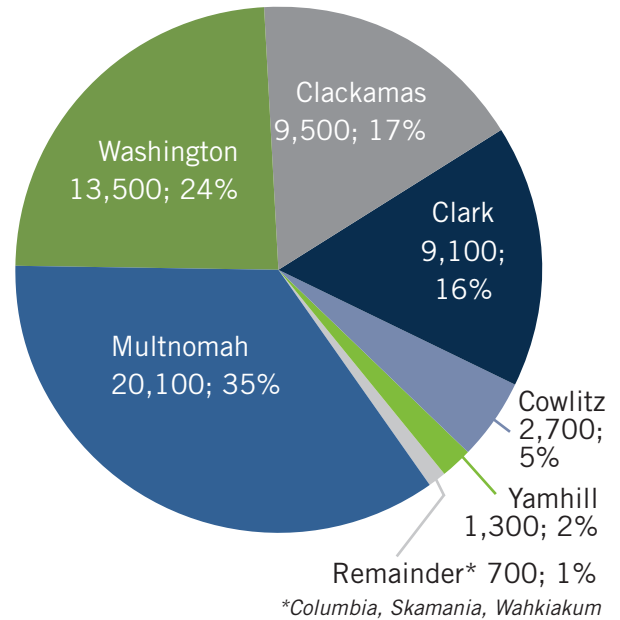
The Construction sector contributed approximately \$5.3 billion to the metro area’s Gross Domestic Product in 2014; 3.3 percent of all output.

CONSTRUCTION EMPLOYMENT BY COMPONENT GREATER PORTLAND REGION: 2015



Source: EMSI

CONSTRUCTION EMPLOYMENT BY COUNTY GREATER PORTLAND REGION: 2015



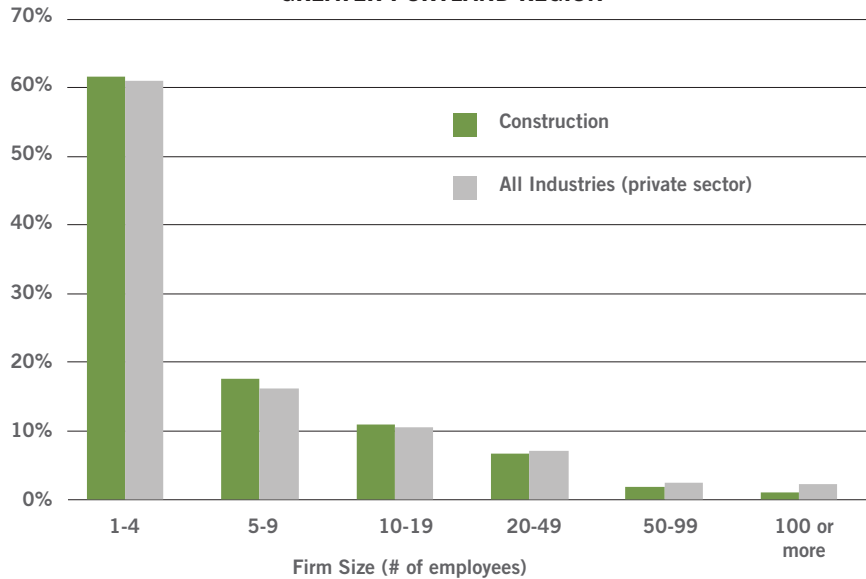
Source: EMSI

Construction jobs are found throughout the area, but are slightly less concentrated in Multnomah County and more concentrated in Clackamas and Clark counties.

The Construction sector includes companies primarily engaged in the construction of buildings, engineering projects (e.g., highways), preparing sites for new construction, and specialty trades (e.g., painting, plumbing, electrical).

FIRM CHARACTERISTICS

**FIRMS BY SIZE CLASS: CONSTRUCTION
GREATER PORTLAND REGION**



Source: Oregon Employment Department, Washington Employment Security Department

There are roughly 7,300 Construction establishments in the region.

The average size of a Construction firm is half that for all firms: 6 employees per company versus 12 overall.

90 percent of the region's Construction employment is in firms employing fewer than 20 people.

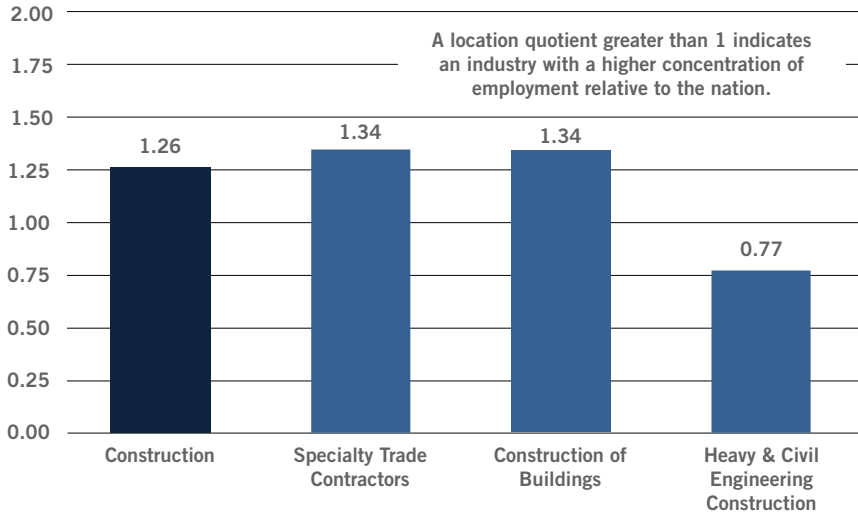
MAJOR EMPLOYERS

Alliant Systems	Interstate Roofing Inc.	Prairie Electric
Andersen Construction Co	JH Kelly	Streimer Sheet Metal Works Inc.
Bruun Construction	Kiewit Infrastructure West	Tapani Underground
Christenson Electric	Moore Excavation	Walsh Construction Co.
Harder Mechanical	Oregon Electric Group	Western Partitions
Hoffman Construction	Pacific Northern Environmental	

Source: Equifax (EMS), The Business Journal

CONCENTRATION

LOCATION QUOTIENTS CONSTRUCTION AND COMPONENTS GREATER PORTLAND REGION: 2014



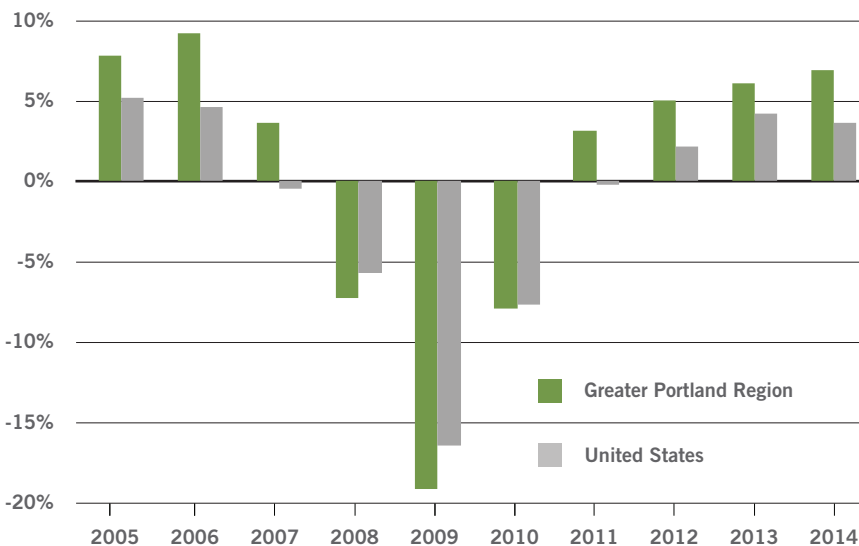
Source: Oregon Employment Dept.; Washington Employment Security Dept., U.S. Bureau of Labor Statistics

Location quotients are used to measure a sector's employment concentration in an area. A number greater than one indicates a higher concentration of employment relative to the nation.

Construction employment is slightly more concentrated in the Portland region compared to the nation largely due to our size, and our population and job growth which fuels demand for housing and commercial space.

EMPLOYMENT TRENDS

CONSTRUCTION ANNUAL GROWTH RATES GREATER PORTLAND REGION VS. UNITED STATES



Source: EMSI

Construction is a cyclical industry, with dramatic booms (1990s, mid-2000s) and busts (Great Recession).

- Construction was one of the hardest-hit industries in the recession, losing nearly one-third of all jobs (21,000).
- Since turning the corner in 2011, it has added jobs faster than its national counterpart.
- It's been one of the fastest-growing industries in recent years, outpacing the rest of the economy two-to-one.
- Despite strong growth, Construction is still nearly 10,000 jobs below its pre-recession peak of 66,800 jobs (down 17 percent).

CONSTRUCTION JOBS PER 100 GREATER PORTLAND REGION



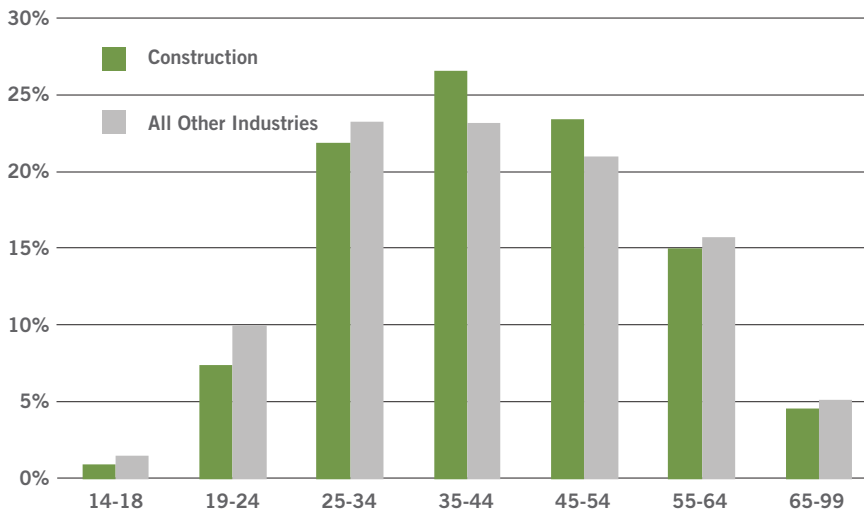
Source: EMSI

Construction accounts for about 5-6 out of every 100 jobs in the economy; a ratio that economists consider healthy and sustainable over the long term.

During the housing boom, this ratio shot up to more than 7 jobs-per-100; higher than normal.

CHARACTERISTICS OF THE WORKFORCE

CONSTRUCTION EMPLOYMENT BY AGE GREATER PORTLAND REGION: 2014



Source: U.S. Census Bureau; Longitudinal Employer-Household Dynamics

One-fifth of the region's Construction workforce is at, or nearing, retirement age.

Younger workers (under 35 years of age) are less represented in Construction compared to the overall economy.

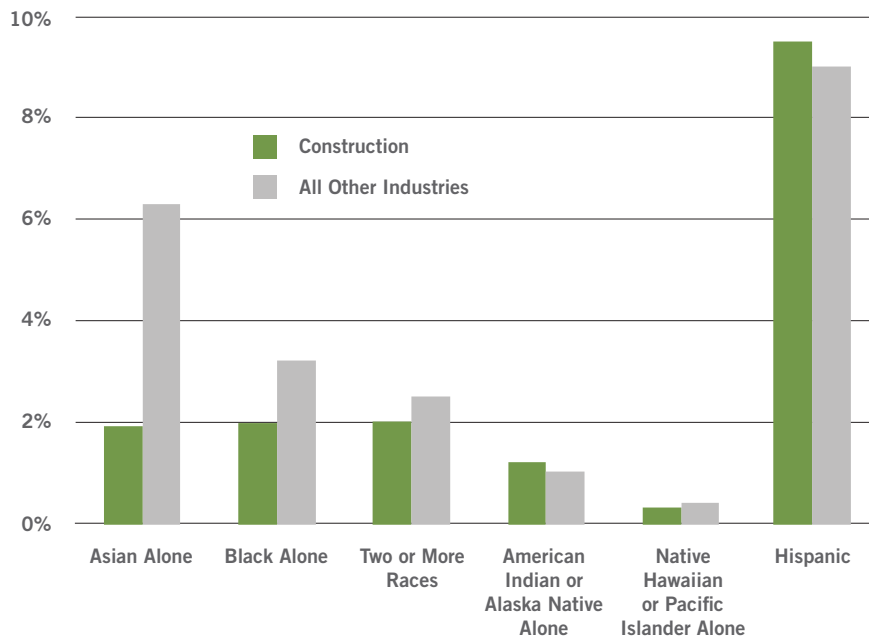
**CONSTRUCTION EMPLOYMENT BY GENDER
GREATER PORTLAND REGION: 2014**



Source: U.S. Census Bureau; Longitudinal Employer-Household Dynamics

The Construction sector is overwhelmingly male; 83 percent of the workforce compared to 52 percent for all industries.

**CONSTRUCTION EMPLOYMENT BY RACE (NONWHITE) AND ETHNICITY
GREATER PORTLAND REGION: 2014**



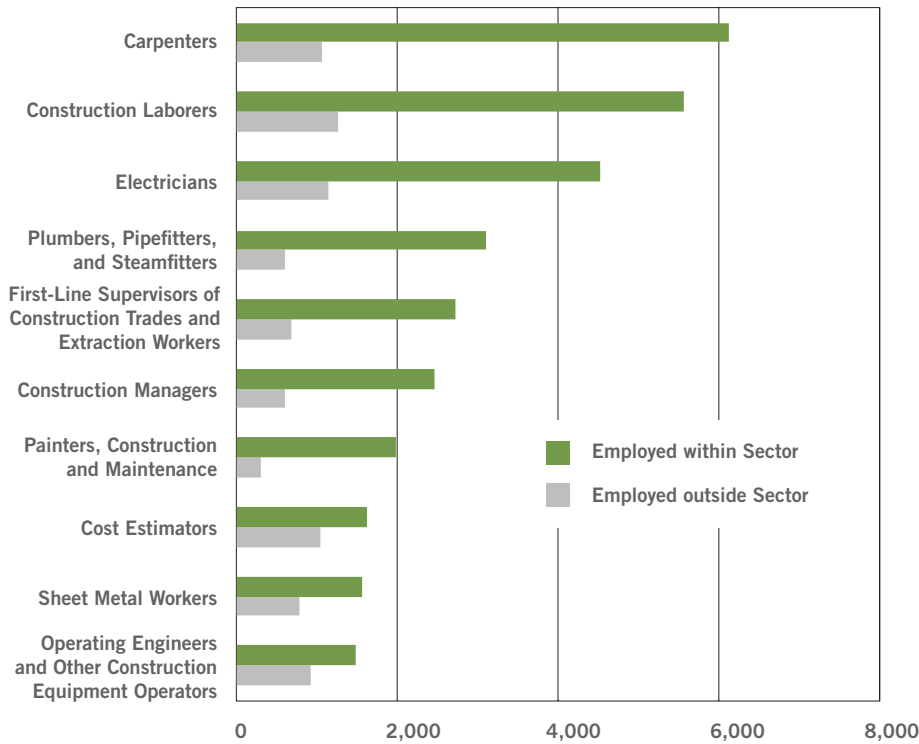
Whites make up the vast majority of the Construction workforce; 92 percent compared to 87 percent across all other industries.

Hispanics comprise a greater share of the workforce compared to all other industries, while Blacks and Asians are underrepresented.

Recognizing the underrepresentation of people of color and women in Construction, the industry has identified increasing diversity as a primary goal.

OCCUPATIONS

**TOP 10 CONSTRUCTION OCCUPATIONS
EMPLOYMENT WITHIN SECTOR VS. OUTSIDE OF SECTOR
GREATER PORTLAND REGION: 2015**



Roughly 160 occupations are represented in Construction.

Seven of the 10 largest occupations are relatively unique to the sector and not often found elsewhere in the economy.

Source: EMSI

TOP CONSTRUCTION OCCUPATIONS (ALL INDUSTRIES): GREATER PORTLAND REGION

Occupation	2014	2024	Estimated Annual Openings Due to Growth
Carpenters	6,826	8,667	184
Construction Laborers	6,629	8,365	174
Electricians	5,815	6,948	113
Supervisors of Construction Trades and Extraction Workers	3,307	4,299	99
Painters, Construction and Maintenance	2,084	2,960	88
Plumbers, Pipefitters, and Steamfitters	3,759	4,568	81
Construction Managers	3,010	3,656	65
Cost Estimators	2,592	3,239	65
Heating, Air Conditioning, & Refrigeration Mechanics & Installers	1,717	2,209	49
Roofers	1,458	1,805	35
Drywall and Ceiling Tile Installers	1,266	1,556	29

Source: EMSI

TOP CONSTRUCTION OCCUPATIONS (SECTOR): GREATER PORTLAND REGION

Occupation	2014 Sector Employment	% of Sector Employment	2014 Median Wage*	% of Median Wage, All Occs.*	Location Quotient*	Typical Entry Level Education
Carpenters	5,827	10.2%	\$19.75	105%	1.41	High school diploma or equivalent
Construction Laborers	5,439	9.6%	\$17.32	92%	0.94	Less than high school
Electricians	4,724	8.3%	\$36.49	193%	1.27	High school diploma or equivalent
Plumbers, Pipefitters, and Steamfitters	3,187	5.6%	\$37.21	197%	1.27	High school diploma or equivalent
Supervisors of Construction Trades & Extraction Workers	2,669	4.7%	\$31.16	165%	0.84	High school diploma or equivalent
Construction Managers	2,442	4.3%	\$42.57	225%	1.74	Bachelor's degree
Painters, Construction and Maintenance	1,801	3.2%	\$17.23	91%	1.25	Less than high school
Sheet Metal Workers	1,608	2.8%	\$30.70	163%	1.60	High school diploma or equivalent
Cost Estimators	1,612	2.8%	\$26.26	139%	2.22	Bachelor's degree
Operating Engineers & Other Construction Equipment Operators	1,497	2.6%	\$28.00	148%	0.82	High school diploma or equivalent

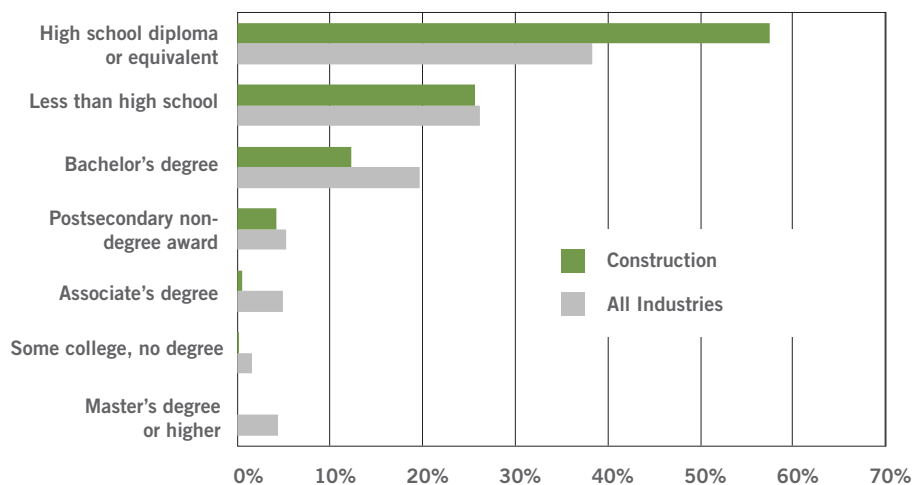
*7-county metro area, all industries

Source: EMSI; Bureau of Labor Statistics

The top 10 occupations make up over half of total employment.

EDUCATIONAL REQUIREMENTS

**CONSTRUCTION EMPLOYMENT BY TYPICAL ENTRY-LEVEL EDUCATION
GREATER PORTLAND REGION: 2015**



Eight out of every 10 Construction jobs require a high school diploma or less.

15 percent call for an Associate's degree or higher; a significantly smaller proportion than for all other industries (29%).

Seven of the 10 largest occupations require an apprenticeship or moderate on-the-job training.

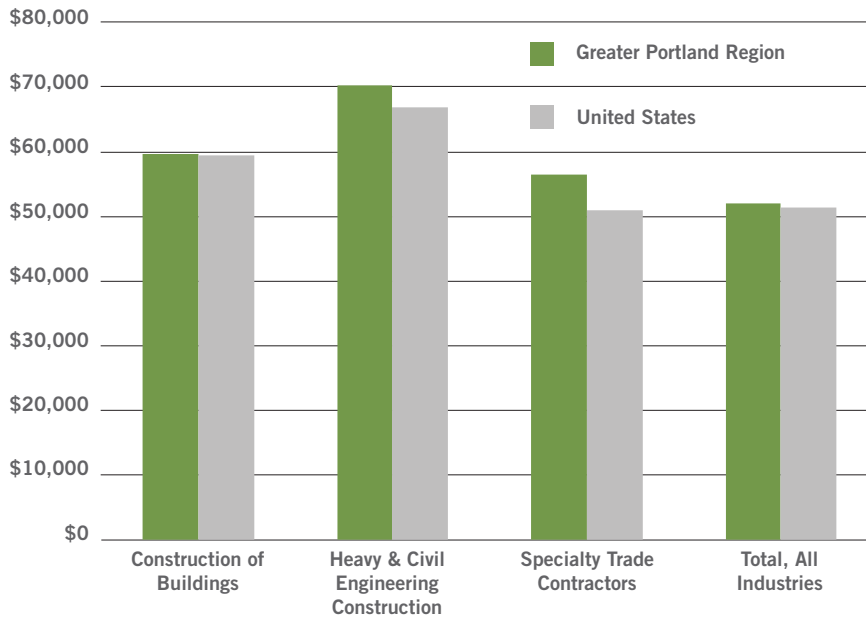
**TRAINING AND DEGREE GRADUATE COMPLETER DATA FOR CONSTRUCTION-RELATED PROGRAMS
GREATER PORTLAND REGION**

Training	2013 Completers	Type of Credential Granted			
		Award less than 2 years	Award at least 2 and less than 4	Associate's degree	Bachelor's degree
Building/Construction Site Management/ Manager	17			17	
Building/Home/Construction Inspection/ Inspector	6			6	
Construction Trades, General	1	1			
Electrical and Power Transmission Installation/Installer, General	45	26		19	
Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/ Technician	89	66		23	
Industrial Mechanics and Maintenance Technology	2			2	
Operations Management and Supervision	63	35		9	19
Welding Technology/Welder	122	85	3	34	
TOTALS	345	213	3	110	19

Source: EMSI

WAGES

ANNUAL AVERAGE WAGES FOR COMPONENTS OF CONSTRUCTION: GREATER PORTLAND REGION AND U.S.: 2014

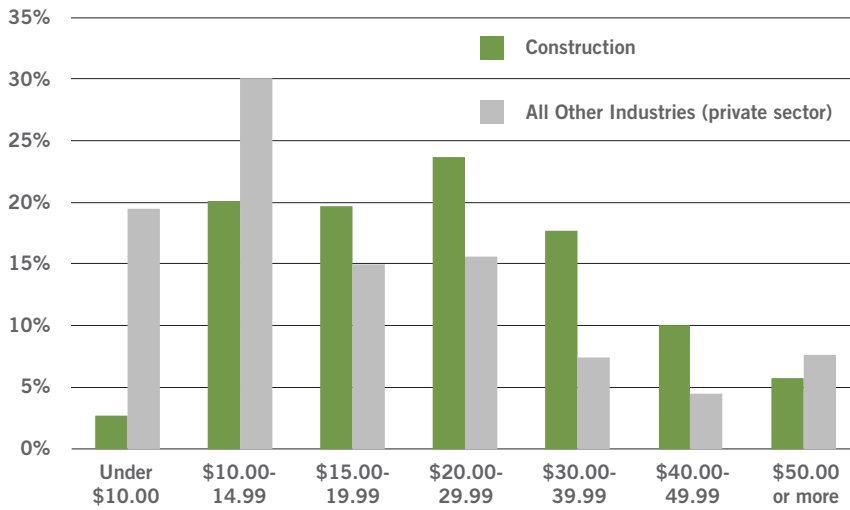


The average annual wage in Construction is \$58,245 which is about \$6,500 (12%) higher than the average across all industries in the region, and 6 percent higher than its national counterpart.

Each component of Construction pays more than the average wage for all industries, and all pay more than the national average.

Source: Oregon Employment Department, Washington Employment Security Department

**CONSTRUCTION
SHARE OF EMPLOYMENT BY HOURLY WAGE
OREGON: 2014**



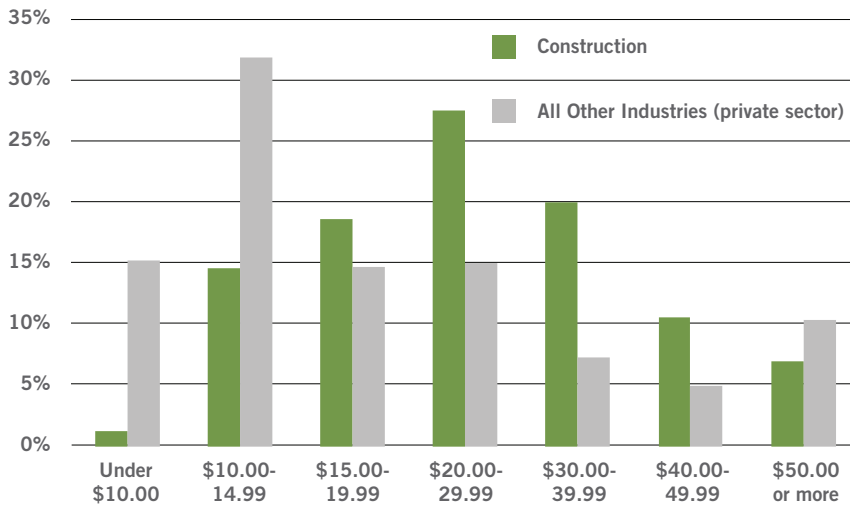
Construction’s median hourly wage is \$22.40 (2014); 46 percent higher than that of all industries (\$15.40).

There are relatively fewer lower-paying jobs and more higher-paying jobs than the overall economy.

In Oregon, one-third of Construction workers earn \$30/ hour or more.

Source: Oregon Employment Department Unemployment Insurance Wage Records

**CONSTRUCTION
SHARE OF EMPLOYMENT BY HOURLY WAGE
WASHINGTON: 2014**



In Washington, nearly 40 percent of Construction workers earn \$30/ hour or more.

Source: Washington Employment Security Department

TURNOVER

TURNOVER RATE IN CONSTRUCTION GREATER PORTLAND REGION: 2014

Total, Construction	12.6%
Construction of Buildings	12.9%
Heavy & Civil Engineering Construction	12.5%
Specialty Trade Contractors	12.5%
Total, All Industries (private sector)	9.5%

Source: Oregon Employment Dept. analysis of U.S. Census Bureau (LEHD) data

Turnover refers to the change in the workforce due to employee separations and hiring.

Overall, Construction has more turnover than the overall economy. This is likely due to the nature of the industry: as projects are completed, many workers are laid off and rehired onto other projects. Some churn could also be attributed to a tightening labor market.

Each component of Construction experiences the same rate of turnover.

JOB VACANCIES

LARGEST NUMBER OF VACANCIES IN CONSTRUCTION-RELATED OCCUPATIONS PORTLAND TRI-COUNTY: 2015

Occupation	2015 Vacancies, All Industries
Electricians	436
Construction Laborers	395
Helpers--Installation, Maintenance, and Repair Workers	174
Roofers	170
Carpenters	60
Drywall and Ceiling Tile Installers	54
Painters, Construction and Maintenance	46
Plumbers, Pipefitters, and Steamfitters	46
Cement Masons and Concrete Finishers	44
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	34

Tri-County: Clackamas, Multnomah, Washington counties

NOTE: Information not available for SW Washington

Source: Oregon Employment Department, 2015 Job Vacancy Survey

CURRENT SUPPLY

REGISTERED JOBSEEKERS CONSTRUCTION, PORTLAND METRO AREA (OREGON PORTION): AUGUST 2015

Occupation	Jobseekers ¹
Electricians	305
Carpenters	803
Operating Engineers and Other Construction Equipment Operators	406
Construction Laborers	1,709
Plumbers, Pipefitters, and Steamfitters	284
Sheet Metal Workers	400
Painters, Construction and Maintenance	666
Cost Estimators	272
Drywall and Ceiling Tile Installers	320
Roofers	252

¹ Data represent jobseekers registered with The Oregon Employment Department, iMatchSkills (active status, August 2015). Data are self-reported. Job seekers can include more than one occupation in their iMS profile, so job seekers might be counted more than once in the data.

Portland Metro Area (Oregon portion): Clackamas, Columbia, Multnomah, Washington, Yamhill counties

NOTE: Information not available for SW Washington

Source: Oregon Employment Department

Jobseekers are those in active status in iMatch Skills, August 2015. Jobseekers can include more than one occupation so they may be counted more than once.

UNEMPLOYMENT INSURANCE CLAIMANTS SOUTHWEST WASHINGTON : AUGUST 2015

Occupation	Claimants ¹
Electricians	91
Carpenters	94
Operating Engineers & Other Construction Equipment Operators	22
Construction Laborers	140
Plumbers, Pipefitters, and Steamfitters	77
Sheet Metal Workers	21
Painters, Construction and Maintenance	20
Cost Estimators	5
Drywall and Ceiling Tile Installers	10
Roofers	7

¹ Data represent claimants registered with The Washington Employment Security Department (active status, August 2015).

Southwest Washington: Clark, Cowlitz, Wahkiakum, Skamania counties

Source: Washington Employment Security Department

In Southwest Washington, there were nearly 500 unemployed workers claiming unemployment insurance in Construction's 10 largest occupations (August 2015).

**APPRENTICESHIP PROGRAM COMPLETERS
GREATER PORTLAND REGION: SUMMER 2015**

Occupation	2014	2015
Electricians	138	163
Carpenters	38	37
Operating Engineers & Other Construction Equipment Operators	12	6
Construction Laborers	27	22
Plumbers, Pipefitters, and Steamfitters	33	55
Sheet Metal Workers	27	15
Painters, Construction and Maintenance	6	10
Drywall and Ceiling Tile Installers	23	27
Roofers	10	8
Structural Iron and Steel Workers	10	23

Source: Bureau of Labor and Industries

CURRENT DEMAND

**CONSTRUCTION OCCUPATIONS WITH LARGEST NUMBER OF
HELP-WANTED ONLINE (HWOL) LISTINGS
GREATER PORTLAND REGION: SUMMER 2015**

Occupation	HWOL Ads- Sector	HWOL Ads- All Industries
Supervisors of Construction Trades and Extraction Workers	19	323
Construction Managers	18	129
Heavy and Tractor-Trailer Truck Drivers	13	1,437
Industrial Engineers	10	449
Marketing Managers	9	852
Supervisors of Mechanics, Installers, and Repairers	8	326
Supervisors of Office and Administrative Support Workers	8	817
Software Developers, Applications	7	1,425
Network and Computer Systems Administrators	7	160
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	6	110
All Occupations In Sector	307	

Data include ads across all industries and from all sources (the firm itself, staffing agency ads, Oregon Employment Department job listings, etc.), and is adjusted for duplications).

The number of online job advertisements for construction occupations in the Greater Portland region increased in 2015. This could be an indication the industry is expanding its recruitment efforts beyond the traditional methods for finding Construction workers, perhaps in response to a tightening labor market.

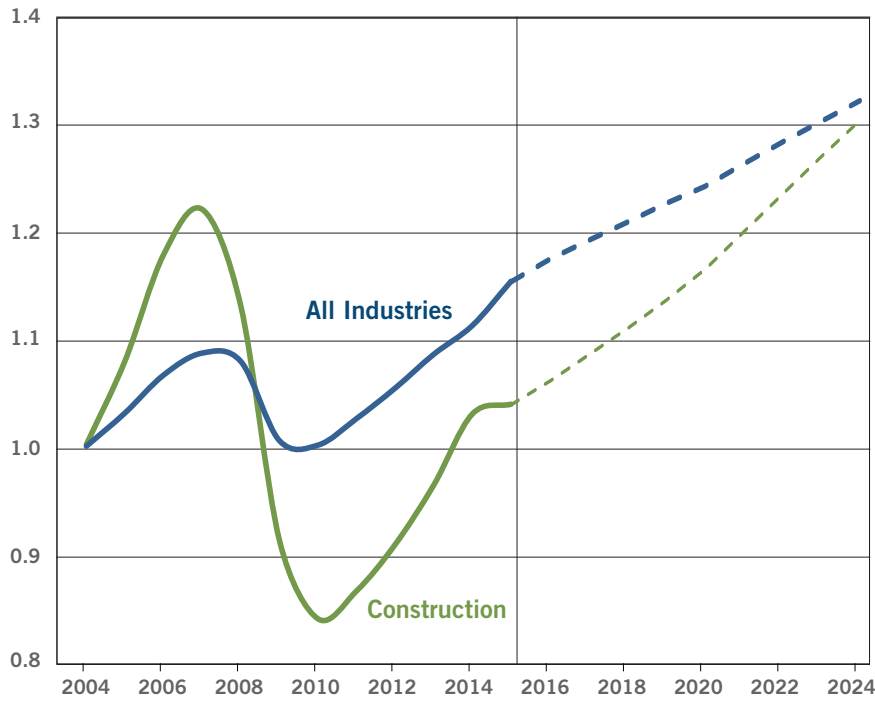
Source: The Conference Board, Help-Wanted OnLine (HWOL) data series

3-month average: June, July, August 2015

Note: Only about half of HWOL ads have an identified industry, so the Sector totals are a lower-bound figure.

LONG-TERM DEMAND

**HISTORICAL & PROJECTED GROWTH
GREATER PORTLAND REGION**
2004 indexed to 1



Construction employment is expected to return to pre-recession levels by 2022 (EMS1).

Between 2014 and 2024, it's expected to add about 15,000 jobs for a growth rate of 26 percent; faster than the overall economy (19 percent).

The largest number of new jobs will be in Multnomah County. Southwest Washington will grow the fastest.

Construction will account for 1-in-12 new jobs between 2014 and 2024.

Growth will be driven by an expanding population: the greater Portland region is expected to add 325,000 new residents between 2015 and 2025 (700,000 by 2040). Solid job growth across the rest of the economy will also lead to more commercial and industrial projects and infrastructure work.

**CONSTRUCTION OCCUPATIONS ADDING THE LARGEST NUMBER OF JOBS
GREATER PORTLAND REGION**

Occupation	2014	2024	Growth	Percent Growth	Share of Sector Growth	Projected Annual Growth Openings
Carpenters	5,827	7,506	1,679	29%	11%	168
Construction Laborers	5,439	6,908	1,470	27%	10%	147
Electricians	4,724	5,758	1,034	22%	7%	103
Supervisors of Construction Trades and Extraction Workers	2,669	3,522	854	32%	6%	85
Painters, Construction and Maintenance	1,801	2,618	816	45%	5%	82
Plumbers, Pipefitters, and Steamfitters	3,187	3,929	743	23%	5%	74
Construction Managers	2,442	2,976	534	22%	4%	53
Cost Estimators	1,608	2,065	457	28%	3%	46
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	1,303	1,747	443	34%	3%	44
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	1,147	1,561	415	36%	3%	41
Office Clerks, General	1,322	1,676	354	27%	2%	35
Roofers	1,437	1,781	344	24%	2%	34
General and Operations Managers	1,250	1,572	322	26%	2%	32
Drywall and Ceiling Tile Installers	1,247	1,531	285	23%	2%	28
Bookkeeping, Accounting, & Auditing Clerks	1,080	1,354	275	25%	2%	27

Source: EMSI

Nationally, trade groups and industry experts have raised the possibility of a labor shortage in Construction. Workers left the industry during the depths of the recession, and many of them might have moved out of the area or found work in other occupations, and are thus unlikely to return.

THE COLUMBIA-WILLAMETTE WORKFORCE COLLABORATIVE



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