



September 6, 2018

Board of County Commissioners
Clackamas County

Members of the Board:

Approval of modifications to the Clackamas Workforce Partnership (CWP) Local Strategic Plan

Purpose/Outcomes	Approval of modifications to the Clackamas Workforce Partnership Local Strategic Plan. These modifications guide CWP’s continued efforts to develop regional solutions for workforce and industry challenges.
Dollar Amount and Fiscal Impact	N/A
Funding Source	Workforce Innovation and Opportunity Act (WIOA)/CWP
Duration	Present – June 2020
Strategic Plan Alignment	<ul style="list-style-type: none"> • Build public trust through good government • Grow a vibrant economy
Previous Board Action	N/A
Contact Person	Cindy Moore, Business & Community Services, Economic Development, 503-742-4328

BACKGROUND: After a thorough review by CWP staff and CWP Advisory Groups, modifications to the plan were brought to the April 2018 CWP Board Member Retreat for discussion with overlay of the Equity Lens. Comments and edits to the modifications were incorporated and the draft plan was shared with the Executive Committee in May of 2018 and approved to move to public comment.

To support transparency, a draft Modified Strategic Plan was released for a fourteen-day public comment period on June 4, 2018. At the expiration of the public comment period, feedback and comments were utilized to craft and finalize the Modified Plan. This plan was presented to the CWP Board of Directors on June 21 and approved as stated.

Since being approved by the CWP Board of Directors, the modification is now being submitted to the Board of County Commissioners for signature and approval. The modifications will be submitted to State workforce officials September 30, 2018 for final signatures.

RECOMMENDATION: Staff respectfully recommends that the Board approve the CWP Modified Local Strategic Plan.

ATTACHMENTS: Modification to Strategic Plan June 2020, CWP (includes signature page for Chief Elected Official)

Respectfully Submitted,

Laura Zentner, Director
Business & Community Services

Section 2 (ii): Changes in Financing Available to Support WIOA Services

Clackamas Workforce Partnership (CWP) currently has oversight of significant funding outside of WIOA Title 1 and continues to work with partners to seek out competitive grants and increase resources.

Because Clackamas Workforce Partnership has significant multi-year competitive grants sunseting in 2018, and new competitive federal grant opportunities have not become available, CWP is forced to expand its work to pursue additional resource development and co-funding opportunities. Opportunities will be explored to bring in more local and state investment, public and private.

Furthermore, competitive grants have identified targeted populations to serve with specific industry engagement expectations to enhance the work done at WorkSource Clackamas. Even though the funding isn't as flexible as WIOA formula funds, these grants have helped ease the service cuts resulting from formula funding cuts. In Program Year 2018, CWP formula funds will see an over 12% reduction.

CWP has also been successful obtaining private foundation funding, which includes more recently a Meyer Memorial Grant to continue work around Equity, DEI initiatives and community outreach.

Section 2 (iii): Changes to the Local WDB Structure

There have been no changes to the local WDB structure.

Section 2 (iv): Revised Strategies to Meet Local Performance Goals

Clackamas Workforce Partnership, during the modification process, assessed performance metrics within each of the four goals: Business, Job Seeker, Emerging Worker and Resource Development. As the economy in Clackamas County has shifted, the priorities for each of the goals have evolved, requiring adjustments to how we measure our success. In each of the follow sections we have outlined our changes, updates, and various wording adjustments to more effectively define our goals as an organization.

GOAL 1: Businesses have the skilled workers they need when they need them.

Original Language of Strategy 3: Implement systems, tools and lean processes to deliver the right candidates for job openings.

Proposed Modification to Strategy 3: Engage the business community to utilize the workforce system to access to the right candidates for job openings.

Original Language of Business Performance Metrics:

1. Employer satisfaction, feedback mechanism.

2. Length of time from job order to fulfillment.
3. Number of active and engaged business partners using the WorkSource System.
4. Job retention (duration of employment).
5. Referral to hire Ratio.

Proposed Modifications to Business Performance Metrics:

1. **Percentage of businesses satisfied with hires through WorkSource system (satisfaction with hire).**
2. **Number of businesses receiving a service through the WorkSource system.**
3. **Percentage of businesses who hire one or more new employees through the WorkSource system (rate of hire).**
4. **Number of businesses engaged with Collaborative sector work to be tracked annually.**
5. **Number of businesses served through Clackamas Coordinated Business Services (CCBS).**

GOAL 2: Job seekers are trained and/or placed in occupations with opportunities for advancement.

Original Language of Strategy 3: Refocus training and skill development to include innovative strategies that lead to career track employment and advancement.

Proposed Modification to Strategy 3: Facilitate the creation of innovative training and skill development tools and strategies that deliver the right candidates for job opening that lead to career track employment and advancement.

Original Language of Strategy 4: Establish an Equity Council and Equity Lens that further defines equity for our work.

Proposed Modification to Strategy 4: Utilize an Equity Lens that is guided by community participation via an Equity Council to review internal policies and procedures.

GOAL 3: Emerging workers are aware of AND ENGAGED IN* career pathways and are work ready. (*proposed modification).

Original Language of Emerging Worker Metrics:

1. Number of businesses providing work related learning experiences.
2. Number of participants completing work related learning experiences.
3. Number of participants entering sector training programs.
4. Certificate and credentials completion and attainment.

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3. Number of participants entering sector training programs.
4. Certificate and credentials completion and attainment.
5. Number of Students/Youth places into training opportunities.
6. Number of youth placements post training/graduation.
7. Number of STEM focused classes available in region

Proposed Modifications to Emerging Worker Performance Metrics:

1. Education or training activities or employment in the 2nd quarter after exit.
2. Education or training activities or employment in the 4th quarter after exit.
3. Credential attainment rate.
4. Measurable Skills Gain.
5. Number of partnerships between CWP or provider and Clackamas County Middle Schools/High Schools/Parents/Other Youth Providers related to career pathway and/or to conduct *Career Related Learning Activities.
6. Number of business partnerships facilitated by CWP or provider and Clackamas County Middle Schools/High Schools/Other Youth Providers to conduct *Career Related Learning Activities.
7. Number of *Career Related Learning Activities coordinated in partnership with CWP or provider for any Clackamas County Youth.

GOAL 4: Resource DEVELOPMENT (*proposed modification) – Clackamas County has resources to support workforce development.

Original Language of Strategy 1: Develop and grown partnerships with community and stakeholders to leverage resources, innovative strategies with a plan for sustainability.

Proposed Modification to Strategy 1: Align and grown partnerships with community and regional stakeholders to leverage and increase resources through innovative strategies with a plan for sustainability.

Original Language of Strategy 2: Develop and Enhance internal systems and staff resources.

Proposed Modification to Strategy 2: Enhance internal systems and staff resources.

Original Language of Strategy 3: Improve proactive approach to align regional partners / resources.

Proposed Modification to Strategy 3: Merge with Strategy 1 (Goal 4)

Original Language of Strategy 4: Advocate locally for workforce development and education funding.

Proposed Modification to Strategy 4: Develop and implement CWP fundraising plan.

Original Language of Resource Development Metrics:

1. Diversity of Funding Streams
2. Number of individuals served through partnerships that provide services or funding to address specific workforce barriers.
3. Number of grant awards received in partnership with local, regional and state partners.
4. Number of Letter of Support, Memorandums of Understanding and Grant Applications submitted with local, regional and state partners.
5. Time/Cost tracking for grant proposals for use in decision making re: cost effectiveness of pursuit of funding opportunities.
6. Number of Relationships with new funders developed with potential to bring funding to our area.

Proposed Modifications to Resource Development Performance Metrics:

- 1. Diversity of Funding Streams**
- 2. Number of Letters of Support, Memorandums of Understanding and Grant/Funding Applications submitted with local, regional and state partners.**
- 3. Number of Letter of Support, Memorandums of Understanding and Grant Applications submitted with local, regional and state partners that are awarded.**
- 4. Total dollars in fundraising totals per Project Year.**

Attach:

- Proof of publication for public comment
- Comments received and resolution of those comments
- Modified pages of local plan including appropriate attachments

I (we) attest to the accuracy of this document and the attachments indicated above. Further, I (we) assure the Office of Workforce Investments that hard copies of the complete modification and signature page shall be kept on file at the local area administrative office and be available for review.

(Signature of Chief Elected Official)

(Date)

(Signature of WDB Executive Director)

(Date)

Local Plan Modification – Clackamas Workforce Partnership

Local Workforce Development Area: Clackamas Workforce Partnership

Plan Modification: (## - PY18)

Date: June 4, 2018

Summary of Modifications:

Clackamas Workforce Partnership (CWP) is pleased to share modifications of our local Strategic Plan scheduled through 2020. Doing an analysis of the plan midway will ensure we stay on track with meeting community goals related to workforce development. These modifications guide our continued efforts to develop regional solutions for workforce and industry challenges. The process of development is meant to be transparent and productive. After a thorough review by CWP staff and CWP Advisory Groups, modifications to the plan were brought to the April 2018 CWP Board Member Retreat for discussion with overlay of the Equity Lens. Comments and edits to the modifications were incorporated and the draft plan was shared with the Executive Committee in May of 2018 and approved to move to public comment. To support transparency, a draft Modified Strategic Plan is being released for a fourteen-day public comment period on June 4, 2018. At the expiration of the public comment period, feedback and comments will be utilized to craft and finalize the Modified Plan, which will be presented to our Board of Directors on June 21 for review and approval.

We are dedicated to ensuring regular updates and presented in a way that supports the region's ability to understand and align regional workforce supply with regional business demand. CWP is committed to provided and using high quality information to support the region and guide our investment. It is because of this, we are pleased to announce the official launch of the newly created Construction Sector Plan of the Columbia-Willamette Workforce Collaborative (CWWC) region of partners.

As indicated in the Workforce Innovation and Opportunities Act (WIOA), the primary functions of the Clackamas Workforce Partnership, as the Local Workforce Development Board for Clackamas County, are as follows:

- Develop a Local Plan
- Regional Research and Labor Market Analysis
- Convening, Brokering, Leveraging
- Promote Employer Engagement
- Career and Pathways Development
- Proven and Promising Practices
- Technology
- Program Oversight
- Negotiation of Local Performance Accountability
- Selection of Operators and Providers
- Coordination with Education Providers
- Budget and Administration
- Accessibility for Individuals with Disabilities

As we strive to perform these key functions, Clackamas Workforce Partnership developed in accordance to the “Guidance Letters, Technical Assistance and Communications Document” required for the local Strategic Plan Modifications outlined in Attachment A of the Local Plan Submissions Procedure.

This includes the following sections:

- (1) In labor market and economic conditions; and
- (2) Any factor that affects the implementation of the local plan, including but not limited to:
 - (i) Significant changes in local economic conditions;
 - (ii) Changes in the financing available to support WIOA title I and partner provided WIOA services
 - (iii) Changes to the Local WDB structure; and
 - (iv) The need to revise strategies to meet local performance goals.

This plan will ensure continued alignment with our collective goals and objectives while meeting workforce and industry challenges.

Changes to local plan (summarize changes, additions, and deletions):

Section 1: Workforce and Economic Analysis

Clackamas County averaged 162,300 jobs in 2017, a one-year increase of 2.9 percent or 4,600 jobs. Clackamas County surpassed its 2007 pre-recession peak in 2015, with 2016 standing out as its best year for job growth, rising by 6,500 jobs or 4.3 percent.

Not every industry in Clackamas County has recovered from the Great Recession.

- Government remains 200 jobs below its pre-recession employment, with losses concentrated in local education and federal government.
- Construction remains 600 jobs below its pre-recession employment high – but recent growth suggests the industry will set a new peak in 2018.
- Manufacturing rose to 17,800 jobs in 2017, recovering most of the jobs it lost during the recession with an additional 400 needed to reach a full recovery.
- Transportation, warehousing and utilities failed to recover any of the jobs it lost during the recession, averaging about 3,700 in 2017. The industry lost around 400 jobs in 2017; otherwise it has shown very little movement since 2009.
- Finance, insurance and real estate averaged just over 7,600 jobs in 2017 but needs to recover an additional 700 jobs to regain its pre-recession peak.

Education and health services led Clackamas County out of the Great Recession. The industry sailed right through the downturn adding jobs in every year with a brief pause in 2012.

Education and health services averaged 22,700 jobs in 2015, an increase of about 6,300 or 39 percent since 2007.

Leisure and hospitality returned to its pre-recession employment back in 2013, setting a new peak of 16,500 in 2017, nearly 2,600 jobs or 18 percent higher. Retail trade recovered from the Great Recession in 2014 and has since gained close to 1,400 jobs to average 19,300 (+7.5%) in 2017. Other services recovered in 2013, adding about 1,500 to average 7,300 in 2017, an increase of about 26 percent. Wholesale trade averaged around 11,300 jobs in 2017, an increase of 700 jobs or 6.5 percent over its 2007 pre-recession peak. Professional and business services have performed exceptionally well since 2012, rising 3,200 jobs above its 2007 peak to average 20,500 in 2017, an increase of about 19 percent.

In addition to its nonfarm industries, Clackamas County supports 3,745 farms (2012 Census of Agriculture) with a market value of \$325.2 million in 2012. Crops represented roughly 77 percent of its sales or \$249.5 million, while livestock and poultry brought in the remaining 23 percent or \$75.7 million. Nursery crop sales exceeded \$150 million in 2012, while poultry and eggs brought in close to \$49 million. Agricultural, forestry, fishing and hunting averaged about 4,600 in 2017 to represent roughly three percent of Clackamas County’s jobs.

The Clackamas Workforce Partnership selected four targeted industry groups to represent its emerging in-demand industry sectors and occupations: Tech; Advanced Manufacturing; Health Care; and, Construction. These targeted industries are aligned with the greater Portland metropolitan area.

Tech

The Tech industry group includes software publishers (NAICS 5112), data processing (NAICS 5182), and computer systems design (NAICS 5415). Tech reached a peak of 3,500 jobs in 2017, a robust increase of about 1,000 or 37 percent since 2011.

Top Occupations with Vacancies in Tech Oregon Statewide, 2017		
	2017 Vacancies within Industry	2017 Vacancies, All Industries
Electrical Engineers	50	111
Sales Managers	38	273
Software Developers, Applications	38	260
Sales Representatives, Wholesale and Manufacturing, Except Technical and	38	355
Customer Service Representatives	36	1,105
Reporters and Correspondents	30	30
Advertising Sales Agents	24	24
Office and Administrative Support Workers, All Other	23	324
Telecommunications Equipment Installers and Repairers, Except Line Installers	19	19
Receptionists and Information Clerks	18	493

Across the tri-county Portland area, Clackamas County hosted about 14 percent of the Tech industry’s jobs, Washington County held 35 percent and Multnomah County held the lion’s share, at 51 percent.

The Tech industry’s payroll in Clackamas County reached \$558.8 million in 2017 and wages averaged \$159,518. Tech included 315 employer units in the first quarter of 2017, with computer systems design representing about 57 percent of the group’s employer units. Tech employers tend to be small - roughly 77 percent employed from one to four workers in the first quarter of 2017, comparatively, about 57 percent of Clackamas County’s private sector employers employed one to four workers (Chart 1).

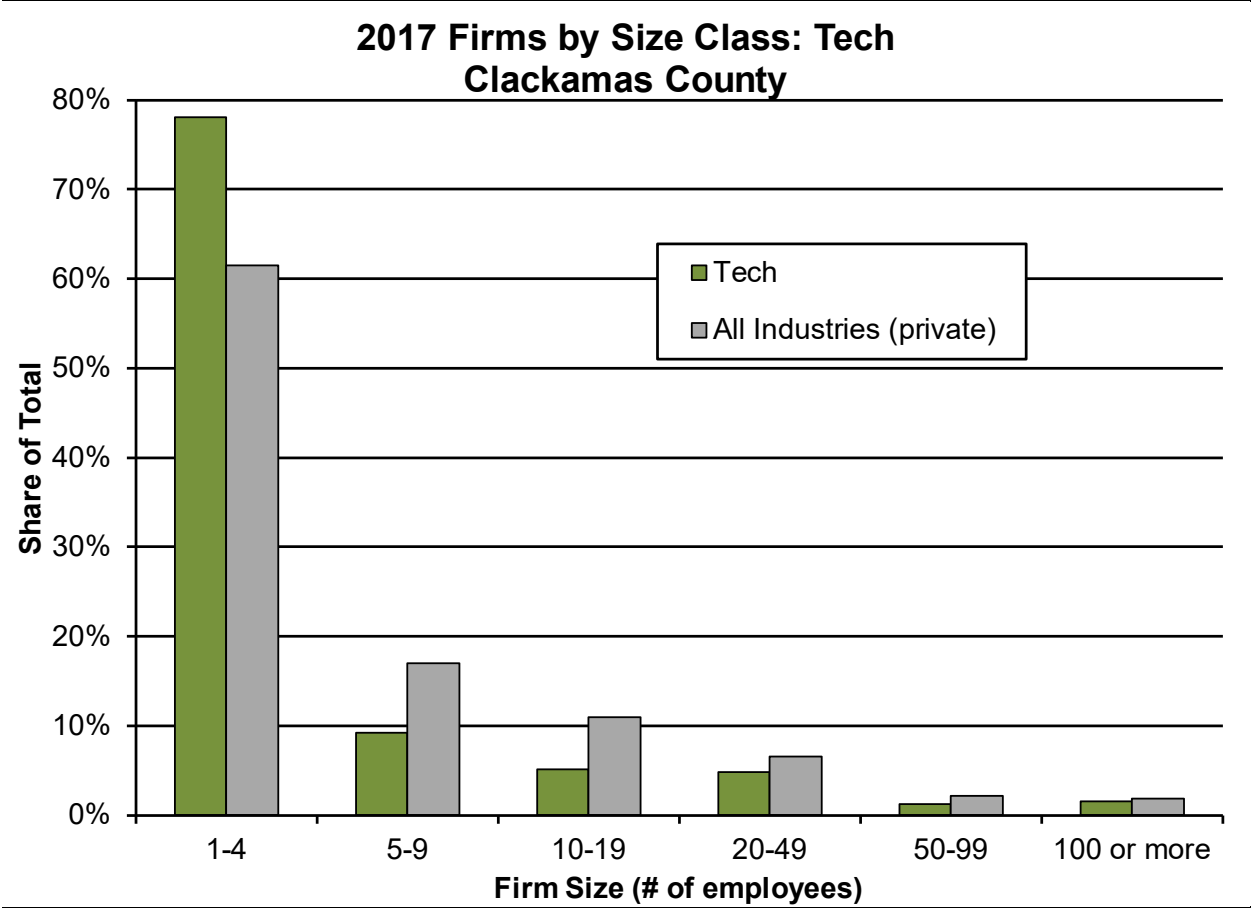


Chart 1

Turnover in Clackamas County’s Tech industry measured 9.8 percent in 2016, slightly lower than the 10.1 percent rate for all private industries. Prime working age adults dominated the Tech workforce. Workers age 35-44 held 29 percent of the Tech industry’s jobs in 2016, while workers age 45-54 filled 27 percent. For all private industries, these two groups held a share of about 43 percent in 2016 – indicating a gap of about 13 percent. Around 25 percent of the Tech industry’s jobs were held by workers age 34 or younger in 2016, compared with private industry’s much higher 35 percent. Males held 67 percent of the jobs in Tech, compared with 55 percent for all private industries.

Advanced Manufacturing

The Advanced Manufacturing group includes fabricated metal (NAICS 332) machinery (NAICS 333), computer and electronic products (NAICS 334), electrical equipment (NAICS 335), transportation equipment (NAICS 336), medical equipment and supplies (NAICS 3391) and metal and mineral merchant wholesalers (NAICS 4235). Advanced Manufacturing provided 9,700 jobs in 2017 and a payroll of \$663 million, while annual wages averaged \$67,313.

Top Occupations with Vacancies in Manufacturing Portland Tri-County, 2017		
	2017 Vacancies within Industry	2017 Vacancies, All Industries
Production Workers, All Other	174	452
Helpers--Installation, Maintenance, and Repair Workers	138	170
Marketing Managers	122	130
Heavy and Tractor-Trailer Truck Drivers	95	322
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	77	372
Team Assemblers	55	135
Industrial Production Managers	54	54
Industrial Engineers	46	46
Purchasing Agents, Except Wholesale, Retail, and Farm Products	46	122
Sales Managers	46	216

The industry included 286 employer units in the first quarter of 2017 with fabricated metal products representing about 43 percent of the total. Medium sized and large employers were prominent in Advanced Manufacturing, with just over nine percent of its units employing 100 or more workers, compared with about two percent for all private sector industries. Small employers with one to four workers represented about 37 percent of Advanced Manufacturing employer units compared with a much higher 62 percent for all private industries. (Chart 2)

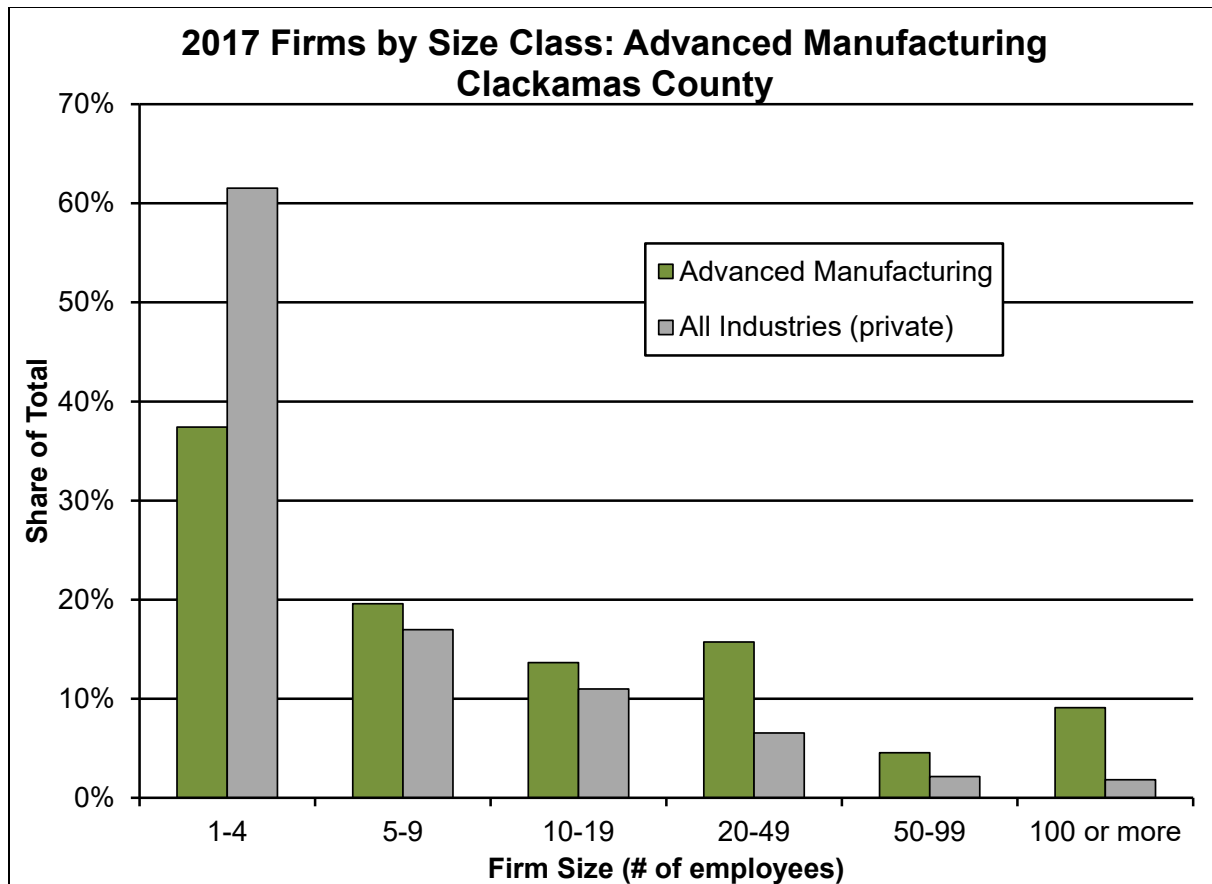


Chart 2

The turnover rate for Advanced Manufacturing, at just 4.9 percent, was less than half the 2016 private industry average, measuring 10.1 percent. Workers in the 45-54 age group held around 28 percent of Advanced Manufacturing’s jobs in 2016, while workers age 55-64 filled about 23 percent. For all private industries, these two age groups held a 37 percent share – indicating a gap of around 14 percent. Only four percent of Advanced Manufacturing’s jobs were held by workers age 24 or younger, compared with about 13 percent for all private industries. Males held 74 percent of the jobs in Advanced Manufacturing, compared with a more balanced 55 percent for all private industries.

Health Care

The Health Care group includes ambulatory health care (NAICS 621), hospitals (NAICS 622), and nursing and residential care facilities (NAICS 623). Health Care provided more than 18,200 jobs in 2017 with a payroll of \$1.094 billion, while wages averaged \$59,990.

Top Occupations with Vacancies in Health Care Portland Tri-County, 2017		
	2017 Vacancies within Industry	2017 Vacancies, All Industries
Personal Care Aides	414	515
Social and Community Service Managers	172	210
Business Operations Specialists, All Other	153	371
Nursing Assistants	139	334
Medical Assistants	115	115
Registered Nurses	108	194
Ophthalmic Medical Technicians	107	107
Physical Therapists	86	86
Office and Administrative Support Workers, All Other	86	147
Receptionists and Information Clerks	85	233

The industry included 981 employer units in the first quarter of 2017, with ambulatory Health Care represented about 75 percent of the group’s units. Small firms dominated Health Care, with 46 percent of its units employing one to four workers. Employers with five to nine jobs represented nearly one-in-four firms (24%) and the 10 to 19 group topped 17 percent. Together, firms with 19 or fewer jobs represented 86 percent of Health Care’s employers. Firms with 100 or more employees were the exception, representing about three percent of Health Care’s units, compared with about two percent for all private industries. (Chart 3)

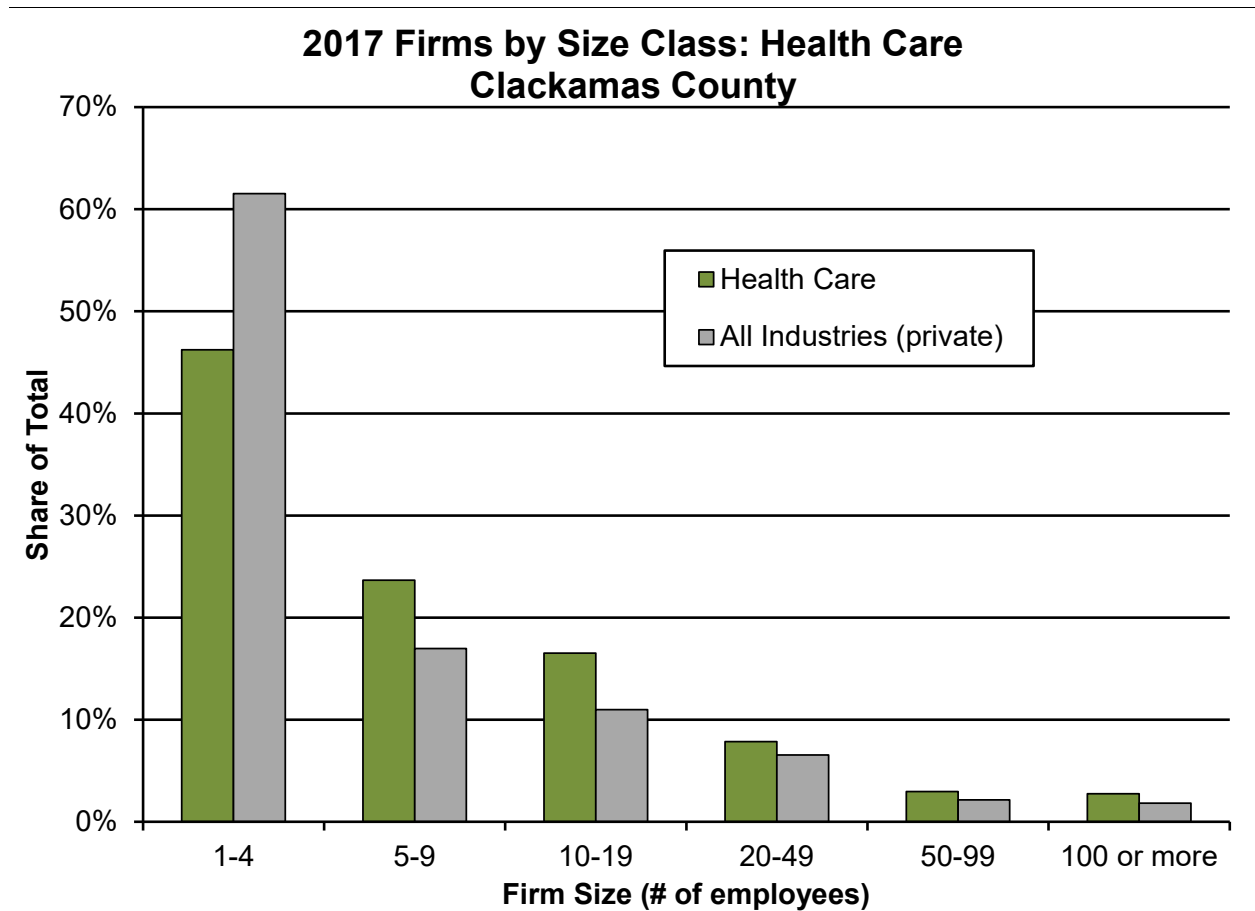


Chart 3

The turnover rate for Health Care, at 7.9 percent, was below the private industry average, which measured 10.1 percent in 2016. Workers in the 25-34 age group held about 23 percent of Health Care’s jobs in 2016, while workers age 35-44 filled over 24 percent. For all private industries, these two age groups held a share of 43 percent – indicating a difference of about four percent. Nine percent of Health Care’s jobs were held by workers age 24 or younger, compared with around 13 percent for all private industries. Females dominated the Health Care workforce, representing about 75 percent of its jobs, compared with 45 percent for all private industries.

Construction

Construction (NAICS 23) provided over 11,800 jobs in 2017, and a payroll of \$673 million, while annual wages averaged \$56,879.

**Top Occupations with Vacancies in Construction
Portland Tri-County, 2017**

	2017 Vacancies within Industry	2017 Vacancies, All Industries
Carpenters	747	949
Painters, Construction and Maintenance	480	535
Construction Laborers	229	393
Construction Managers	226	242
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	172	372
Electricians	163	203
First-Line Supervisors of Construction Trades and Extraction Workers	134	166
Light Truck or Delivery Services Drivers	131	478
Plumbers, Pipefitters, and Steamfitters	117	117
Sheet Metal Workers	109	163

The industry included 1,851 employer units in the first quarter of 2017 with small firms (1-4 employees) representing about 64 percent (Chart 4). Only two percent of construction firms employed 50 or more workers compared with about four percent for all private industries.

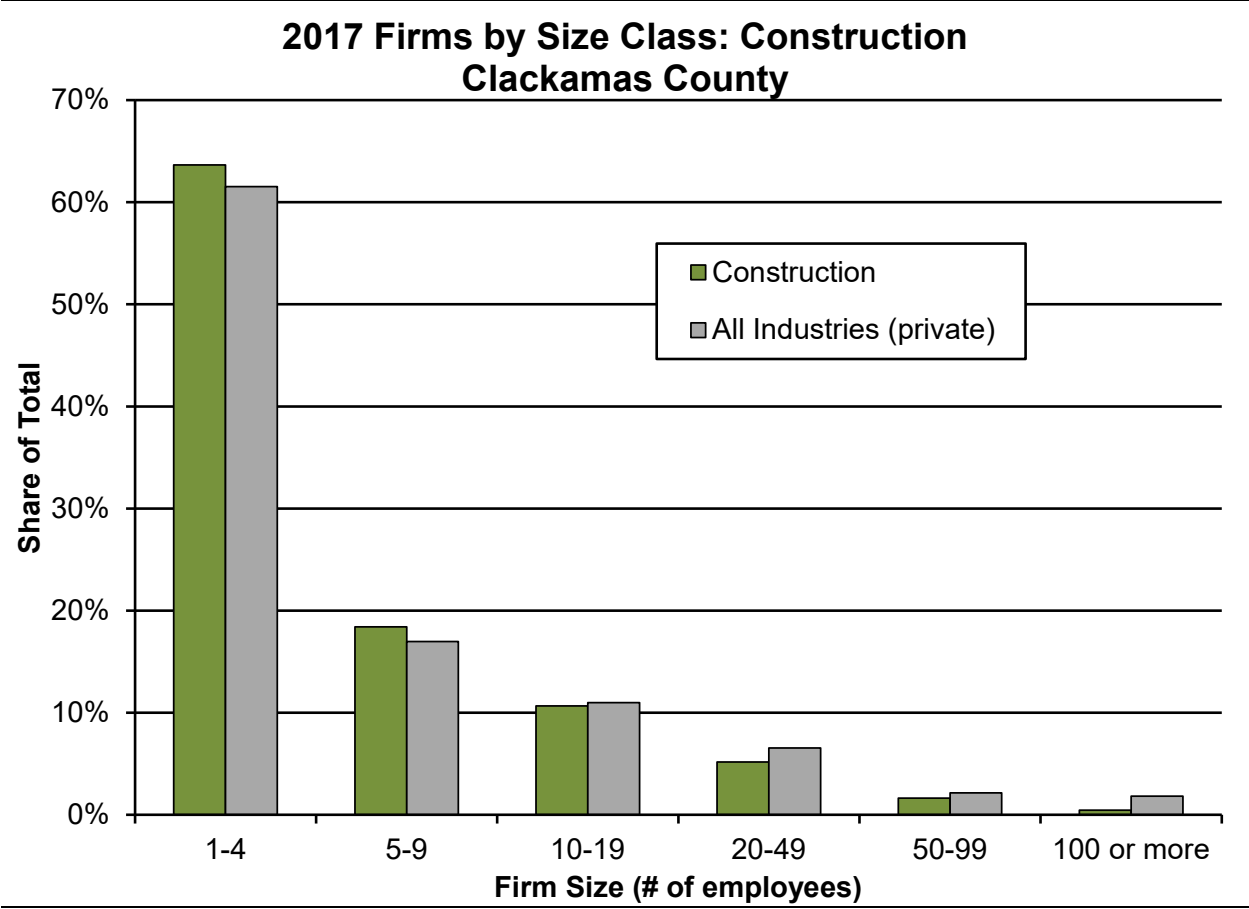


Chart 4

The turnover rate for Construction, at 11.0 percent in 2016, was somewhat higher than the private industry average, which measured 10.1 percent. Young workers held a smaller share of the Construction industry’s jobs when compared with all private industries. Workers age 24 and under held close to 10 percent of Construction’s jobs in 2016 compared with 13 percent for all private industries. Nearly 48 percent of the Construction industry’s jobs were held by workers in the 35-44 and 45-54 age groups. Females held just 18.5 percent of Construction’s jobs in 2016.

Section 2 (i): Significant Changes in Local Economic Conditions

In 2016, the Columbia-Willamette Workforce Collaborative (CWWC) published its first data report about the Construction industry. This report introduced the community to Construction as a high growth industry in the Portland-Vancouver Metro Area, and led the collaborative to building a Construction Workforce plan which launched in June 2017.

Since the 2016 report (which included data from 2013, 2014, and 2015), Construction has added more than 12,000 jobs – the most jobs in 2017, outpacing other fast-growing industries like Healthcare, Retail Trade, and Accommodation & Food Services. The impressive growth in 2016 and 2017 has spurred Construction employment past pre-recession levels. The industry is expected to add more than 11,000 jobs over the next decade, a growth rate of 17 percent.

Please see additional information about the Construction Sector launch and plan throughout the CWWC collaborative region.



CONSTRUCTION LABOR MARKET REPORT

2018

THE COLUMBIA-WILLAMETTE WORKFORCE COLLABORATIVE
Working together to support and develop regional talent.



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Since the 2016 report (which included data from 2013, 2014, and 2015), Construction has added more than 12,000 jobs – the most jobs in 2017, outpacing other fast-growing industries like Healthcare, Retail Trade, and Accommodation & Food Services. The impressive growth in 2016 and 2017 has spurred Construction employment past pre-recession levels. The industry is expected to add more than 11,000 jobs over the next decade, a growth rate of 17 percent.

The jobs being added in the Construction industry are high wage, averaging over \$25 an hour. Current and future building trends, both public and private, are rapidly increasing the demand for skilled tradespeople while one-fifth of the area's Construction workforce is at, or nearing, retirement age. The region has seen apprenticeship program completers in common Construction occupations (electricians, laborers, carpenters, etc.) more than double in the last three years, but the numbers remain well below what is needed to satisfy industry demand.

In October of 2016, the CWWC held a Construction Workforce Convening to discuss these challenges and to begin the process of engaging companies in the development of the 2017-2019 regional, industry-specific workforce plan. The plan helps the collaborative align the efforts of the public workforce system in support of shared workforce goals to maximize the overall impact for the industry.

Companies identified several areas of focus for a construction workforce plan, indicating a strong emphasis be placed throughout on better marketing the career opportunities, recruiting non-traditional construction workers, creating industry support tools such as mentoring to retain their workforce, and helping industry strengthen best practices for recruiting and screening the best candidates.

The CWWC works with employers and industry experts throughout the two-year plan, utilizing their skills and abilities to educate influencers with data-driven outlooks for careers in Construction, allocate resources for pre-apprenticeship, training, and screening capacity for women and people of color, and promote and provide standardized tools for jobsite culture success. Meeting with employers quarterly allows the collaborative to regularly engage the industry so that workforce development strategies adapt as the industry changes.

The 2018 report shows significant growth in the industry, and indicates that workforce development efforts are helping to support the success of the industry. The data indicates that Construction has considerable growth still to come, and the Columbia-Willamette Workforce Collaborative will be there to support regional employers, partners, industry experts, job seekers, and youth along the way.



ABOUT THE COLUMBIA-WILLAMETTE WORKFORCE COLLABORATIVE

The Columbia-Willamette Workforce Collaborative (Collaborative) is a partnership between Clackamas Workforce Partnership, Workforce Southwest Washington 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, Technology, 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 can better understand industry trends, identify current and emergent workforce needs, and develop customized solutions for each sector.

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

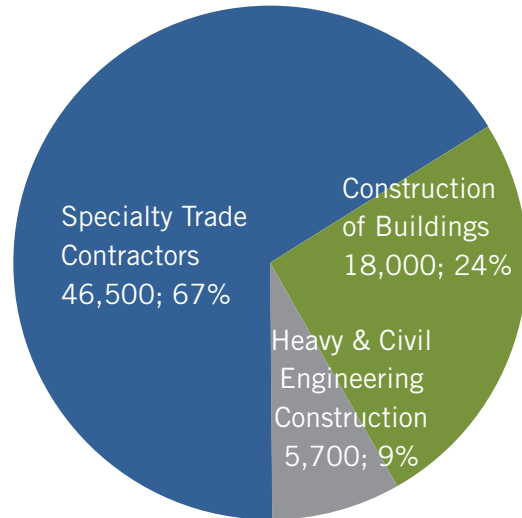
With over 70,000 jobs and a payroll of \$3.9 billion, Construction accounts for over five percent of the Portland-Vancouver metro area's private-sector employment and six percent of payroll.

The Construction sector contributed approximately \$6.8 billion to the metro area's Gross Domestic Product in 2017; 4 percent of all output.

Multnomah, Clackamas, and Washington counties account for three out of every four Construction workers in the Portland-Vancouver metro area.

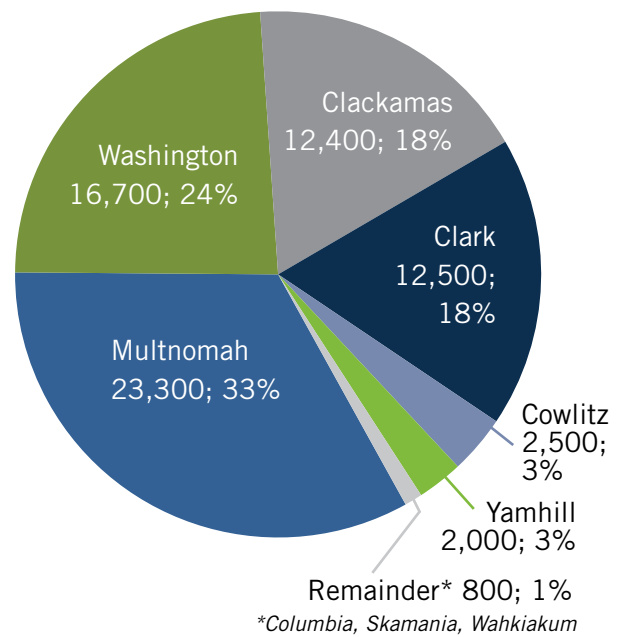
The Construction sector includes companies primarily engaged in the construction of buildings, engineering projects (e.g., highways), preparing sites for new construction, and specialty trades (e.g., painting, plumbing, electrical).

CONSTRUCTION EMPLOYMENT BY COMPONENT PORTLAND-VANCOUVER METRO AREA, 2017



Source: Oregon Employment Department & Washington Employment Security Department

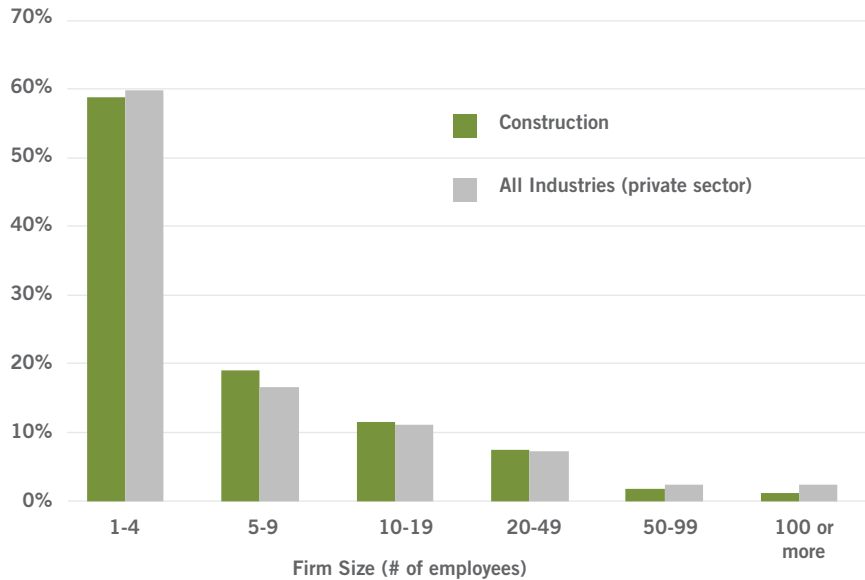
CONSTRUCTION EMPLOYMENT BY COUNTY PORTLAND-VANCOUVER METRO AREA, 2017



Source: EMSI

FIRM CHARACTERISTICS

**FIRMS BY SIZE CLASS: CONSTRUCTION
PORTLAND-VANCOUVER METRO AREA, FIRST QUARTER, 2017**



Source: Oregon Employment Department, Washington Employment Security Department

There are roughly 7,400 Construction establishments in the region.

The average size of a Construction firm is just over half that for all firms: 8 employees per company versus 14 overall.

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

MAJOR EMPLOYERS

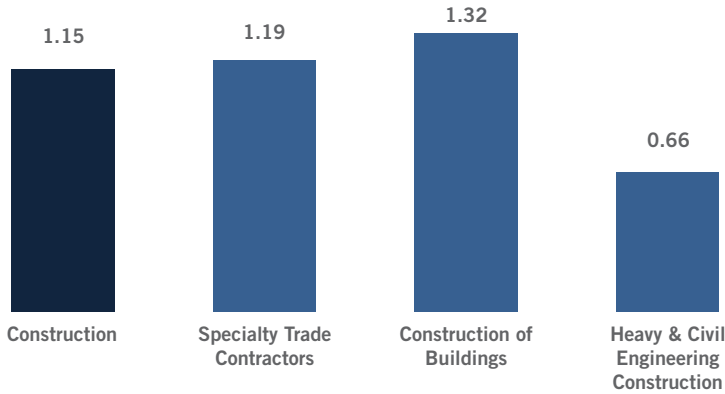
Hoffman Construction Co.	R&H Construction	Lorentz Bruun Construction
Skanska	Fortis Construction Inc.	P&C Construction
Andersen Construction Co.	Mortenson Construction	JH Kelly
Howard S. Wright, a Balfour Beatty Co.	Nutter Corp.	Kiewit Infrastructure West
Lease Crutcher Lewis	LMC Construction	Tapani Underground
Perlo Construction	TEAM Construction	Rotschy Inc.
Walsh Construction Co.	Deacon Construction LLC	Robertson & Olson Construction Inc.
LCG Pence Construction	JE Dunn Construction Co.	Pacific Lifestyle Homes Inc.
Turner Construction	Bremik Construction	Aho Construction I Inc.

Source: Portland Business Journal, Vancouver Business Journal, the Book of Lists, 2017
The List: Metro-Area Commercial & Civil General Contractors
Ranked by Commercial billings for Portland metro-area projects during 2016

CONCENTRATION

LOCATION QUOTIENTS CONSTRUCTION AND COMPONENTS PORTLAND-VANCOUVER METRO AREA, 2017

A location quotient greater than 1 indicates an industry with a higher concentration of employment relative to the nation.



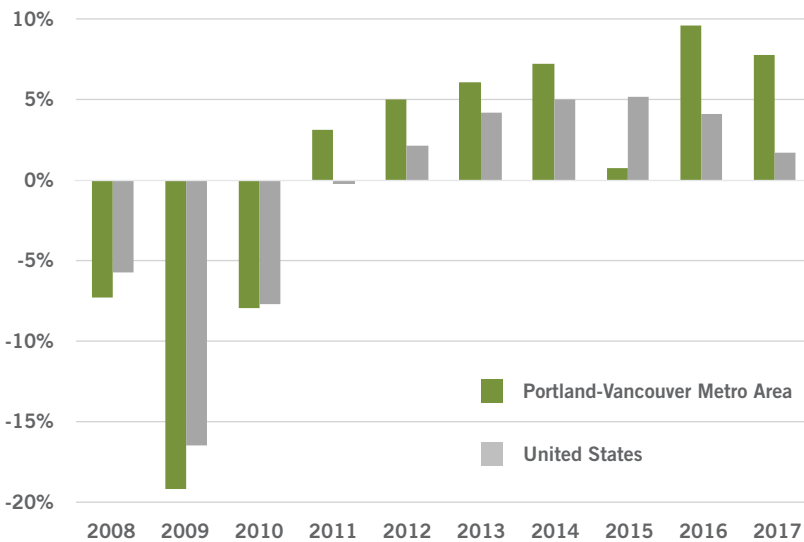
Source: EMSI

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-Vancouver region compared to the nation largely due to our size, and our population and job growth which fuels demand for housing and commercial space. Portland was the 19th fastest growing Metro in terms of job growth in 2017, adding 24,300 jobs.

Despite the low LQ for Heavy & Civil Engineering Construction, this sub-sector represents less than 10 percent of total employment in Construction. Construction jobs are found throughout the area, but are slightly less concentrated in Multnomah County (0.91) and more concentrated in Clackamas (1.51) and Clark (1.74) counties.

EMPLOYMENT TRENDS

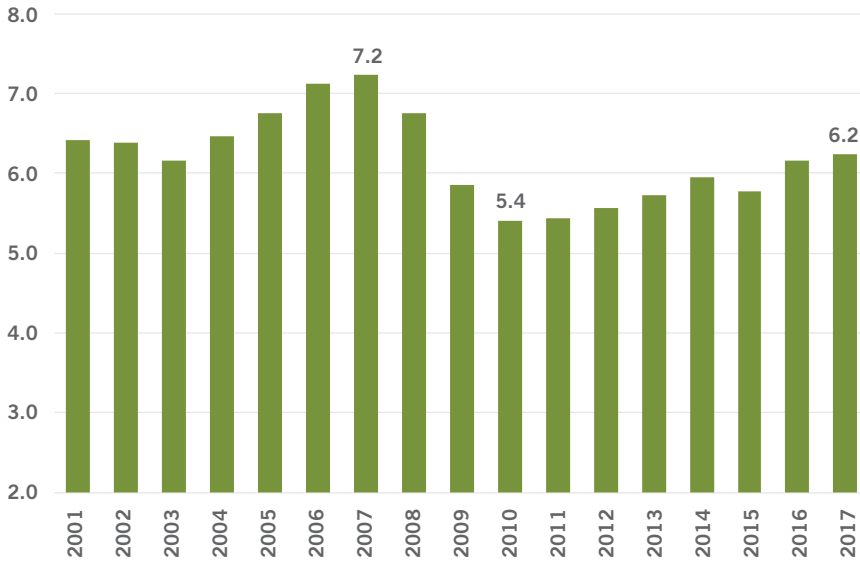
CONSTRUCTION ANNUAL GROWTH RATES PORTLAND-VANCOUVER METRO AREA VS. UNITED STATES



Source: EMSI

- Construction is a cyclical industry, with dramatic booms (1990s, mid-2000s, 2010-present) and busts (Great Recession).
- Construction was one of the hardest-hit industries in the recession, losing nearly one third of jobs (21,000).
- Since turning the corner in 2010, it has added jobs faster than its national counterpart.
- Construction added the most jobs in 2017, outpacing other fast-growing industries like Health Care, Retail Trade, and Accommodation & Food Services.
- The surge in growth since 2016 has led to Construction employment surpassing pre-recession levels in 2017.

CONSTRUCTION JOBS PER 100 PORTLAND-VANCOUVER METRO AREA



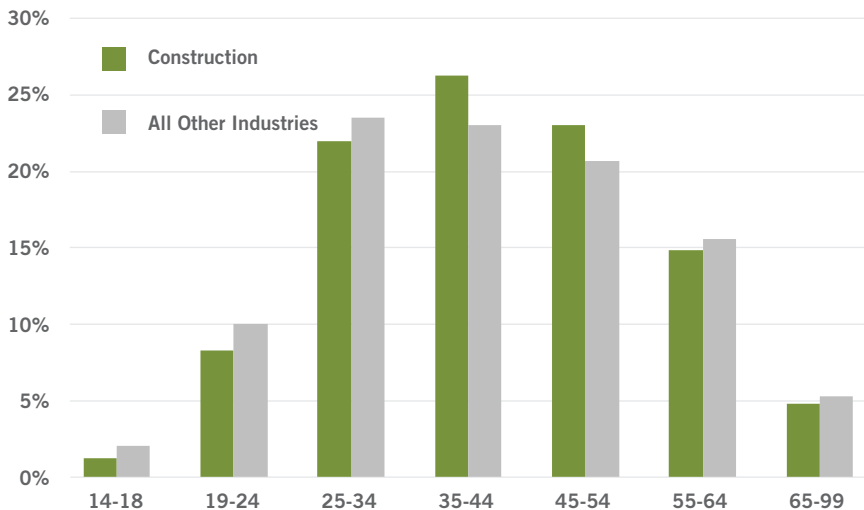
Source: EMSI

Construction accounts for about just over 6 out of every 100 jobs in the economy; economists consider a ratio between five and six 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 PORTLAND-VANCOUVER METRO AREA, 2017

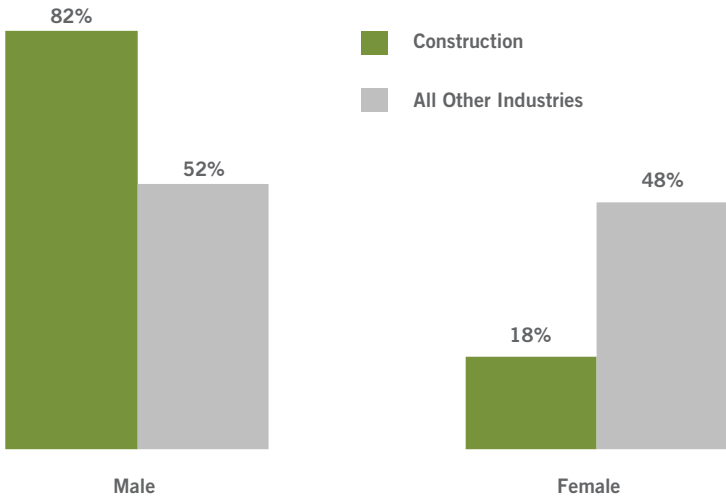


Source: EMSI

One-fifth of the region's Construction workforce is at, or nearing, retirement age (55 or older).

Despite booming enrollments in apprenticeship programs, the share of younger workers employed in Construction remains less than across all other industries. More young workers will be needed to not only replace oncoming retirements but new growth in the region as well.

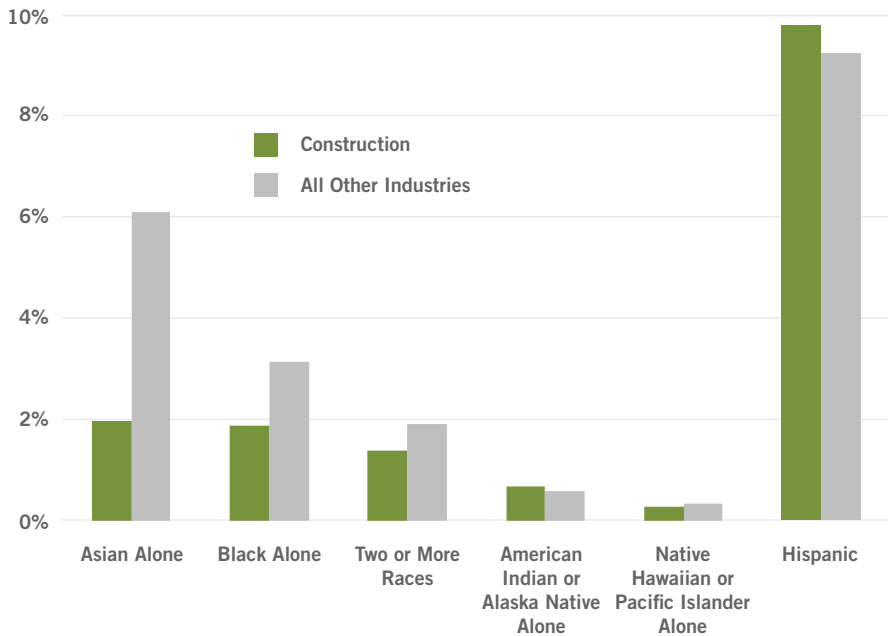
**CONSTRUCTION EMPLOYMENT BY GENDER
PORTLAND-VANCOUVER METRO AREA, 2017**



Source: EMSI

The Construction sector is overwhelmingly male; 82 percent of the workforce compared to 52 percent for all other industries.

**CONSTRUCTION EMPLOYMENT BY RACE (NONWHITE) AND ETHNICITY
PORTLAND-VANCOUVER METRO AREA, 2017**



Source: EMSI

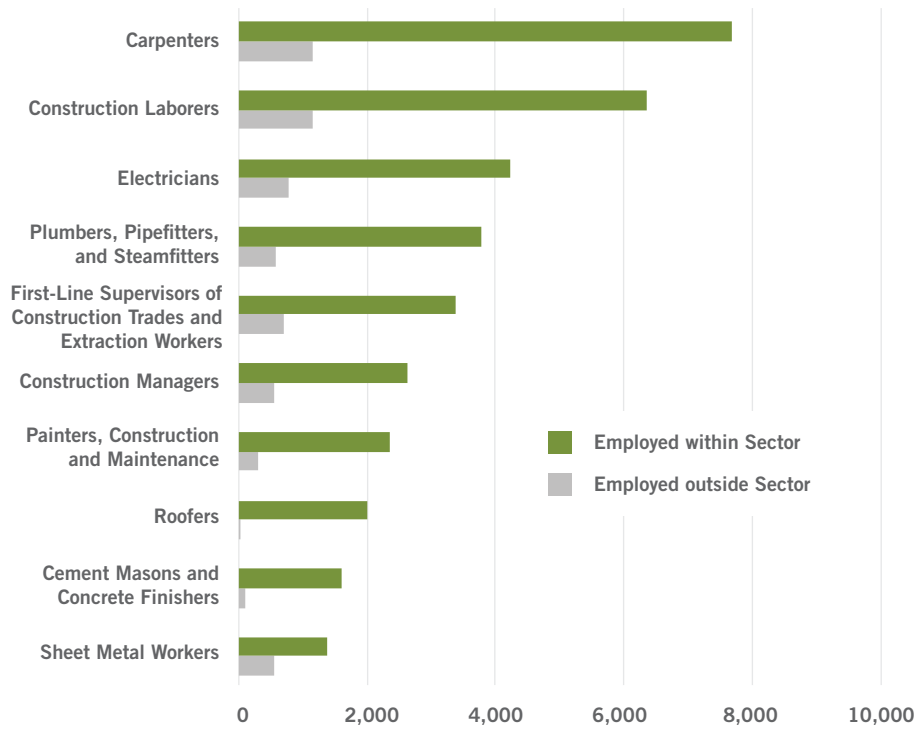
Whites make up the vast majority of the Construction workforce; 84 percent compared to 79 percent across all other industries.

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 PORTLAND-VANCOUVER METRO AREA, 2017



Source: EMSI

Roughly 160 occupations are represented in Construction.

The top ten largest Construction occupations are relatively unique to the sector and not often found elsewhere in the economy.

TOP CONSTRUCTION OCCUPATIONS (ALL INDUSTRIES) PORTLAND-VANCOUVER METRO AREA

Occupation	2017	2027	Estimated Annual Openings	Estimated Annual Growth Openings
Carpenters	9,353	10,870	1,068	152
Construction Laborers	8,018	9,594	1,050	158
Electricians	5,277	6,218	722	94
Plumbers, Pipefitters, and Steamfitters	4,540	5,274	586	73
First-Line Supervisors of Construction Trades and Extraction Workers	4,397	5,215	541	82
Construction Managers	3,348	3,708	274	36
Painters, Construction and Maintenance	2,797	3,428	325	63
Operating Engineers and Other Construction Equipment Operators	2,217	2,485	282	27
Roofers	2,138	2,700	293	56
Sheet Metal Workers	1,972	2,193	238	22

Source: EMSI

The top Construction occupations have grown faster than anticipated since 2016. New to the list are operating engineers, painters, and sheet metal workers.

TOP CONSTRUCTION OCCUPATIONS (SECTOR): PORTLAND-VANCOUVER METRO AREA

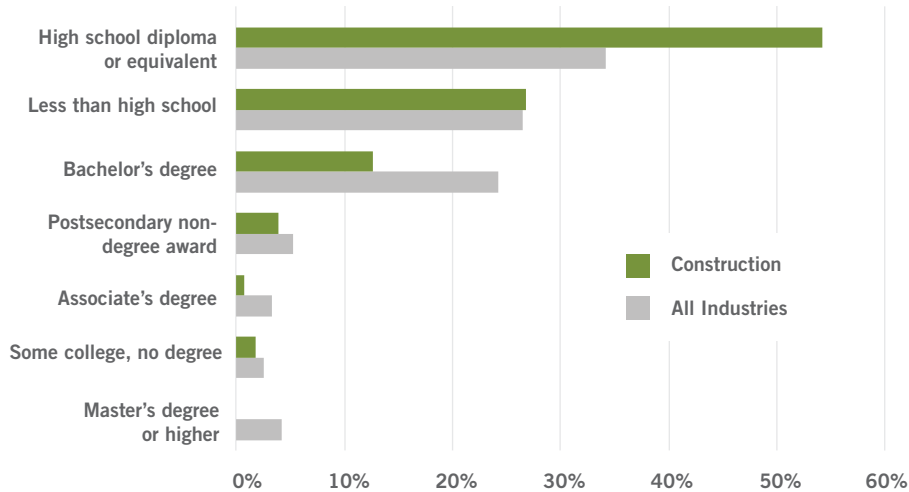
Occupation	2017 Sector Employment	% of Sector Employment	2017 Median Wage	% of Median Wage, All Occs.	Location Quotient	Typical Entry Level Education	Typical on-the-job-training
Carpenters	8,201	12.0%	\$23.23	118%	1.60	High school diploma or equivalent	Apprenticeship
Construction Laborers	6,840	10.0%	\$17.73	90%	1.03	No formal educational credential	Short-term on-the-job training
Electricians	4,494	6.6%	\$33.73	171%	1.01	High school diploma or equivalent	Apprenticeship
Plumbers, Pipefitters, and Steamfitters	3,967	5.8%	\$36.40	185%	1.27	High school diploma or equivalent	Apprenticeship
First-Line Supervisors of Construction Trades and Extraction Workers	3,666	5.4%	\$33.04	167%	0.96	High school diploma or equivalent	None
Construction Managers	2,785	4.1%	\$45.93	233%	1.56	Bachelor's degree	Moderate-term on-the-job training
Painters, Construction and Maintenance	2,457	3.6%	\$16.53	84%	1.46	No formal educational credential	Moderate-term on-the-job training
Roofers	2,107	3.1%	\$21.63	110%	2.13	No formal educational credential	Moderate-term on-the-job training
Cement Masons and Concrete Finishers	1,702	2.5%	\$21.45	109%	1.20	No formal educational credential	Moderate-term on-the-job training
Operating Engineers and Other Construction Equipment Operators	1,446	2.1%	\$28.45	144%	0.74	High school diploma or equivalent	Moderate-term on-the-job training

Source: EMSI

The top ten occupations make up over half of total employment. Occupations new to the list include roofers and cement masons.

EDUCATIONAL REQUIREMENTS

CONSTRUCTION EMPLOYMENT BY TYPICAL ENTRY-LEVEL EDUCATION PORTLAND-VANCOUVER METRO AREA, 2017



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

Thirteen percent call for an Associate's degree or higher; a significantly smaller proportion than for all other industries (32%).

Nine of the ten largest occupations require an apprenticeship or moderate on-the-job training.

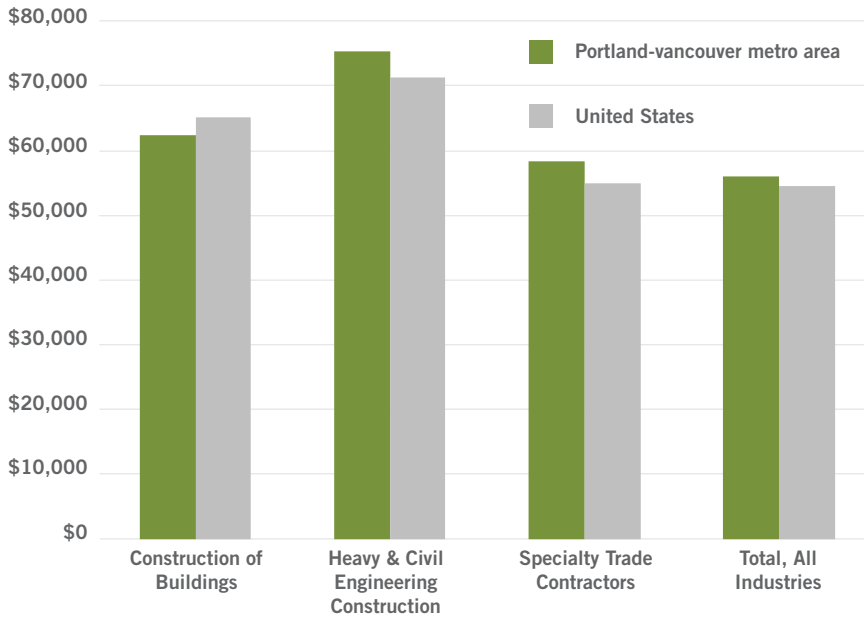
TRAINING AND DEGREE GRADUATE COMPLETER DATA FOR CONSTRUCTION-RELATED PROGRAMS PORTLAND-VANCOUVER METRO AREA

Training	2016 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	9			9	
Lineworker	5	5		6	
Construction Trades, General	10			10	
Electrical and Power Transmission Installation/Installer, General	27	12		15	
Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician	179	168		11	
Industrial Mechanics and Maintenance Technology	3			3	
Operations Management and Supervision	18	4		4	
Welding Technology/Welder	394	355		39	
TOTALS	645	544	-	97	-

Source: EMSI

WAGES

ANNUAL AVERAGE WAGES FOR COMPONENTS OF CONSTRUCTION: PORTLAND-VANCOUVER METRO AREA AND U.S., 2017



Source: EMSI

The average annual wage in Construction is \$60,800 which is about \$4,700 (8%) higher than the average across all industries in the region, and 2 percent higher than its national counterpart. Each component of Construction pays more than the average wage for all industries.

Recent wage growth across the United States in Construction of Buildings has spurred national wages to become more competitive. The Portland-Vancouver region now faces a four percent wage deficit relative to the national average.

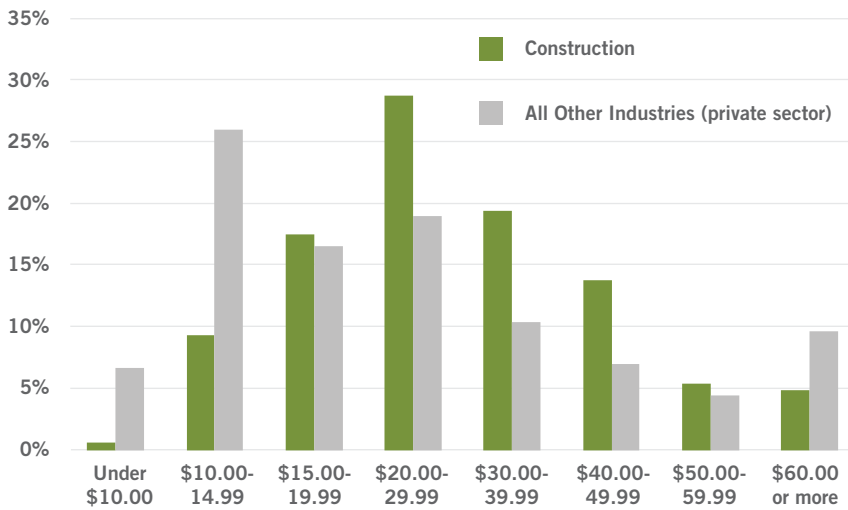
CONSTRUCTION SHARE OF EMPLOYMENT BY HOURLY WAGE OREGON, 2017



Source: Oregon Employment Department Unemployment Insurance Wage Records

Construction's median hourly wage is \$24.19 (2017); 29 percent higher than that of all industries (\$18.71). There are relatively fewer lower paying jobs and more higher paying jobs than the overall economy. In Oregon, 36 percent of Construction workers earn \$30/ hour or more.

**CONSTRUCTION
SHARE OF EMPLOYMENT BY HOURLY WAGE
WASHINGTON, 2017**



In Washington, 44 percent of Construction workers earn \$30/ hour or more.

Source: Washington Employment Security Department

TURNOVER

**TURNOVER RATE IN CONSTRUCTION
PORTLAND-VANCOUVER METRO AREA, 2016**

Total, Construction	11.5%
Construction of Buildings	12.2%
Heavy & Civil Engineering Construction	10.5%
Specialty Trade Contractors	11.3%
Total, All Industries (private sector)	9.9%

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. Construction has more turnover than the overall economy, however, it has decreased in the sector by 1.1 percentage points in the past two years (from 12.6 to 11.5 percent). The subsector of Heavy & Civil Engineering Construction experienced the most substantial reduction in turnover, reducing from 12.5 percent in 2014 to most recently 10.5 percent.

The higher rate of turnover relative to all other industries is likely due to the nature of the Construction sector: 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 as the Portland-Vancouver region faces historically low levels of unemployment.

JOB VACANCIES

LARGEST NUMBER OF VACANCIES IN CONSTRUCTION-RELATED OCCUPATIONS PORTLAND TRI-COUNTY, 2017

Occupation	2017 Vacancies, All Industries
Total, Construction	3,186
Carpenters	747
Painters, Construction and Maintenance	480
Construction Laborers	229
Construction Managers	226
Heavy and Tractor-Trailer Truck Drivers	191
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	172
Electricians	163
First-Line Supervisors of Construction Trades and Extraction Workers	134
Light Truck or Delivery Services Drivers	131
Plumbers, Pipefitters, and Steamfitters	117
Sheet Metal Workers	109
General and Operations Managers	86
Transportation, Storage, and Distribution Managers	86
Fence Erectors	70
Interior Designers	46
Compliance Officers	38
Roofers	25
Receptionists and Information Clerks	23
Office Clerks, General	23
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	23
Installation, Maintenance, and Repair Workers, All Other	23
Operating Engineers and Other Construction Equipment Operators	13

Tri-County: Clackamas, Multnomah, Washington counties

NOTE: Information not available for SW Washington

Source: Oregon Employment Department, 2017 Job Vacancy Survey

CURRENT SUPPLY

REGISTERED JOB SEEKERS CONSTRUCTION, PORTLAND METRO AREA (OREGON PORTION)

Occupation	Jobseekers ¹
Construction Laborers	1,376
Carpenters	679
Painters, Construction and Maintenance	556
Operating Engineers and Other Construction Equipment Operators	343
Sheet Metal Workers	274
Plumbers, Pipefitters, and Steamfitters	210
Electricians	202
Roofers	189
Drywall and Ceiling Tile Installers	172
Cost Estimators	165

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, February 2018. Jobseekers can include more than one occupation so they may be counted more than once.

¹ Data represent job seekers registered with The Oregon Employment Department, iMatchSkills. Active status: February 2018. Data are self-reported.

Job seekers can include more than one occupation in their profile and are therefore counted more than once in the data. The unique count of job seekers for the above list of occupations is 2,652.

UNEMPLOYMENT INSURANCE CLAIMANTS SOUTHWEST WASHINGTON, JANUARY 2018

Occupation	Claimants ¹
Construction Laborers	183
Operating Engineers and Other Construction Equipment Operators	104
Construction Managers	62
Carpenters	47
Electricians	40
Painters, Construction and Maintenance	40
Roofers	30
Supervisors of Construction Trades and Extraction Workers	21
Sheet Metal Workers	18
Plumbers, Pipefitters, and Steamfitters	12
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	9
Cost Estimators	6
Drywall and Ceiling Tile Installers	5

Southwest Washington: Clark, Cowlitz, Wahkiakum, Skamania counties

Source: Washington Employment Security Department

In Southwest Washington, there were nearly 600 unemployed workers claiming unemployment insurance in Construction's 10 largest occupations (January 2018).

¹ Data represent claimants registered with The Washington Employment Security Department (active status, January 2018)

**TRAINING ENROLLMENT DATA FOR CONSTRUCTION-RELATED APPRENTICESHIPS
7-COUNTY PORTLAND MSA**

Occupation	Registered Apprentices (2017)	Share of Apprenticeships
Electricians	1,590	28%
Carpenters	978	17%
Plumbers, pipefitters, and steamfitters	748	13%
Drywall and ceiling tile installers	508	9%
Sheet metal workers	318	6%
Construction laborers	290	5%
Roofers	230	4%
Structural iron and steel workers	173	3%
Heating, air conditioning, and refrigeration mechanics and installers	101	2%
Operating engineers and other construction equipment operators	97	2%

Source: Bureau of Labor Industries

APPRENTICESHIP PROGRAM COMPLETERS, 7-COUNTY PORTLAND MSA

Occupation	2014	2015	2016	2017
Electricians	138	163	256	300
Carpenters	38	37	76	199
Plumbers, Pipefitters, and Steamfitters	33	55	68	116
Construction Laborers	27	22	48	30
Sheet Metal Workers	27	15	29	28
Drywall and Ceiling Tile Installers	23	27	29	31
Roofers	10	8	20	18
Structural Iron and Steel Workers	10	23	12	50
Operating Engineers & Other Construction Equipment Operators	12	6	7	10
Painters, Construction and Maintenance	6	10	7	14
Total	324	366	552	796

Source: Bureau of Labor and Industries

CURRENT DEMAND

CONSTRUCTION OCCUPATIONS WITH LARGEST NUMBER OF ONLINE JOB POSTINGS PORTLAND-VANCOUVER METRO AREA, 2017 MONTHLY AVERAGE

Occupation	Average monthly online job postings, 2017
Construction Managers	149
Telecommunications Equipment Installers and Repairers, Except Line Installers	133
First-Line Supervisors of Construction Trades and Extraction Workers	124
Electricians	109
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	58
Construction Laborers	56
Carpenters	39
Construction and Building Inspectors	36
Plumbers, Pipefitters, and Steamfitters	31
Operating Engineers and Other Construction Equipment Operators	21
All Occupations In Sector	121

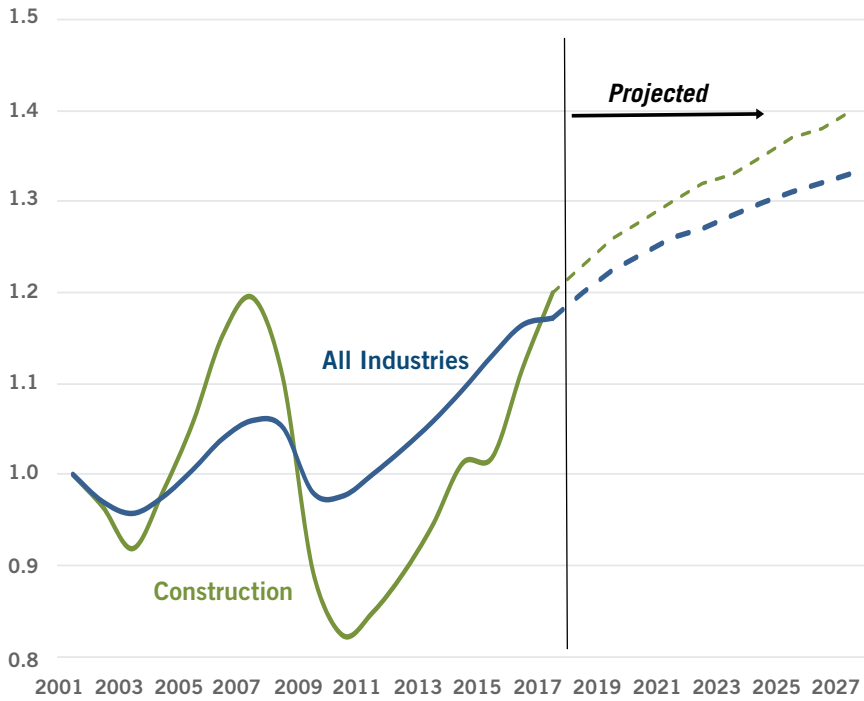
Source: EMSI
12-month average: Jan-Dec 2017

Data for top ten occupations listed include ads across all industries and is adjusted for duplications.

The number of online job advertisements for construction occupations in the Portland-Vancouver region has substantially increased since 2015. The expansion beyond traditional methods for finding Construction workers could be two-fold--historically low levels of employment has tightened the labor market, making it more difficult for Construction firms to find workers. Compounding the problem is the regional labor shortage, meaning that firms

LONG-TERM DEMAND

**HISTORICAL & PROJECTED GROWTH
PORTLAND-VANCOUVER METRO AREA**
2001 indexed to 1



Source: EMSI

Construction employment surpassed pre-recession levels during 2017 and intense demand should lead to continued strong growth.

Between 2017 and 2027, the sector is expected to add about 11,000 jobs for a growth rate of 17 percent; faster than the overall economy (14 percent).

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

Construction will account for 1-in-13 new jobs between 2017 and 2027.

Growth will be driven by an expanding population. The Portland-Vancouver region is expected to add nearly 200,000 new residents between 2017 and 2027—double the rate of the national average. 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
PORTLAND-VANCOUVER METRO AREA**

Occupation	2017	2027	Growth	Percent Growth	Share of Sector Growth	Projected Annual Growth Openings
Construction Laborers	6,840	8,267	1,427	21%	12%	143
Carpenters	8,201	9,601	1,400	17%	12%	140
Electricians	4,494	5,366	872	19%	8%	87
First-Line Supervisors of Construction Trades and Extraction Workers	3,666	4,367	701	19%	6%	70
Plumbers, Pipefitters, and Steamfitters	3,967	4,661	694	17%	6%	69
Painters, Construction and Maintenance	2,457	3,021	564	23%	5%	56
Roofers	2,107	2,665	558	26%	5%	56
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	1,380	1,817	437	32%	4%	44
Office Clerks, General	1,854	2,158	304	16%	3%	30
General and Operations Managers	1,712	1,994	282	16%	2%	28
Construction Managers	2,785	3,057	272	10%	2%	27
Cost Estimators	1,328	1,574	246	19%	2%	25
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	1,394	1,623	229	16%	2%	23
Cement Masons and Concrete Finishers	1,702	1,920	218	13%	2%	22
Sheet Metal Workers	1,424	1,602	178	13%	2%	18

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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