** Advanced Carpentry Occupations**

**Labor Market Information Report**

**Laney College**

Prepared by the San Francisco Bay Center of Excellence

for Labor Market Research

September 2019

# Recommendation

Based on all available data, there appears to be a significant undersupply of Advanced Carpentry workers compared to the demand for this cluster of occupations in the Bay region and in the East Bay sub-region (Alameda and Contra Costa Counties.) There is a projected annual gap of about 12,931 students in the Bay region and 4,031 in the East Bay Sub-Region.

This report also provides student outcomes data on employment and earnings for programs on TOP 0952.10 - Carpentry in the state and region. It is recommended that these data be reviewed to better understand how outcomes for students taking courses on this TOP code compare to potentially similar programs at colleges in the state and region, as well as to outcomes across all CTE programs at Laney College and in the region.

# Introduction

This report profiles Advanced Carpentry Occupations in the 12 county Bay region and in the East Bay sub-region for a proposed new program at Laney College. Labor market information (LMI) is not available at the eight-digit SOC Code level for Construction Carpenters (47-2031.01), therefore, the data shown in Tables 1 and 2 is for Carpenters (at the six digit SOC level) and likely overstates demand for Construction Carpenters. Tables 3, 4, 6, 9, 10 and 11 use job postings data from Burning Glass at the eight-digit SOC Code level for Construction Carpenters (47-2031.01).

Similarly, labor market information (LMI) is not available at the eight-digit SOC Code level for Weatherization Installers and Technicians (47-4099.03), therefore, the data shown in Tables 1 and 2 is for Miscellaneous Construction and Related Workers(at the six digit SOC level) and likely overstates demand for Weatherization Installers and Technicians. Tables 3, 4, 6, 9, 10 and 11 use job postings data from Burning Glass at the eight-digit SOC Code level for Weatherization Installers and Technicians (47-4099.03).

|  |
| --- |
| * **Helpers--Carpenters (SOC 47-3012):** Help carpenters by performing duties requiring less skill. Duties include using, supplying or holding materials or tools, and cleaning work area and equipment. Construction laborers who do not primarily assist carpenters are classified under "Construction Laborers" (47-2061). Apprentice workers are classified with the appropriate skilled construction trade occupation (47-2011 through 47-2231). |
| Entry-Level Educational Requirement: No formal *educational credential* |
| Training Requirement: Short-term *on-the-job training* |
| Percentage of Community College Award Holders or Some Postsecondary Coursework: 21% |
| * **Carpenters (SOC 47-2031):** Construct, erect, install, or repair structures and fixtures made of wood, such as concrete forms; building frameworks, including partitions, joists, studding, and rafters; and wood stairways, window and door frames, and hardwood floors. May also install cabinets, siding, drywall and batt or roll insulation. Includes brattice builders who build doors or brattices (ventilation walls or partitions) in underground passageways |
| Entry-Level Educational Requirement: High *school diploma or equivalent* |
| Training Requirement: Apprenticeship |
| Percentage of Community College Award Holders or Some Postsecondary Coursework: 24*%* |
| * **Maintenance and Repair Workers, General (SOC 49-9071):** Perform work involving the skills of two or more maintenance or craft occupations to keep machines, mechanical equipment, or the structure of an establishment in repair. Duties may involve pipe fitting; boiler making; insulating; welding; machining; carpentry; repairing electrical or mechanical equipment; installing, aligning, and balancing new equipment; and repairing buildings, floors, or stairs. Excludes “Maintenance Workers, Machinery" (49-9043). |
| Entry-Level Educational Requirement: High *school diploma or equivalent* |
| Training Requirement: Moderate-term *on-the-job training* |
| Percentage of Community College Award Holders or Some Postsecondary Coursework: 37*%* |
| * **Construction Laborers (SOC 47-2061)**: Perform tasks involving physical labor at construction sites. May operate hand and power tools of all types: air hammers, earth tampers, cement mixers, small mechanical hoists, surveying and measuring equipment, and a variety of other equipment and instruments. May clean and prepare sites, dig trenches, set braces to support the sides of excavations, erect scaffolding, and clean up rubble, debris and other waste materials. May assist other craft workers. Construction laborers who primarily assist a particular craft worker are classified under "Helpers, Construction Trades" (47-3010). Excludes “Hazardous Materials Removal Workers” (47-4041). |
| Entry-Level Educational Requirement: No *formal educational credential* |
| Training Requirement: Short-term *on-the-job training* |
| Percentage of Community College Award Holders or Some Postsecondary Coursework: 20*%* |
| * **Miscellaneous Construction and Related Workers (SOC 47-4099):** Weatherization Installers and Technicians: Perform a variety of activities to weatherize homes and make them more energy efficient. Duties include repairing windows, insulating ducts, and performing heating, ventilating, and air-conditioning (HVAC) work. May perform energy audits and advise clients on energy conservation measures. |
| Entry-Level Educational Requirement: High school diploma or equivalent |
| Training Requirement: Moderate-term on-the-job training |
| Percentage of Community College Award Holders or Some Postsecondary Coursework: 0% |

# Occupational Demand

**Table 1. Employment Outlook for Advanced Carpentry Occupations in Bay Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation | 2017 Jobs | 2022 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Average Annual Open-ings | 10% Hourly Wage | Median Hourly Wage |
| Helpers--Carpenters | 840 | 945 | 106 | 13% | 728 | 146 | $12.89 | $18.33 |
| Carpenters | 38,532 | 40,774 | 2,242 | 6% | 20,309 | 4,062 | $13.83 | $28.31 |
| Maintenance and Repair Workers, General | 34,969 | 37,559 | 2,590 | 7% | 20,022 | 4,004 | $14.27 | $23.42 |
| Construction Laborers | 37,464 | 40,874 | 3,410 | 9% | 23,191 | 4,638 | $10.75 | $22.80 |
| Miscellaneous Construction and Related Workers | 692 | 761 | 69 | 10% | 449 | 90 | $12.50 | $22.31 |
| **Total** | **112,497** | **120,914** | **8,417** | **7%** | **64,698** | **12,940** | **$12.92** | **$24.85** |

*Source: EMSI 2019.2*

**Bay Region** includes Alameda, Contra Costa, Marin, Monterey, Napa, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano and Sonoma Counties

**Table 2. Employment Outlook for Advanced Carpentry Occupations in East Bay Sub-Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation | 2017 Jobs | 2022 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Average Annual Open-ings | 10% Hourly Wage | Median Hourly Wage |
| Helpers--Carpenters | 239 | 269 | 30 | 12% | 207 | 41 | $13.44 | $17.75 |
| Carpenters | 12,668 | 13,414 | 745 | 6% | 6,617 | 1,323 | $13.69 | $27.19 |
| Maintenance and Repair Workers, General | 9,105 | 9,776 | 672 | 7% | 5,204 | 1,041 | $13.11 | $21.89 |
| Construction Laborers | 12,969 | 14,140 | 1,171 | 9% | 8,005 | 1,601 | $11.10 | $23.08 |
| Miscellaneous Construction and Related Workers | 254 | 283 | 28 | 11% | 168 | 34 | $13.62 | $20.58 |
| **TOTAL** | **35,236** | **37,881** | **2,645** | **8%** | **20,200** | **4,040** | **$12.59** | **$24.19** |

*Source: EMSI 2019.2*

**East Bay Sub-Region** includes Alameda and Contra Costa Counties

### Job Postings in Bay Region and East Bay Sub-Region

**Table 3. Number of Job Postings by Occupation for latest 12 months (August 2018 - July 2019)**

| Occupation | Bay Region | East Bay |
| --- | --- | --- |
| Maintenance and Repair Workers, General | 12,813 | 4,073 |
| Construction Laborers | 2,050 | 778 |
| Construction Carpenters | 168 | 80 |
| Helpers--Carpenters | 28 | 11 |
| Weatherization Installers and Technicians | 5 | 3 |
| **Total** | **15,064** | **4,945** |

*Source: Burning Glass*

**Table 4a. Top Job Titles for Advanced Carpentry Occupations for latest 12 months (August 2018 - July 2019)**

**Bay Region**

|  |  |  |  |
| --- | --- | --- | --- |
| Common Title | Bay | Common Title | Bay |
| Maintenance Technician | 3,137 | Maintenance | 164 |
| Service Technician | 1,314 | Installation Technician | 160 |
| Field Service Technician | 917 | Handyman | 148 |
| Facilities Technician | 613 | Construction Worker | 148 |
| Technician | 346 | Field Service Representative | 144 |
| Maintenance Worker | 322 | Facilities Maintenance Technician | 137 |
| Maintenance Engineer | 285 | General Labourer | 136 |
| Field Service Engineer | 281 | Apartment Maintenance Worker | 121 |
| Construction Labourer | 271 | Porter | 104 |
| Building Engineer | 264 | Maintenance Specialist | 94 |
| Repair Technician | 239 | Maintenance Person | 94 |
| Equipment Technician | 237 | Laborer | 86 |
| Maintenance Mechanic | 195 | Building Maintenance Worker | 82 |
| Facilities Assistant | 192 | Construction Coordinator | 73 |

**Table 4b. Top Job Titles for Advanced Carpentry Occupations for latest 12 months (August 2018 - July 2019)**

**East Bay Sub-Region**

|  |  |  |  |
| --- | --- | --- | --- |
| Common Title | East Bay | Common Title | East Bay |
| Maintenance Technician | 1,014 | Field Service Representative | 55 |
| Service Technician | 512 | Maintenance | 54 |
| Field Service Technician | 340 | Maintenance Mechanic | 51 |
| Facilities Technician | 136 | Facilities Maintenance Technician | 51 |
| Construction Labourer | 111 | General Labourer | 50 |
| Technician | 97 | Apartment Maintenance Worker | 50 |
| Equipment Technician | 97 | Facilities Assistant | 49 |
| Repair Technician | 95 | Building Maintenance Worker | 49 |
| Maintenance Worker | 94 | Handyman | 42 |
| Building Engineer | 79 | Construction Coordinator | 40 |
| Installation Technician | 66 | Laborer | 36 |
| Field Service Engineer | 64 | Maintenance Specialist | 31 |
| Maintenance Engineer | 57 | Maintenance Person | 30 |
| Construction Worker | 57 | Porter | 23 |

*Source: Burning Glass*

# Industry Concentration

**Table 5. Industries hiring Advanced Carpentry Workers in Bay Region**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Industry – 6 Digit NAICS (No. American Industry Classification) Codes | Jobs in Industry (2018) | Jobs in Industry (2022) | % Change (2018-22) | % in Industry (2018) |
| Residential Remodelers (236118) | 13,320 | 14,906 | 12% | 12% |
| New Single-Family Housing Construction (except For-Sale Builders) (236115) | 9,229 | 9,124 | -1% | 8% |
| Commercial and Institutional Building Construction (236220) | 8,080 | 9,233 | 14% | 7% |
| All Other Specialty Trade Contractors (238990) | 4,907 | 5,145 | 5% | 4% |
| Local Government, Excluding Education and Hospitals (903999) | 4,166 | 4,410 | 6% | 4% |
| Site Preparation Contractors (238910) | 3,654 | 3,844 | 5% | 3% |
| Hotels (except Casino Hotels) and Motels (721110) | 2,620 | 2,683 | 2% | 2% |
| Drywall and Insulation Contractors (238310) | 2,530 | 2,772 | 10% | 2% |
| Residential Property Managers (531311) | 2,482 | 2,877 | 16% | 2% |
| Poured Concrete Foundation and Structure Contractors (238110) | 2,393 | 2,332 | -3% | 2% |
| Plumbing, Heating, and Air-Conditioning Contractors (238220) | 2,052 | 2,204 | 7% | 2% |
| Painting and Wall Covering Contractors (238320) | 2,018 | 1,991 | -1% | 2% |
| Highway, Street, and Bridge Construction (237310) | 2,017 | 2,100 | 4% | 2% |
| Offices of Real Estate Agents and Brokers (531210) | 1,963 | 2,050 | 4% | 2% |
| Finish Carpentry Contractors (238350) | 1,934 | 2,051 | 6% | 2% |
| Electrical Contractors and Other Wiring Installation Contractors (238210) | 1,858 | 1,971 | 6% | 2% |
| Flooring Contractors (238330) | 1,805 | 1,847 | 2% | 2% |
| Temporary Help Services (561320) | 1,799 | 1,965 | 9% | 2% |
| Water and Sewer Line and Related Structures Construction (237110) | 1,652 | 1,880 | 14% | 1% |
| Colleges, Universities, and Professional Schools (State Government) (902612) | 1,573 | 1,761 | 12% | 1% |
| Tile and Terrazzo Contractors (238340) | 1,557 | 1,682 | 8% | 1% |
| Lessors of Residential Buildings and Dwellings (531110) | 1,376 | 1,331 | -3% | 1% |

*Source: EMSI 2019.2*

**Table 6. Top Employers Posting Advanced Carpentry Occupations in Bay Region and East Bay Sub-Region (August 2018 - July 2019)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Employer | Bay | Employer | Bay | Employer | East Bay |
| Marriott International Incorporated | 508 | Prometheus | 40 | Marriott International Incorporated | 82 |
| CBRE | 121 | Tesla | 39 | Eden Housing Incorporated | 36 |
| Avalonbay Communities Incorporated | 91 | Hilton Hotel Corporation | 39 | Fpi Management | 33 |
| Essex Property Trust | 86 | United Site Services | 38 | CBRE | 31 |
| Equity Residential | 84 | Fpi Management Incorporated | 38 | University California | 31 |
| John Stewart Company | 79 | University California | 37 | Schnitzer Steel Industries | 29 |
| Eden Housing Incorporated | 77 | Siemens | 36 | Avalonbay Communities Incorporated | 29 |
| FPI Management | 76 | Proautomated Inc | 36 | Siemens | 28 |
| Cushman & Wakefield | 66 | Veolia North America | 35 | Essex Property Trust | 26 |
| Comcast | 62 | Greystar | 35 | Comcast | 26 |
| IBM | 61 | ServiceMaster | 33 | Equity Residential | 25 |
| Alliance Residential Company | 56 | National Carwash Solutions | 33 | Roto Rooter | 22 |
| Schnitzer Steel Industries | 55 | Target | 32 | University Of California Berkeley | 18 |
| Fairfield Residential | 47 | Jones Lang Lasalle Incorporated | 32 | US Army | 17 |
| Hyatt | 44 | Essex Property Trust Incorporated | 32 | National Carwash Solutions | 17 |
| Roto Rooter | 42 | Flagship Facility Services, Inc | 31 | Johnson Controls Incorporated | 17 |
| Sares Regis Group | 40 | Emcor | 31 | Bay Alarm Company | 16 |

*Source: Burning Glass*

# Educational Supply

There is one community college (Laney) in the Bay region issuing 9 awards on average annually (last 3 years) on TOP 0952.10 – Carpentry.

**Table 7. Awards on TOP 0952.10 - Carpentry in Bay Region**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| College | Sub-Region | Associates | Certificates | Noncredit | Total |
| Laney College | East Bay | 4 | 5 | 0 | 9 |
| **Total Bay Region** | | **4** | **5** | **0** | **9** |
| **Total East Bay Sub-Region** | | **4** | **5** | **0** | **9** |

# *Source: Data Mart*

Note: The annual average for awards is 2015-16 to 2017-18.

# Gap Analysis

Based on the data included in this report, there is a large labor market gap in the Bay region with 12,940 annual openings for the Advanced Carpentry occupational cluster and 9 annual (3-year average) awards for an annual undersupply of 12,931 students. In the East Bay Sub-Region, there is also a large gap with 4,040 annual openings and 9 annual (3-year average) awards for an annual undersupply of 4,031 students.

# Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0952.10 - Carpentry**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 2015-16 | Bay  (All CTE Programs) | Laney College (All CTE Programs) | State (0952.10) | Bay (0952.10) | East Bay (0952.10) | Laney College (0952.10) |
| % Employed Four Quarters After Exit | 74% | 74% | 69% | 72% | 61% | 61% |
| Median Quarterly Earnings Two Quarters After Exit | $10,550 | $10,550 | $13,865 | $16,768 | $12,498 | $12,498 |
| Median % Change in Earnings | 46% | 46% | 59% | 59% | 1% | 1% |
| % of Students Earning a Living Wage | 63% | 63% | 62% | 66% | 64% | 64% |

*Source: Launchboard Pipeline (version available on 8/26/19)*

# Skills, Certifications and Education

**Table 9. Top Skills for Advanced Carpentry Occupations in Bay Region (August 2018 - July 2019)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Skill | Postings | Skill | Postings | Skill | Postings |
| Repair | 9,175 | Machinery | 966 | Boilers | 539 |
| Plumbing | 5,639 | Property Management | 880 | Asset Protection | 504 |
| Painting | 3,717 | Welding | 871 | Masonry | 503 |
| HVAC | 3,551 | Customer Contact | 823 | Inventory Maintenance | 498 |
| Carpentry | 3,432 | Sales | 690 | Electrical Work | 479 |
| Cleaning | 2,663 | Electrical Systems | 658 | Laundry | 478 |
| Predictive / Preventative Maintenance | 2,528 | Safety Training | 654 | Wiring | 464 |
| Customer Service | 2,249 | Technical Support | 653 | Building Codes | 451 |
| Scheduling | 1,958 | Appliance Repair | 609 | Roofing | 450 |
| Hand Tools | 1,539 | Forklift Operation | 606 | Furniture Moving | 438 |
| Power Tools | 1,436 | Apartment Maintenance | 578 | Plumbing Repairs | 430 |
| Lifting Ability | 1,346 | Project Management | 572 | Caulking | 421 |
| Facility Maintenance | 1,218 | Test Equipment | 566 | Equipment Repair | 413 |
| Occupational Health and Safety | 1,164 | Budgeting | 555 | Staff Management | 401 |
| Drywall | 1,036 | Schematic Diagrams | 554 | Equipment Maintenance | 360 |

*Source: Burning Glass*

**Table 10. Certifications for Advanced Carpentry Occupations in Bay Region (August 2018 - July 2019)**

Note: 60% of records have been excluded because they do not include a certification. As a result, the chart below may not be representative of the full sample.

|  |  |  |  |
| --- | --- | --- | --- |
| Certification | Postings | Certification | Postings |
| Driver's License | 5,000 | CDL Class B | 46 |
| EPA CFC/HCFC Certification | 280 | First Aid CPR AED | 45 |
| Environmental Protection Agency Certification | 187 | EPA 608 | 45 |
| Forklift Operator Certification | 113 | Project Management Certification | 40 |
| CDL Class C | 93 | Building Maintenance | 36 |
| Certified A+ Technician | 92 | CompTIA Network+ | 33 |
| Automotive Service Excellence (ASE) Certification | 69 | Cisco Certified Network Associate (CCNA) | 32 |
| Occupational Safety and Health Administration Certification | 61 | Electrician Certification | 29 |
| IT Infrastructure Library (ITIL) Certification | 56 | Bronze Level Certification | 29 |
| CDL Class A | 54 | Contractors License | 26 |
| Certified Pool/Spa Operator | 53 | Welding Certification | 25 |
| Security Clearance | 49 | North American Board of Energy Practitioners (NABCEP) | 24 |

*Source: Burning Glass*

**Table 11. Education Requirements for Advanced Carpentry Occupations in Bay Region**

Note: 60% of records have been excluded because they do not include a degree level. As a result, the chart below may not be representative of the full sample.

|  |  |  |
| --- | --- | --- |
| Education (minimum advertised) | Latest 12 Mos. Postings | Percent 12 Mos. Postings |
| High school or vocational training | 5,498 | 92% |
| Associate Degree | 501 | 8% |
| Bachelor’s Degree or Higher | 0 | 0% |

*Source: Burning Glass*

# Methodology

Occupations for this report were identified by use of skills listed in O\*Net descriptions and job descriptions in Burning Glass. Labor demand data is sourced from Economic Modeling Specialists International (EMSI) occupation data and Burning Glass job postings data. Educational supply and student outcomes data is retrieved from multiple sources, including CTE Launchboard and CCCCO Data Mart.

# Sources

O\*Net Online

Labor Insight/Jobs (Burning Glass)

Economic Modeling Specialists International (EMSI)

CTE LaunchBoard [www.calpassplus.org/Launchboard/](http://www.calpassplus.org/Launchboard/)

Statewide CTE Outcomes Survey

Employment Development Department Unemployment Insurance Dataset

Living Insight Center for Community Economic Development

Chancellor’s Office MIS system

# Contacts

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