Welding Occupations

Labor Market Analysis: San Diego County

November 2026

Summary

NEW PROGRAM RECOMMENDATION?	EVIDENCE OF A SUPPLY GAP?	AT OR ABOVE THE LIVING WAGE?	EXPECTED LEVEL(S) OF EDUCATION
Proceed with Caution	☑	☒	☐ Doctorate Degree ☐ Master's Degree ☐ Bachelor's Degree ☐ Associate degree ☐ Some College or Certificate ☑ HS Diploma or Equivalent ☐ Less Than a HS Diploma ☐ Apprenticeship
SUPPORT FOR PROGRAM MODIFICATION?	**NUMBER OF INSTITUTIONS THAT PROVIDE TRAINING**	**NUMBER OF ANNUAL JOB OPENINGS**	
☑	MEDIUM	HIGH	

The San Diego & Imperial Center of Excellence (COE) developed this brief to assist the region's community colleges with strategic planning and program development. Welding Occupations include "Maintenance and Repair Workers, General," "Plumbers, Pipefitters, and Steamfitters," and "Welders, Cutters, Solderers, and Brazers." According to available data, Welding Occupations in San Diego County have a labor market demand of 2,398 annual job openings (while average demand for a single occupation in San Diego County is 271 annual job openings), and six institutions supply an estimated 602 awards for these occupations. On average, entry-level wages are below the living wage. This brief recommends proceeding with caution when developing a new program and supports a program modification because 1) there is a supply gap; and 2) a high number of annual job openings exists for these occupations. However, average entry-level wages are below the living wage, while median wages are above the living wage. Additionally, colleges should note that the expected level of education is a high school diploma or equivalent.

Introduction

This report provides labor market information in San Diego County for the following occupational codes in the Standard Occupational Classification (SOC)[1] system:

- **Maintenance and Repair Workers, General** (SOC 49-9071): Maintain and repair machines, equipment, and buildings using skills from multiple trades, including plumbing, welding, carpentry, and electrical or mechanical repair.
- **Plumbers, Pipefitters, and Steamfitters** (SOC 47-2152): Install, modify, and repair piping that carries liquids or gases; work may include heating, cooling, mechanical controls, and sprinkler systems.
- **Welders, Cutters, Solderers, and Brazers** (SOC 51-4121): Join metal parts and repair holes, indentations, or seams using hand-welding, flame-cutting, soldering, or brazing equipment.

For the purpose of this report, these occupations are referred to as *Welding Occupations*.

Maintenance and Repair Workers, General and Plumbers, Pipefitters, and Steamfitters are also identified in the COE's May 2025 Military to Civilian Employment report. The study uses a Military Occupational Classification (MOC)-to-SOC crosswalk to identify civilian counterparts based on similarities in skills, duties, and qualifications. Both occupations met the study's San Diego County screening criterion of at least 20 military exiters in 2020, providing context for military-to-civilian career pathways rather than a separate estimate of current labor demand. Their inclusion highlights civilian career pathways for transitioning service members with transferable maintenance and technical skills.[2]

[1] The Standard Occupational Classification (SOC) system is used by federal statistical agencies to classify workers into occupational categories for collecting, calculating, and disseminating data. bls.gov/soc

[2] San Diego & Imperial Center of Excellence. Military to Civilian Employment: Opportunities in the San Diego & Imperial Region. May 2025, pp. 14–16. coeccc.net/san-diego-imperial/2025/05/military-to-civilian-employment.

Projected Occupational Demand

Between 2025 and 2030, businesses in San Diego County will need to hire 2,398 employees annually to fill new jobs and backfill positions made vacant through turnover and retirement (Exhibit 1a). Maintenance and Repair Workers, General account for the largest share of demand, with 1,539 annual openings. Overall employment is projected to increase by 924 jobs, or four percent, during the five-year period.

Exhibit 1a: Employment Change and Occupational Demand for Welding Occupations in San Diego County (2025-2030)[3]

Occupational Title	2025 Jobs	2030 Jobs	2025-2030 Net Jobs Change	2025-2030 % Jobs Change	Annual Job Openings (Demand)
Maintenance and Repair Workers, General	14,942	15,611	669	4%	1,539
Plumbers, Pipefitters, and Steamfitters	5,816	6,063	247	4%	533
Welders, Cutters, Solderers, and Brazers	3,344	3,352	8	0%	326
Total	**24,102**	**25,026**	**924**	**4%**	**2,398**

Between 2025 and 2035, Welding Occupations in San Diego County are projected to have 2,388 annual job openings and increase by 1,451 jobs, or six percent (Exhibit 1b). Annual openings are similar to the five-year outlook, while employment for Welders, Cutters, Solderers, and Brazers remains essentially flat.

Exhibit 1b: Employment Change and Occupational Demand for Welding Occupations in San Diego County (2025-2035)[4]

Occupational Title	2025 Jobs	2035 Jobs	2025-2035 Net Jobs Change	2025-2035 % Jobs Change	Annual Job Openings (Demand)
Maintenance and Repair Workers, General	14,942	16,022	1,080	7%	1,537
Plumbers, Pipefitters, and Steamfitters	5,816	6,178	362	6%	526
Welders, Cutters, Solderers, and Brazers	3,344	3,353	9	0%	325
Total	**24,102**	**25,553**	**1,451**	**6%**	**2,388**

[3] Lightcast Q3 2026; QCEW, Non-QCEW, Self-Employed.
[4] Lightcast Q3 2026; QCEW, Non-QCEW, Self-Employed.

Earnings

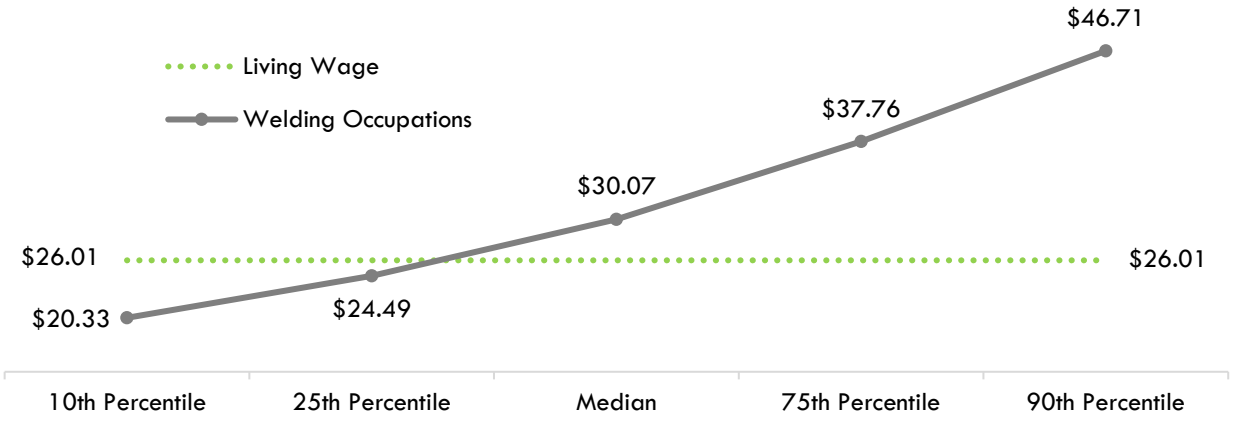
According to traditional[5] labor market information (LMI), entry-level hourly earnings for *Welding Occupations* range from $21.82 to $27.77 (Exhibit 2).

Exhibit 2: Hourly Earnings for Welding Occupations in San Diego County[6]

Occupational Title	Entry-Level Hourly Earnings (25th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75th Percentile)
Plumbers, Pipefitters, and Steamfitters	$27.77	$34.28	$44.88
Welders, Cutters, Solderers, and Brazers	$23.86	$29.74	$36.83
Maintenance and Repair Workers, General	$21.82	$26.17	$31.58

On average, entry-level hourly earnings for *Welding Occupations* are $24.49—or approximately $50,929 annually[7]. This is below the living wage of $26.01 per hour for a single adult in San Diego County (Exhibit 3).[8]

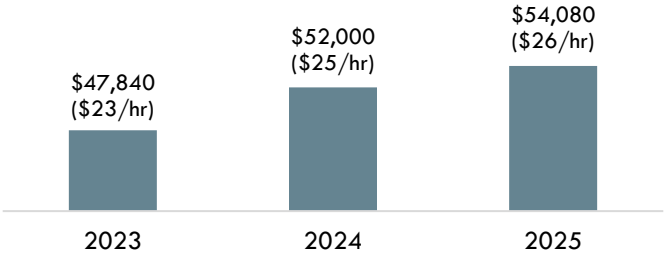
Exhibit 3: Average Hourly Earnings[9] for Welding Occupations in San Diego County[10]



[5] Traditional LMI is generally historical data captured by the U.S. Bureau of Labor Statistics (BLS) or the California Employment Development Department (EDD). It does not account for recent technological, economic, or legislative changes that may affect labor market demand and wages.
[6] Lightcast Q3 2026; QCEW, Non-QCEW, Self-Employed.
[7] Annualized salaries assume a full-time position with 2,080 work hours. Multiplying the hourly wage by 2,080 yields the annual salary.
[8] Center for Women's Welfare, University of Washington. The Self-Sufficiency Standard for California 2024. selfsufficiencystandard.org/california
[9] The 10th and 25th percentiles may be considered entry-level wages; the 75th and 90th percentiles may be considered experienced wages.
[10] Lightcast Q3 2026; QCEW, Non-QCEW, Self-Employed.

In online job postings, employers also advertised between $23 and $26 per hour between January 1, 2023 and December 31, 2025 for *Welding Occupations* in San Diego County (Exhibit 4).[11] This suggests that employer-advertised wages in online job postings were within the range of entry-level wages reported in traditional labor market information and increased over the period analyzed.

Exhibit 4: Entry-Level Advertised Salaries in Online Job Postings for Welding Occupations in San Diego County (2023-2025)



*Hourly wages are rounded to the nearest dollar amount.

Expected Level of Education

According to traditional LMI reported to the California Employment Development Department and U.S. Bureau of Labor Statistics, *Welding Occupations* typically require a high school diploma or equivalent for entry-level employment (Exhibit 5).[12]

Exhibit 5: National Educational Attainment for Welding Occupations[13]

Occupational Title	Typical Entry-Level Education
Maintenance and Repair Workers, General	High school diploma or equivalent
Plumbers, Pipefitters, and Steamfitters	High school diploma or equivalent
Welders, Cutters, Solderers, and Brazers	High school diploma or equivalent

[11] Lightcast Q3 2026; Job Posting Analytics, January 2023 through December 2025.
[12] Lightcast Q3 2026; QCEW, Non-QCEW, Self-Employed.
[13] Lightcast Q3 2026; QCEW, Non-QCEW, Self-Employed.

Similarly, a high school diploma or General Educational Development (GED) credential was the most requested minimum educational requirement in online job postings for *Welding Occupations* in San Diego County between January 1, 2023 and December 31, 2025. Employers also expected the following certifications (Exhibit 6).[14]

Exhibit 6: Top Certifications for Welding Occupations in San Diego County in Online Job Postings (2023-2025)[15]

1. Security Clearance
2. HVAC Certification
3. Secret Clearance
4. Certified Apartment Service Technician
5. Cardiopulmonary Resuscitation (CPR) Certification
6. Journeyman Plumber
7. EPA 608 Technician Certification
8. First Aid Certification
9. Basic Life Support (BLS) Certification
10. 10-Hour OSHA General Industry Card

[14] Lightcast Q3 2026; Job Posting Analytics, January 2023 through December 2025.
[15] Lightcast Q3 2026; Job Posting Analytics, January 2023 through December 2025. Valid Driver's License was excluded from this exhibit.

Educational Supply

Educational supply for an occupation can be estimated by analyzing the number of awards in related Taxonomy of Programs (TOP) or Classification of Instructional Programs (CIP) codes. There are three TOP codes and five CIP codes related to *Welding Occupations* (Exhibit 7).

Exhibit 7: Related TOP and CIP Codes for Welding Occupations[16]

TOP or CIP Code	TOP or CIP Program Title
TOP 0945.00	Industrial Systems Technology and Maintenance
TOP 0952.30	Plumbing, Pipefitting and Steamfitting
TOP 0956.50	Welding Technology
CIP 15.0614	Welding Engineering Technology/Technician
CIP 46.0401	Building/Property Maintenance
CIP 46.0502	Pipefitting/Pipefitter and Sprinkler Fitter
CIP 46.0503	Plumbing Technology/Plumber
CIP 48.0508	Welding Technology/Welder

[16] User-provided TOP-CIP crosswalk and confirmed program-code selection for this analysis.

According to TOP data, three community colleges supply the region with awards for these occupations: Palomar College, San Diego City College, and San Diego College of Continuing Education. According to CIP data, three non-community-college institutions supply the region with awards: CET-San Diego, Escondido Adult School, and Vista Adult School. Combined, the six institutions confer an average of 602 awards annually (Exhibit 8).

Exhibit 8: Number of Awards (Certificates and Degrees) Conferred by Postsecondary Institutions (Program Year 2022-23 Through Program Year 2024-25 Average)[17,18]

TOP or CIP Code	TOP or CIP Program Title	3-Yr Annual Average CC Awards	Other Institutions 3-Yr Annual Average Awards	Total Average Supply
0945.00	Industrial Systems Technology and Maintenance	**0**	**0**	**0**
0952.30	Plumbing, Pipefitting and Steamfitting	**283**	**0**	**283**
	San Diego City	**0**	**0**	
	• Associate degree	0	0	
	San Diego College of Continuing Education	**283**	**0**	
	• Noncredit 288 < 480 hrs	30	0	
	• Noncredit 96 < 144 hrs	253	0	
0956.50	Welding Technology	**204**	**0**	**204**
	Palomar	**44**	**0**	
	• Associate degree	10	0	
	• Certificate 30 < 60 units	13	0	
	• Certificate 6 < 18 units	21	0	
	San Diego College of Continuing Education	**160**	**0**	
	• Noncredit 288 < 480 hrs	139	0	
	• Noncredit 480 < 960 hrs	21	0	
15.0614	Welding Engineering Technology/Technician	**0**	**20**	**20**
	Escondido Adult School	**0**	**20**	
	• Certificates < 1 year	0	20	

[17] California Community Colleges Chancellor's Office Data Mart, program years 2022-23 through 2024-25. San Diego City reported one award during this window, which rounds to zero on an annual-average basis; it remains included in the institution count.
[18] National Center for Education Statistics, Integrated Postsecondary Education Data System completions, academic years 2022-23 through 2024-25. Awards above a bachelor's degree were excluded.

TOP or CIP Code	TOP or CIP Program Title	3-Yr Annual Average CC Awards	Other Institutions 3-Yr Annual Average Awards	Total Average Supply
46.0401	Building/Property Maintenance	**0**	**10**	**10**
	Vista Adult School	**0**	**10**	
	• Certificates < 1 year	0	10	
46.0502	Pipefitting/Pipefitter and Sprinkler Fitter	**0**	**0**	**0**
46.0503	Plumbing Technology/Plumber	**0**	**0**	**0**
48.0508	Welding Technology/Welder	**0**	**85**	**85**
	CET-San Diego	**0**	**85**	
	• Certificates 1 < 2 years	0	85	
	Total	**487**	**115**	**602**

Demand vs. Supply

Comparing labor demand with labor supply[19] suggests that there is a supply gap for these occupations in San Diego County, with 2,398 annual openings and 602 average annual awards. Comparatively, there are 24,655 annual openings in California and 4,281 annual awards, suggesting a statewide supply gap (Exhibit 9).[20]

Exhibit 9: Labor Demand (Annual Openings) Compared with Labor Supply (Average Annual Awards)

	Demand (Annual Openings)	**Supply** (Average Annual Awards)	**Supply Gap or Oversupply**
San Diego	2,398	602	**1,796**
California	24,655	4,281	**20,374**

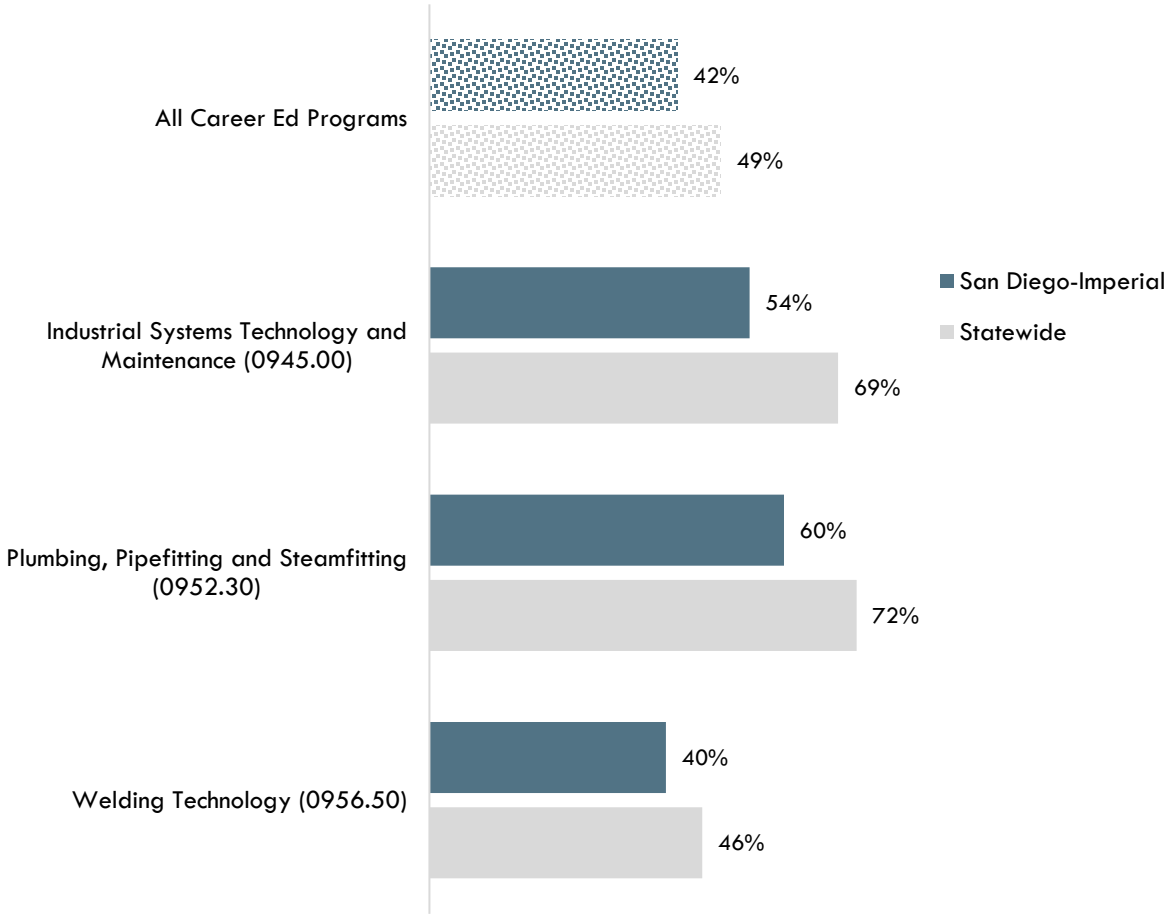
Please note: This is a basic analysis of supply and demand of labor. The data does not include workers currently in the labor force who could fill these positions or workers who are not captured by publicly available data. This data should be used to discuss the potential gaps or oversupply of workers; however, it should not be the only basis for determining whether or not a program should be developed.

[19] Labor supply can be found from two different sources: Lightcast or the California Community Colleges Chancellor's Office MIS Data Mart. This report uses DataMart TOP-code awards and IPEDS CIP-code completions at non-community-college institutions. Displayed annual averages are rounded at the award level and then summed; awards are not unique individuals.
[20] "Supply and Demand," Centers of Excellence Student Outcomes, coeccc.net/our-resources.

Student Outcomes and Regional Comparisons

According to the California Community Colleges DataVista, 40 to 60 percent of students in the San Diego-Imperial region earned a living wage after exiting a program related to *Welding Occupations*, compared to 46 to 72 percent statewide and 49 percent of students in Career Education programs in general across the state (Exhibit 10).[21]

Exhibit 10: Percentage of Students Who Earned a Living Wage by Program, PY2023-24[22]

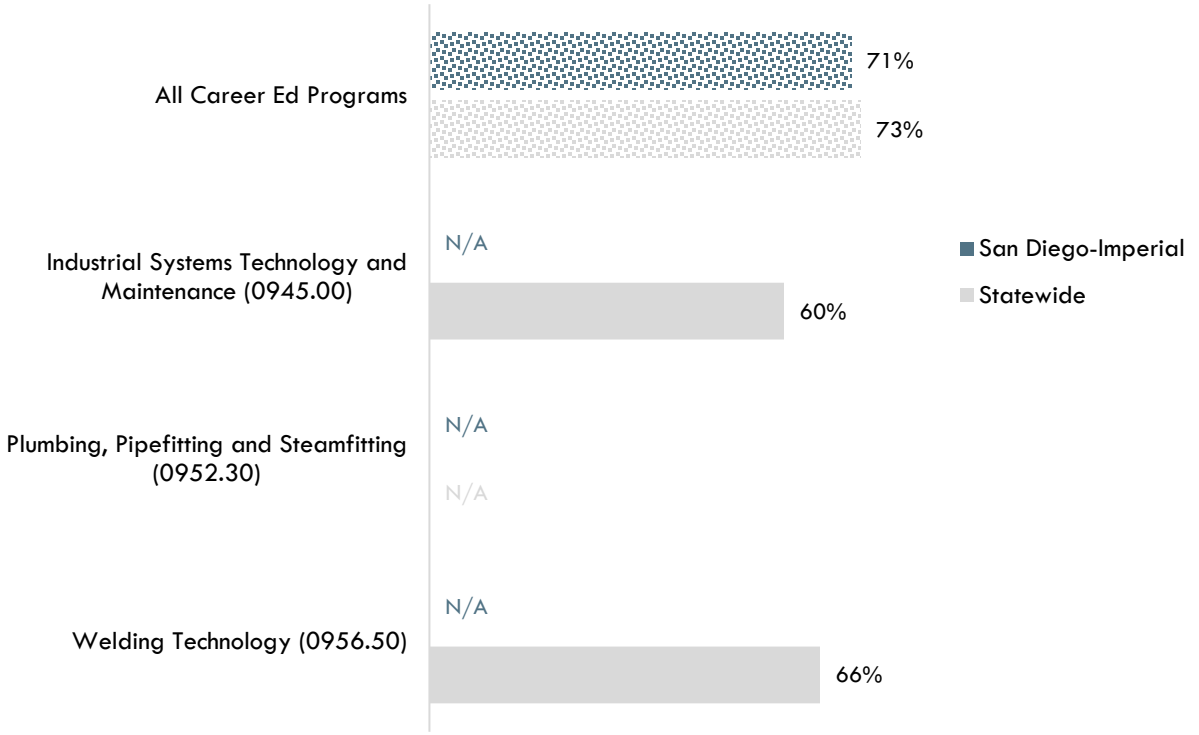


[21] California Community Colleges DataVista 3.1.3, released October 16, 2026. datavista.cccco.edu

[22] Most recent year with available data is Program Year 2023-24. Measure: Proportion of Students After Exit Who Attained the Living Wage. Population: students who exited the community college system, did not transfer, and matched California UI wage records in the second fiscal quarter after exit.

According to the California Community Colleges DataVista, the percentage of students in the San Diego-Imperial region who obtained a job closely related to their field of study after exiting a program related to *Welding Occupations* was not available, compared to 60 to 66 percent statewide and 73 percent of students in Career Education programs in general across the state (Exhibit 11).[23]

Exhibit 11: Percentage of Students in a Job Closely Related to Field of Study by Program, PY2022-23[24]



"N/A" indicates insufficient data

[23] California Community Colleges DataVista 3.1.3, released October 16, 2026. datavista.cccco.edu

[24] Most recent year with available data is Program Year 2022-23. Measure: CTE Exiters Who Reported Working in a Job Closely Related to Their Field of Study. Population: Career Education exiters who responded to the CTE Outcomes Survey and did not transfer; includes eligible award earners and skills builders, not completers only. The result describes respondents employed in the same or a similar field.

Employers

Between January 1, 2023 and December 31, 2025, the top employers in San Diego County for *Welding Occupations* included Greystar, Liberty Military Housing, CONAM Management, Hyatt, and FPI Management, based on online job postings (Exhibit 12).

Exhibit 12: Top Employers for Welding Occupations in San Diego County[25]

Top Employers	
• Greystar • Liberty Military Housing • CONAM Management • Hyatt • FPI Management	• ProTec Building Services • Marriott International • Sharp HealthCare • General Dynamics • San Diego Community College District

Skills

Exhibit 13 lists the top specialized, soft, and software skills that appeared in online job postings between January 1, 2023 and December 31, 2025.

Exhibit 13: Top Skills for Welding Occupations in San Diego County[26]

Specialized Skills	Soft Skills	Software Skills
• Plumbing • HVAC • Painting • Carpentry • Lifting Ability • Power Tool Operation • Preventive Maintenance • Hand Tools • Good Driving Record • Construction	• Communication • Customer Service • Troubleshooting • Management • Operations • Detail Oriented • Problem Solving • English Language	• N/A

[25] Lightcast Q3 2026; Job Posting Analytics, January 2023 through December 2025.
[26] Lightcast Q3 2026; Job Posting Analytics, January 2023 through December 2025. Skills must populate in at least 10% of job postings to be listed.

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All representations included in this report have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. This study examines the most recent data available at the time of the analysis; however, data sets are updated regularly and may not be consistent with previous reports. Efforts have been made to qualify and validate the accuracy of the data and the report findings; however, neither the California Community Colleges Centers of Excellence (COE), COE host district, nor California Community Colleges Chancellor's Office are responsible for the applications or decisions made by individuals and/or organizations based on this study or its recommendations.