



Summary

Program LMI Endorsement	All LMI Criteria Met	Some LMI Criteria Met (Proceed with Caution)	LMI Criteria NOT Met
	✓	<input type="checkbox"/>	<input type="checkbox"/>

Program LMI Endorsement Criteria		
Supply Gap	Yes ✓	No <input type="checkbox"/>
	<i>Comments:</i> There is <i>projected</i> to be 1,149 annual job openings throughout the Inland Empire/Desert region, which is more than the 78 annual average awards conferred by educational institutions over the last 3 years . Supply data includes both community college awards (33) and non-community college awards (45).	
Living Wage	Yes ✓	No <input type="checkbox"/>
	<i>Comments:</i> All (100%) of annual job openings for these two occupations have entry-level hourly wages above the IE/D living wage of 13.74 . ¹	
Education	Yes ✓	No <input type="checkbox"/>
	<i>Comments:</i> Most job postings for target occupations require a high school or equivalent education level (66%) . See exhibits 8 and 9 for more details.	

The Inland Empire/ Desert (IE/D) Center of Excellence for Labor Market Research (IE/D COE) reviewed the following occupations to prepare this report:

- Middle-Skill (typically require training/education above a HS diploma but less than a bachelor’s degree)
 - First-Line Supervisors of Construction Trades and Extraction Workers (47-1011)
 - Construction and Building Inspectors (47-4011)

Summary of findings

Demand

- The number of jobs related to the middle-skill occupations – First-Line Supervisors of Construction Trades and Extraction Workers, Construction and Building Inspectors - is projected to increase 10% through 2027, with 1,149 annual job openings (new and replacement jobs).
- Hourly entry-level wages for all occupations are above living wage at the 25th percentile hourly wage ranging from \$27.67 to \$28.37 in IE/D.
- There were 793 online job postings from 268 employers over the past 12-months with the highest postings for building inspectors and code enforcement officers.
- Most job postings for target occupations require High school diploma or equivalent (66%), followed by associate degree (15%), and finally bachelor’s degree (18%).

Supply

- On average, there were 78 annual awards conferred by educational institutions over the last 3 years in related fields: 33 from community colleges and 45 from other institutions (e.g., 4-year universities, private schools).
- IE/D community college students that exited these programs in the 2021-22 academic year earned a median annual wage of \$46,166 (\$22.20 per hour).
- 64% of students that exited their program in 2021-22 reported that they are working in a job closely related to their field of study.
- Community college programs play an important role diversifying the talent pipeline in these occupations. Most IE/D professionals in construction inspection occupations are Hispanic/Latino or White (92%), “mid career (35 - 54)” (50%), and male (92%). Most community college students in related programs are Hispanic/Latino (79%), “pre-career/college (29%)”, and male (80%).

¹ While the [UW self-sufficiency standard](#) is currently used by the CO and other COEs, the self-sufficiency standard was last updated by UW in 2021, does not account for significant increases in the cost of living in the Inland Empire the last three years, and is below the State of California minimum wage of \$16.00. For these reasons, the COE will provide an alternative living wage calculation from MIT in the analysis below as an additional reference point. MIT estimates, the living wage for an adult with no kids living in 2024 is \$26.30 in Riverside County and \$25.17 in San Bernadino County.

Introduction

California Community College construction inspection (TOP 0957.20) programs prepare students for employment involving the inspection of new or remodeled structures to determine their soundness and compliance to specifications, building codes and other regulations (Taxonomy of Programs, 2023). The knowledge, skills, and abilities trained by construction inspection programs lead to employment in occupations related to construction.

Job Demand

In 2022, there were 10,491 jobs in occupations related to construction in the IE/D region. Regional employment for this occupation group is projected to increase by 10% through 2027 with 1,149 job openings projected annually. Exhibit 1 displays the job count, five-year projected job growth, and job openings in the region.

Exhibit 1. Five-year projections for occupations related to construction. IE/D Region 2022-2027

Occupation	SOC	2022 Jobs	2027 Jobs	2022 - 2027 % Change	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)
First-Line Supervisors of Construction Trades and Extraction Workers	47-1011	9,039	9,925	10%	4,726.81	945
Construction and Building Inspectors	47-4011	1,452	1,609	11%	1,019.87	204
Total		10,491	11,534	10%	5,746.67	1,149

SOURCE: LIGHTCAST 2023.4

Job Postings

The following analysis for occupations related to construction using online job posting data.

Important note: The data produced in this section were generated by leveraging online job posting data sourced from Lightcast, which is the labor market analytics software tool COEs use to produce these briefs. The job posting data is collected from scraping online job boards such as LinkedIn, Indeed, Glassdoor and many others. The process Lightcast uses to assemble this data does have some limitations due to methods that recruitment professionals sometimes use (e.g., posting one job to fill multiple positions). For example, the number of jobs posted is not necessarily the same as the number of job vacancies.² While not perfect, Lightcast leverages machine learning and other AI technologies to enrich, deduplicate and aggregate this information to make it a meaningful dataset.

Exhibit 2 displays the number of job ads posted for occupations related to construction over the last 12 months and the median posting duration. Over the previous 12 months, there were 793 unique job postings for occupations related to construction in the region from 268 employers.

Exhibit 2. Job ads and posting duration, IE/D Region, May 2023 – April 2024

Job Title	Job Ads	Median Posting Duration
Construction and Building Inspectors	395	30 days
First-Line Supervisors of Construction Trades and Extraction Workers	398	30 days
Total	793	

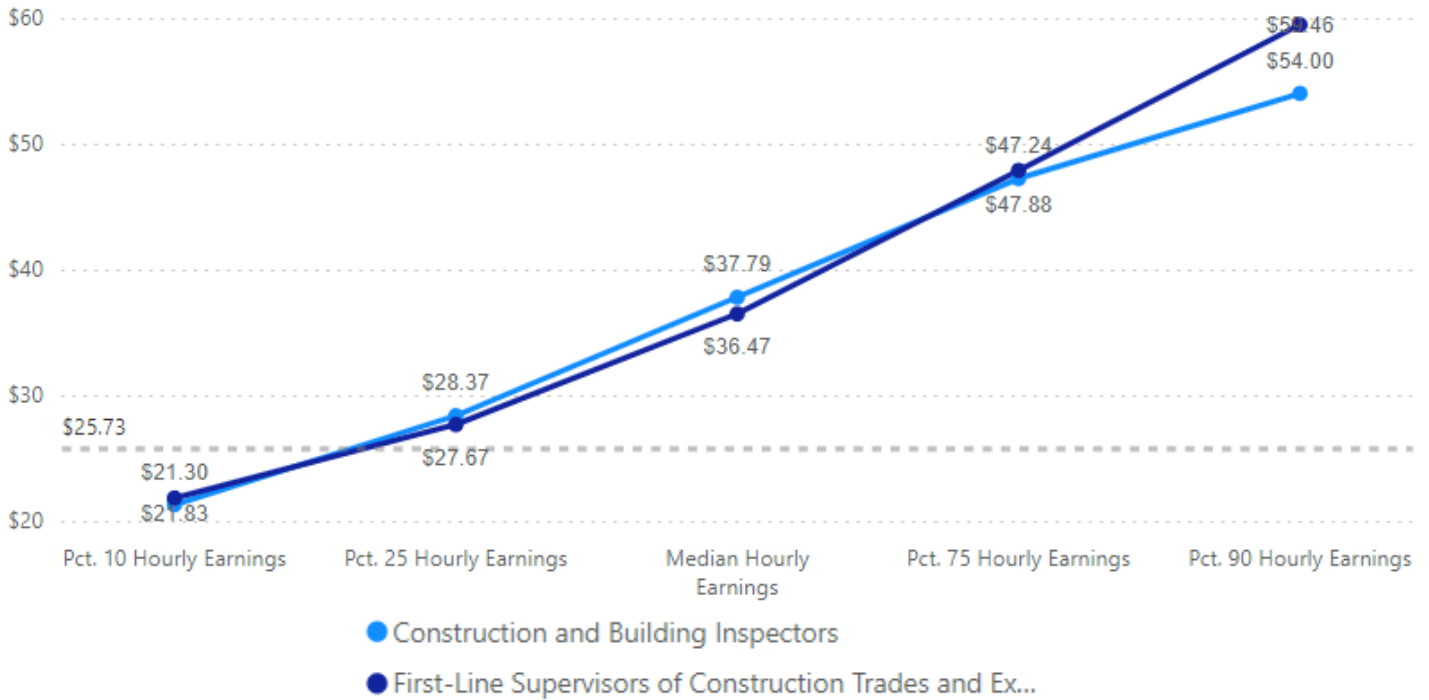
SOURCE: LIGHTCAST 2023.4

² "Job Posting Analytics (JPA) Methodology." Lightcast Knowledge Base, <https://kb.lightcast.io/en/articles/6957446-job-posting-analytics-jpa-methodology>

Earnings

Exhibit 3 displays the hourly earnings for occupations related to construction and includes comparison of hourly earnings as compared to the MIT IE/D living wage of \$25.73.³

Exhibit 3. Hourly earnings by percentile for occupations related to construction, IE/D Region, 2022



SOURCE: LIGHTCAST 2023.4

All entry-level earnings (that is, the earnings of the lowest paid 10% of employees in the IE/D) were above the UW Self-Sufficiency Standard for the IE/D⁴. None of the occupations were also above the MIT living wage for an adult with no children (\$25.73).

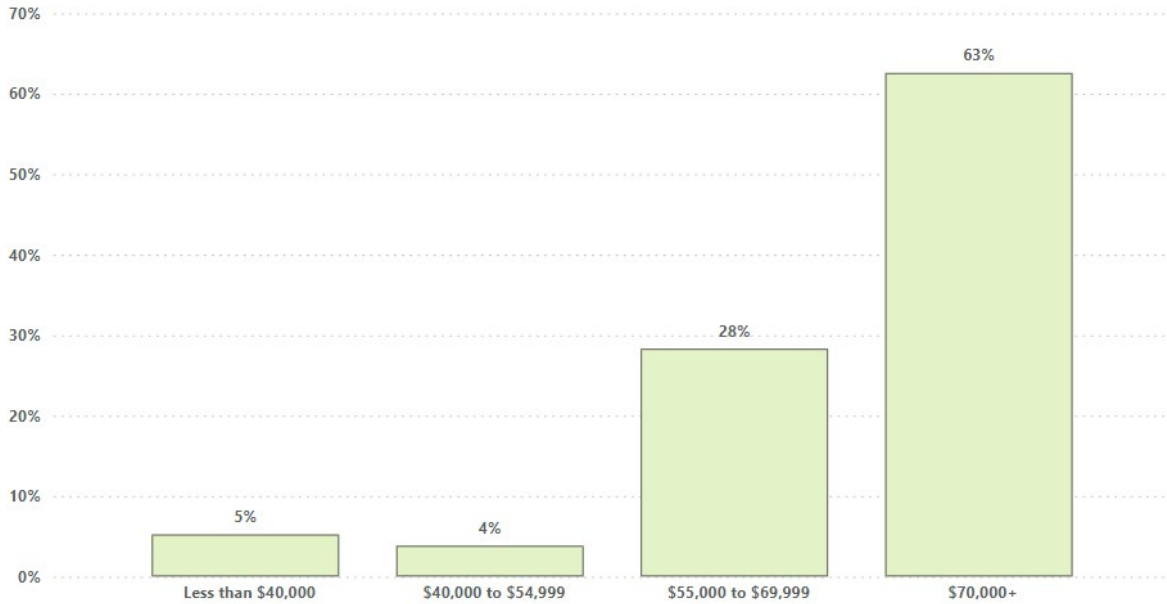
³ While the [UW self-sufficiency standard](#) is currently used by the CO and other COEs, the self-sufficiency standard was last updated by UW in 2021, does not account for significant increases in the cost of living in the Inland Empire the last three years, and is below the State of California minimum wage of \$16.00. While the COE uses this standard for the LMI Wage criteria, For these reasons, the provides an alternative living wage calculation from MIT in the analysis as an additional reference point. MIT estimates, the living wage for an adult with no kids living in 2024 is \$26.30 in Riverside County and \$25.17 in San Bernadino County.

⁴ *ibid*

Advertised Salary from Online Job Ads

Exhibit 4 displays the regional online advertised salaries for the occupations related to construction over the last 12 months. Online job ad salary information data suggests most employers (63%) advertise an annual salary greater than \$70,000.

Exhibit 4. Online advertised salaries for occupations related to construction, IE/D Region, May '23 to April '24



SOURCE: LIGHTCAST 2023.4

Online Job Advertisements: top job titles, skills, education & work experience.

Exhibit 5 displays the job titles most frequently used in job postings for the occupations related to construction over the last 12 months. Assessing the top advertised job titles may provide insight into the types of positions sought by employers.

Exhibit 5. Job titles most frequently used in job ads, IE/D May '23 to April '24

Job Title	Unique Postings
Building Inspectors	76
Code Enforcement Officers	33
Electrical Foremen	30
Utility Inspectors	28
Plans Examiners	27
Construction Inspectors	26
Public Works Inspectors	19
Foremen	18
Termite Inspectors	17
Construction Foremen	16
Subcontractors	16

SOURCE: LIGHTCAST 2023.4

Exhibit 6 displays the employers posting the most job ads for this occupational group during the last 12 months. Showing employer names can provide insight into where students may find employment after completing a program and may inform job development and other employer engagement targets for faculty and staff involved in related programs. ACRT Pacific and Willdan had the highest unique job posts for this occupational group in the last 12 months. Posting intensity is the ratio of total job posts to unique job posts which are deduplicated. A higher posting intensity can represent the level of effort and activity the organization is putting into hiring for that position. The following report comes directly from Lightcast’s Job Posting Analytics dashboard.

Exhibit 6. Employers posting the most job ads, IE/D May '23 to April '24

Company	Total/Unique (May 2023 - Apr 2024)	Posting Intensity	Median Posting Duration
ACRT Pacific	53 / 19	3 : 1	25 days
Willdan	70 / 15	5 : 1	37 days
Arrowhead Regional Medical Center	13 / 13	1 : 1	n/a
Centimark Corporation	126 / 13	10 : 1	26 days
City Of Riverside Ca	27 / 13	2 : 1	23 days
Alertone Service	18 / 11	2 : 1	36 days
City Of Riverside	21 / 10	2 : 1	29 days
ACRT Services	73 / 10	7 : 1	37 days
City Of San Bernardino	27 / 10	3 : 1	26 days
Interwest Consulting Group	30 / 9	3 : 1	45 days

SOURCE: LIGHTCAST 2023.4

Exhibit 7 displays the top common, specialized and computer skills that were included in the job postings over the last 12 months. Today’s demand is an important indicator of which skills employers are looking for in the current market. Analyzing skills from a historical perspective as well as projecting the future needs of employers may provide insight into how the job posting skills demand compares to the market as a whole. Rapidly growing skills are those that are increasing in demand at a faster rate than the market as a whole. ⁵

Exhibit 7. Top 10 in-demand skills from employer job ads, IE/D May '23 to April '24

Common skills	Total Postings	Skill Growth Relative to Market	Computer Skills	Total Postings	Skill Growth Relative to Market
Communication	303	Lagging	Microsoft Excel	93	Growing
Management	204	Stable	Microsoft Outlook	86	Rapidly Growing
Customer Service	184	Stable	Microsoft Word	61	Stable
Writing	137	Growing	Microsoft Office	50	Growing
Operations	128	Stable	Software Systems	23	Growing
Lifting Ability	101	Growing	Spreadsheets	19	Rapidly Growing
Detail Oriented	100	Stable	Firewall	17	Rapidly Growing
Leadership	100	Stable	Microsoft PowerPoint	16	Rapidly Growing
Good Driving Record	96	Growing	Programming Tools	11	Growing
Investigation	96	Growing	Geographic Information Systems	9	Growing

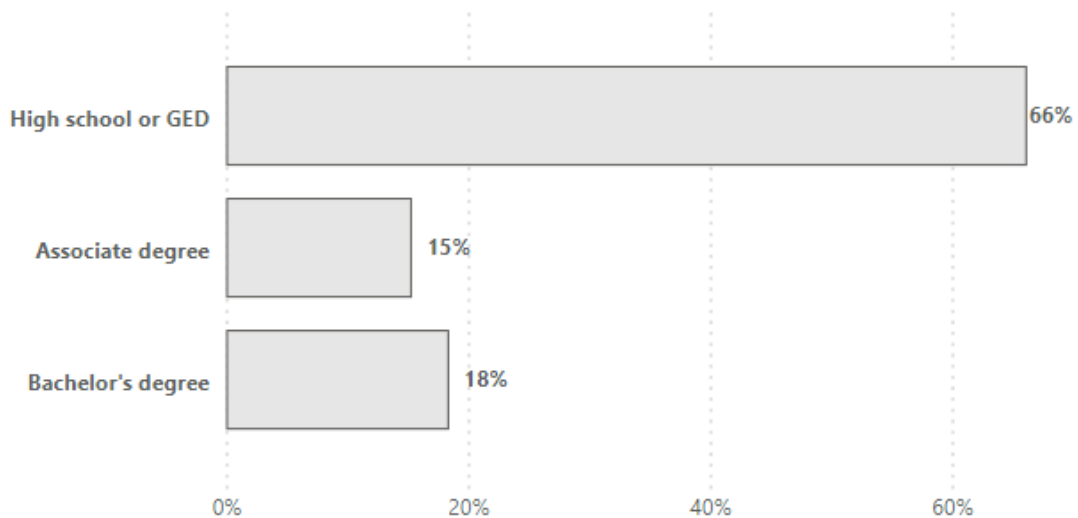
⁵ “What are Lightcast Skill Projects”, Lightcast Knowledge base, <https://kb.lightcast.io/en/articles/8496296-what-are-lightcast-skill-projections>

Specialized skills	Total Postings	Skill Growth Relative to Market
Construction	288	Growing
Building Codes	115	Growing
Plumbing	109	Growing
Project Management	103	Rapidly Growing
Field Inspection	91	Growing
Subcontracting	68	Growing
Code Enforcement	62	Growing
Building Inspections	61	Stable
Public Works	55	Stable
Construction Inspection	51	Growing

SOURCE: LIGHTCAST 2023.4

Exhibit 8 includes the minimum educational requirements from job postings for this occupational group with bachelor's degree (18%) significantly greater than associate degree (15%) or High school diploma or equivalent (66%).

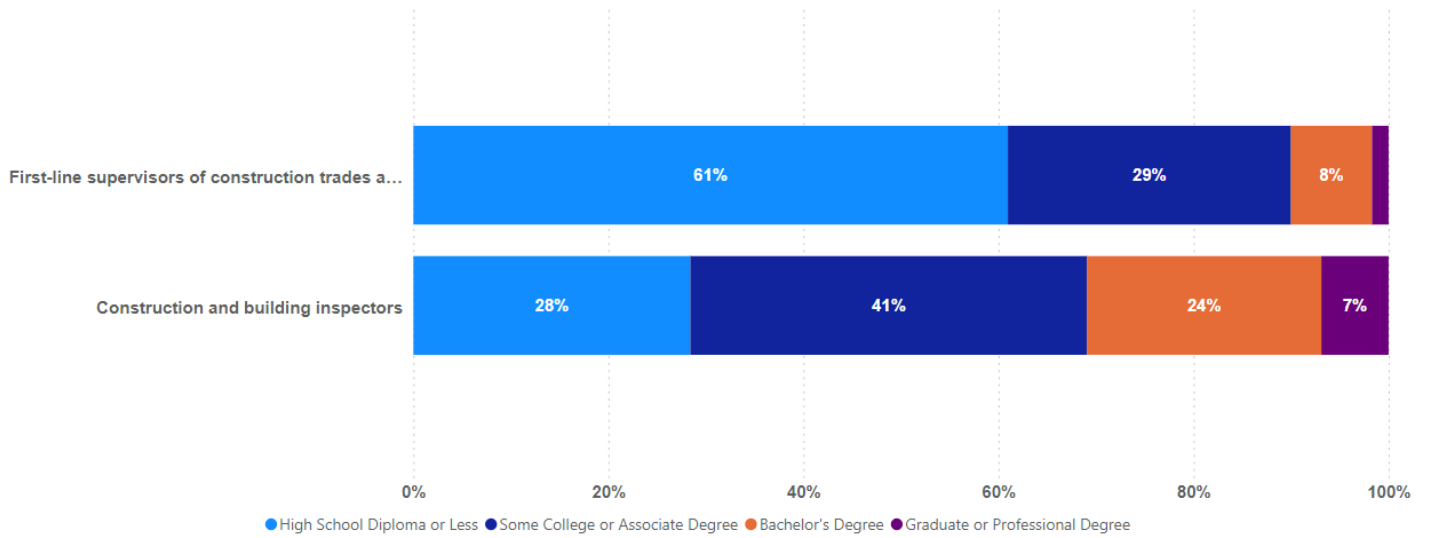
Exhibit 8 Minimum educational requirements in job postings for this occupational group, 2022



SOURCE: LIGHTCAST 2023.4

For the middle-skill occupations, the Bureau of Labor Statistics (BLS) education attainment data in Exhibit 9 for current professionals in the occupations of interest indicates that between 29% and 41% of workers have completed some college or an associate degree as their highest level of education.

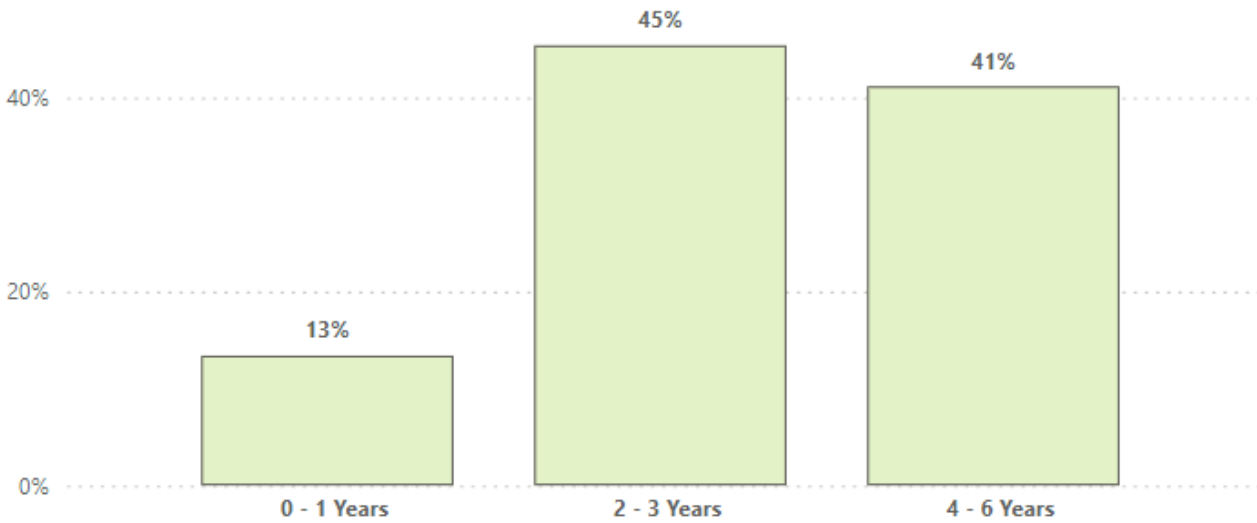
Exhibit 9 National-level Education Attainment for Occupations



SOURCE: BLS 2021

Exhibit 10 displays the work experience typically required from employer job ads for this occupational group. The largest grouping (45%) of employers listing minimum experience requirements sought candidates with 2 – 3 years of previous work experience.

Exhibit 10 Work experience requirements, IE/D May '23 to April '24



SOURCE: LIGHTCAST 2023.4

Student Completions and Program Outcomes

Exhibit 11 displays student completions for the construction inspection (TOP 0957.20) programs over the last three academic years (2020-2023). In the previous three academic years, 4 regional community colleges issued an average of 33 awards in relevant programs.

Exhibit 11 Annual average community college awards for construction inspection (TOP 0957.20)

Top Code	Program	College	2020-2021 Awards	2021-2022 Awards	2022-2023 Awards	3-Year Award Average
0957.00	Civil and Construction Management Technology	Desert	4	10	4	6
0957.00	Civil and Construction Management Technology	Norco College	0	0	7	2
0957.20	Construction Inspection	Desert	9	4	6	6
0957.20	Construction Inspection	Norco College	13	22	11	15
0957.20	Construction Inspection	San Bernardino	1	4	2	2
0957.20	Construction Inspection	Victor Valley	0	0	2	1
Total			27	40	32	33

SOURCE: MIS DATA MART

Non-Community College Supply

Award completion data is available for Building Construction Technology/Technician (46.0415), Construction Management, General (52.2001) in the IE/D for non-community college programs.

In the previous three academic years, three regional non-community colleges institutions issued an average of 45 awards in relevant programs.

CIP	CIP with Title	College	2019-2020 Awards	2020-2021 Awards	2021-2022 Awards	3-Year Award Average
46.0415	46.0415 - Building Construction Technology/Technician	CET-Coachella	11	21	26	19
46.0415	46.0415 - Building Construction Technology/Technician	CET-Colton	9	11	12	11
52.2001	52.2001 - Construction Management, General	San Joaquin Valley College-Ontario	20	15	9	15
Total			40	47	47	45

SOURCE: IPEDS

California program outcome data may provide useful insight into the likelihood of success for the proposed program. Community college student outcome information based on the selected TOP code and region is provided in Exhibit 12.

Exhibit 12 construction inspection strong workforce program outcomes, IE/D, most recent academic year

Program metric title	Inland Empire/Desert	Statewide
Attained a living wage (completers and skills-builders)	78%	73%
Completed 9+ career education units in one year	52%	34%
Job closely related to the field of study	64%	83%
Median annual earnings (all exiters)	\$46,166	\$61,148
Median change in earnings (all exiters)	0%	0%
Students who attained a noncredit workforce milestone in a year		77%
Students who earned a degree, certificate, or attained apprenticeship	15	72
Unduplicated count of enrolled students	186	1,132

SOURCE: LAUNCHBOARD

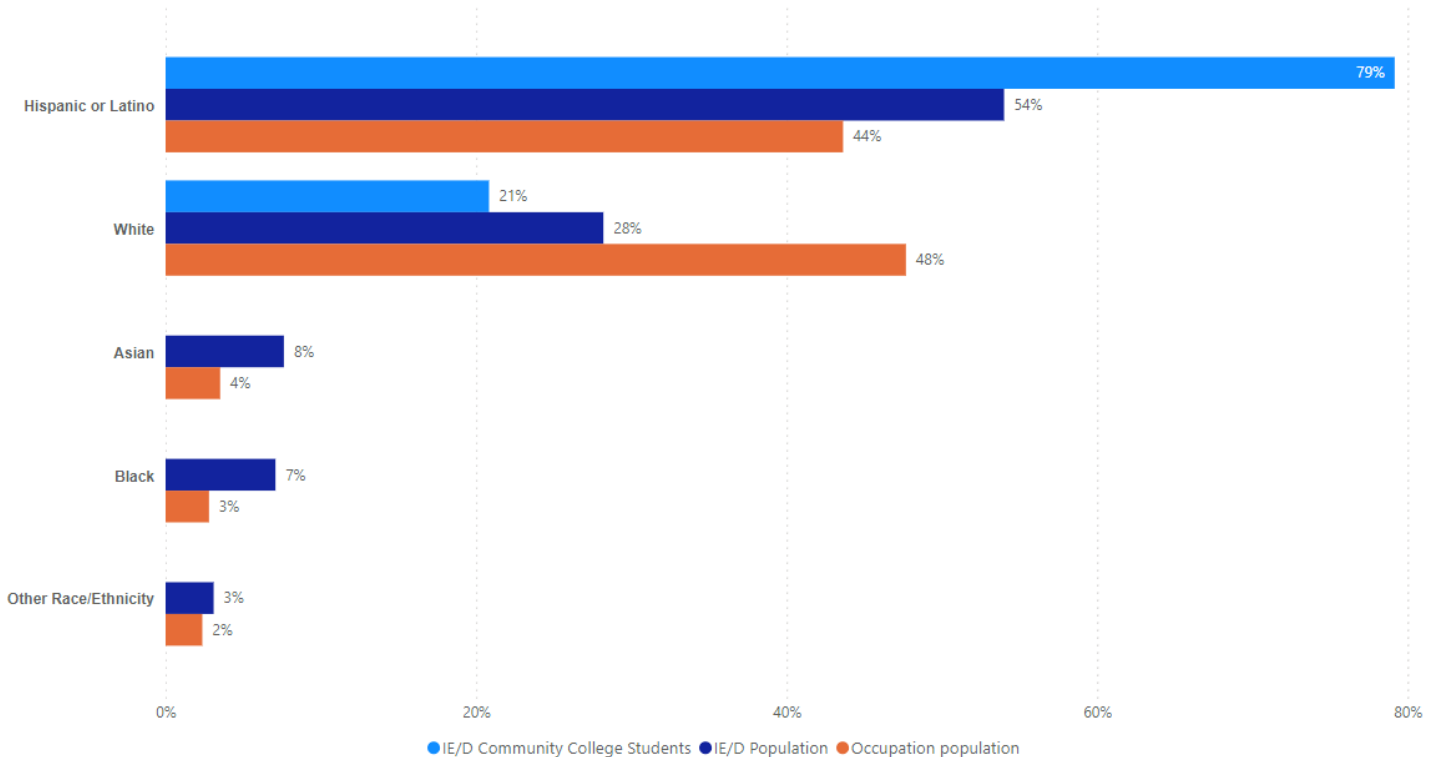
Building an Inclusive Economy

This section examines demographic data for IE/D community college students in construction inspection programs compared to the IE/D population. We also include demographics for related occupation data for the two occupations related to construction. This analysis can be used to:

- Understand the community college system’s current or potential role supporting a diverse talent pipeline into the occupations of interest.
- Inform students (and the faculty and staff working with them) the extent to which individuals from similar demographic groups are over or underrepresented in the professions related to their field of study.
- Inform employers of the diverse talent pipeline coming from the community college system for the occupations analyzed.

Notably, 79% of students enrolled in construction inspection programs are Hispanic or Latino, which is significantly higher than Hispanic or Latino workers in occupations related to construction in the IE/D region (44%). Additionally, 48% of the IE/D population that are employed in occupations related to construction are White which is significantly higher than both IE/D community college students (21%) and IE/D population (28%). Though the IE/D region has an 18% Asian/Black/Other racial composition, none of the students in these programs are reports as being any of those categories.

Exhibit 13 Program and County Demographics by Ethnicity



SOURCE: LIGHTCAST 2023.4 AND LAUNCHBOARD

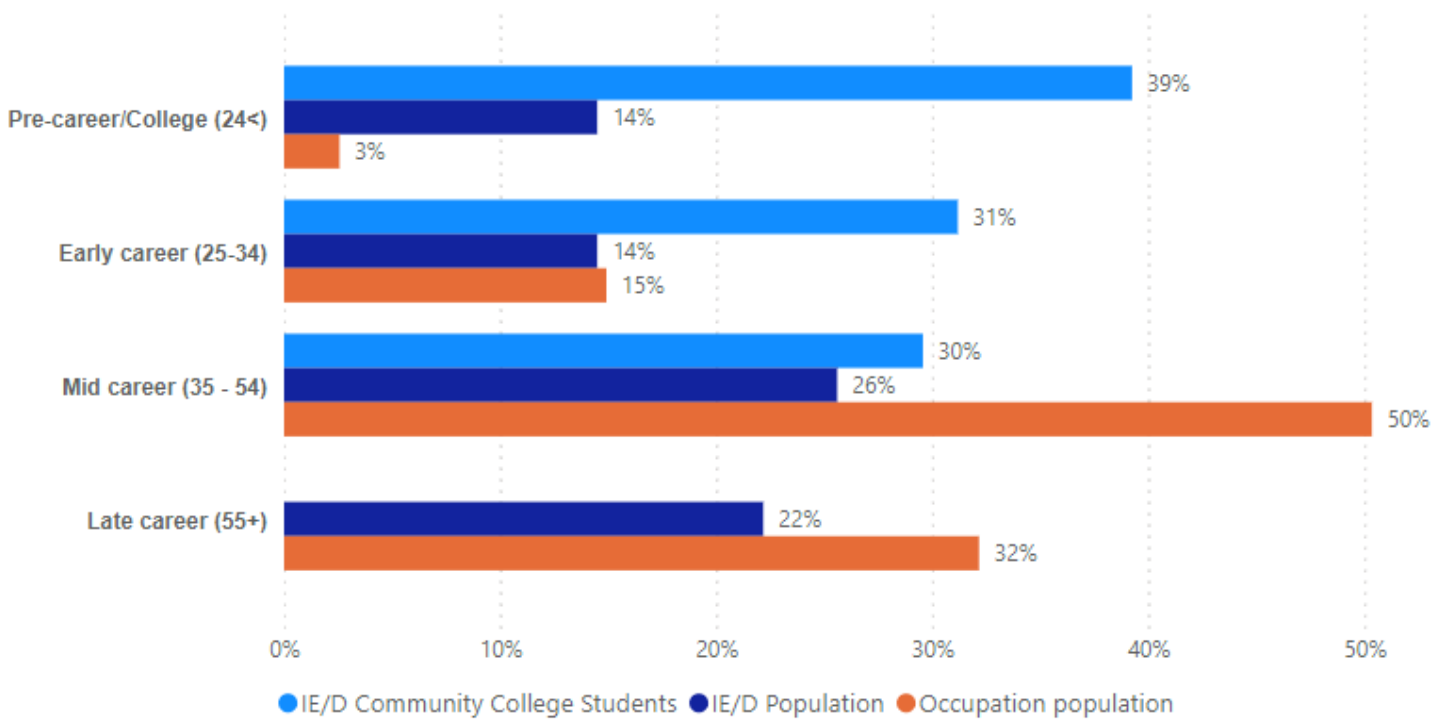
Most IE/D professionals in construction occupations are Hispanic/Latino or White (92%), “Mid career (35 - 54)” (50%), and Male (92%). Most community college students in related programs are Hispanic/Latino (79%), “pre-career/college (29%)”, and Male (80%). Major takeaways:

- Community colleges are an important talent source for employers committed to greater racial/ethnic diversity, especially Hispanic/Latino professionals.
- College programs may want to consider strategies to engage more women into these programs.

Exhibit 14 compares the age of IE/D community college students enrolled in construction inspection programs compared to the IE/D population.

Most students enrolled in construction inspection programs are either in the “pre-career/college” category (39%) or “early career” category (31%) as compared to IE/D population and workforce in these two occupations related to construction. These programs are an important entry point for young construction professionals.

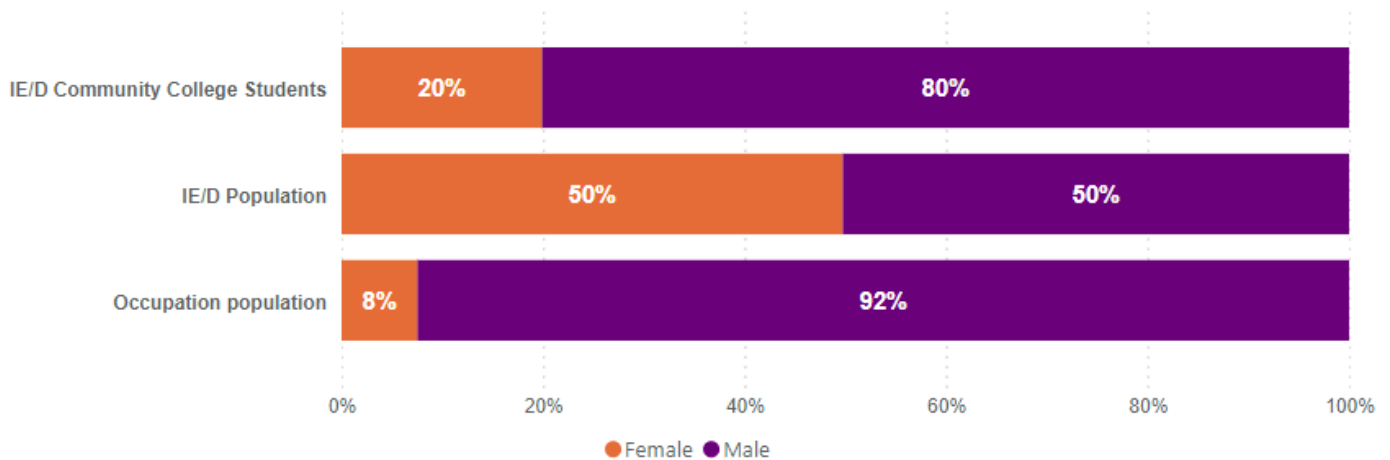
Exhibit 14 Program and County Demographics by Age



SOURCE: LIGHTCAST 2023.4

Exhibit 15 compares the gender of IE/D County community college students enrolled in construction inspection programs compared to the IE/D population. We also include demographics for related occupation data for the two occupations related to construction to identify potential diversity and equity issues addressable by community college programs.

Exhibit 15 Program and County Demographics by Gender



SOURCE: LIGHTCAST 2023.4

Appendix: Methodology

Exhibit 11 displays the average annual California Community College (CCC) awards conferred during the three academic years between 2020 and 2023 from the California Community Colleges Chancellor's Office Management Information Systems (MIS) Data Mart. Awards are the combined total during the timeframe, divided by three in this case to calculate an annual average. This is done to minimize the effect of atypical variations that might be present in a single year.

Community college student outcome information is from LaunchBoard and based on the selected TOP code and region. These metrics are based on records submitted to the California Community Colleges Chancellor's Office Management Information Systems (MIS) by community colleges, which come from self-reported student information from CCC Apply and the National Student Clearinghouse. Employment and earnings metrics are sourced from California's Employment Development Department's Unemployment Insurance database. When available, outcomes for completers are reported to demonstrate the impact that earning a degree or certificate can have on employment and earnings. For more information on the types of students included for each metric, please see the web link for LaunchBoard's Strong Workforce Program Metrics Data Element Dictionary in the References section (LaunchBoard, 2023a). Finally, employment in a job closely related to the field of study comes from self-reported student responses on the CTE Employment Outcomes Survey (CTEOS) administered by Santa Rosa Junior College (LaunchBoard, 2023a).

Appendix: References

Type of Data	Source
Occupational Projections, Wages, and Job Postings	Traditional labor market information data is sourced from Lightcast, a labor market analytics firm. Lightcast occupational employment data are based on final Lightcast industry data and final Lightcast staffing patterns. Wage estimates are based on Occupational Employment. https://lightcast.io/
Living Wage	The living wage is derived from MITs Living Wage Calculator, which measures the income necessary for an individual of family to afford basic expenses. The data assesses the cost of housing, food, childcare, health care, transportation, and taxes. For more information, see: https://livingwage.mit.edu/pages/methodology The living wage for one adult in San Bernardino County is \$25.17 per hour (\$52,353.60 annually). The living wage for one adult in Riverside County is \$26.30 per hour (\$54,704 annually). The average living wage to represent Inland Empire/Desert is \$25.74 per hour (53,539.20 annually)
Typical Education and Training Requirements, and Educational Attainment	The Bureau of Labor Statistics (BLS) provides information about education and training requirements for hundreds of occupations. BLS uses a system to assign categories for entry-level education, work experience in a related occupation, and typical on-the-job training to each occupation for which BLS publishes projections data. For more information, see https://www.bls.gov/emp/documentation/education/tech.htm
Educational Supply	The CCCC Data Mart provides information about students, courses, student services, outcomes and faculty and staff. For more information, see: https://datamart.cccco.edu The National Center for Education Statistics (NCES) Integrated Postsecondary Integrated Data System (IPEDS) collects data on the number of postsecondary awards earned (completions). For more information, see https://nces.ed.gov/ipeds/use-the-data/survey-components/7/completions
Student Metrics and Demographics	LaunchBoard, a statewide data system supported by the California Community Colleges Chancellor's Office and hosted by Cal-PASS Plus, provides data on progress, success, employment, and earnings outcomes for California community college students. For more information, see: https://www.calpassplus.org/LaunchBoard/Home.aspx