

Architectural Drafting

Inland Empire/Desert Region (Riverside-San Bernardino-Ontario Metropolitan Statistical Area)

Summary

- Architectural and civil drafter jobs are expected to increase by 2% through 2022 in the Inland Empire/Desert Region. **More than 500 total job openings, 102 annual job openings** will be available over the five-year timeframe.
- The entry-level hourly wage for architectural and civil drafters of \$18.20 per hour is **above the MIT Living Wage estimate of \$12.30 per hour** for a single adult living in the Inland Empire/Desert Region.
- There appears to be an **opportunity for program growth** based on the average annual number of program completers for the selected community college program (**1 annual community college award**), and the annual openings for architectural and civil drafters in the region (**102 annual job openings**).

Introduction

The occupation detailed in this report is listed below along with its corresponding definition, sample job titles, education and training requirements, as well as the community college educational attainment of current workers within this occupation:

Architectural and Civil Drafters (17-3011)

Prepare detailed drawings of architectural and structural features of buildings or drawings and topographical relief maps used in civil engineering projects, such as highways, bridges, and public works. Use knowledge of building materials, engineering practices, and mathematics to complete drawings.

Sample job titles: Architect, Architectural Designer, Architectural Drafter, Architectural Draftsman, Architectural Intern, CAD Technician (Computer-Aided Design Technician), Drafter, Draftsman, Intern Architect, Project Manager, Computer-Aided Design Designer (CAD Designer), Computer-Aided Design Operator (CAD Operator), Computer-Aided Design Technician (CAD Technician), Computer-Aided Drafting and Design Drafter (CADD Drafter), Drafting Technician, Draftsman, Draftsperson

Entry-Level Educational Requirement: Associate degree

Training Requirement: None

Incumbent workers with a Community College Award or Some Postsecondary Coursework: 61%

Job Opportunities

In 2017, there were more than 1,100 architectural and civil drafter jobs in the Inland Empire/Desert region. Across the region, employment related to this occupation is expected to increase 2% through 2022. Employers will need to hire more than 500 workers over the next five years to fill new jobs and to backfill jobs that workers are leaving –including retirements. Exhibit 1 displays the projected growth for architectural and civil drafters in the region.

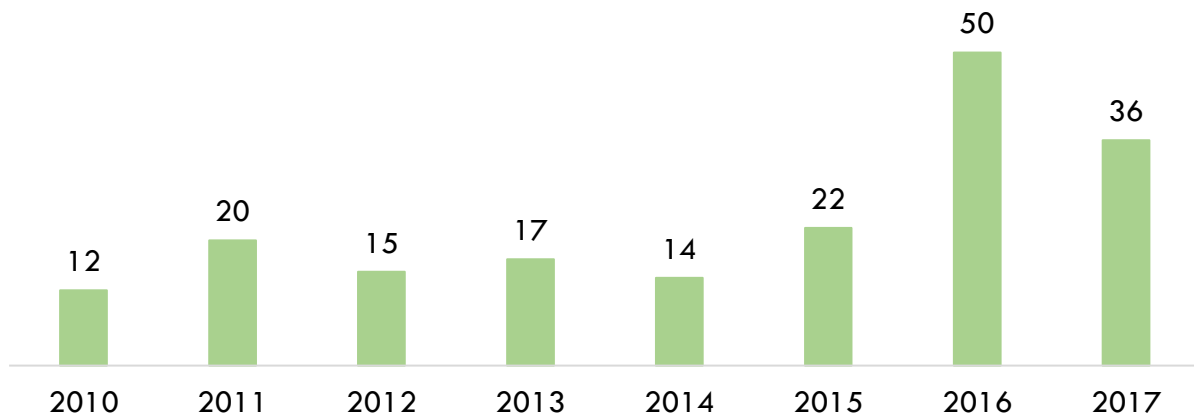
Exhibit 1: Five-year projections for architectural and civil drafters in the Inland Empire/Desert Region

Region	2017 Jobs	5-Yr % Change (New Jobs)	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)	% of workers age 55+
Inland Empire/Desert	1,128	2%	509	102	25%

Source: EMSI 2018.2

Over the last 12 months (May 2017 to April 2018), there were 38 advertisements (ads) for architectural and civil drafters in the Inland Empire/Desert Region. From 2010 to 2017, there was an annual average of 23 job ads per year (Exhibit 2).

Exhibit 2: Number of online job postings for architectural and civil drafters in the Inland Empire/Desert Region, 2010 to 2017



Source: Burning Glass – Labor Insights

On average, local employers fill online job posting for architectural and civil drafters within 45 days, this is within one day of the national average, indicating that it is neither relatively easy nor difficult for local employers to find qualified candidates to fill their open positions. Exhibit 3 shows

the number of job ads posted during the last 12 months along with the regional and national average time to fill.

Exhibit 3: Employer job ads and time to fill for architectural and civil drafters in the Inland Empire/Desert Region during the last 12 months, May 2017 – Apr 2018

Occupation	Job Ads	Regional Average Time to Fill (Days)	National Average Time to Fill (Days)
Architectural and Civil Drafters	38	45	44

Source: Burning Glass – Labor Insights

Earnings

The entry-level wage for architectural and civil drafters is above the MIT Living Wage estimate of \$12.30 per hour, or \$25,584 annually for a single adult living in the Inland Empire/Desert Region. This wage is also sufficient for an adult living in a household with one other working adult and one child (\$14.50 per hour, per adult or \$30,160 annually for each adult). See Exhibit 4 for wage information.

Exhibit 4: Earnings for architectural and civil drafters in the Inland Empire/Desert Region

Occupation	Entry to Experienced Hourly Earnings Range*	Median Wage*	Average Annual Earnings
Architectural and Civil Drafters	\$18.20 to \$29.60	\$24.15	\$51,500

Source: EMSI 2018.2

*Entry Hourly is 25th percentile wage, the median is 50th percentile wage, experienced is 75th percentile wage.

Work Locations, Employers, Skills, Education, and Certifications

Exhibit 5 displays the top employers posting job ads as well as the top work locations from job ads during the last 12 months.

Exhibit 5: The top employers and work locations from employer job ads for architectural and civil drafters in the Inland Empire/Desert Region during the last 12 months, May 2017 – Apr 2018

Occupation	Top Employers	Top Work Locations
Architectural and Civil Drafters (n=20)	<ul style="list-style-type: none"> JMI Ramona Lumber Co. Mayers & Associates Civil Engineering, Inc. 	<ul style="list-style-type: none"> Riverside Perris Bloomington

Source: Burning Glass – Labor Insights

Exhibit 6 lists a sample of in-demand specialized, soft, and software skills that employers are seeking when looking for workers to fill architectural and civil drafter positions.

Exhibit 6: In-demand skills from employer job ads for architectural and civil drafters in the Inland Empire/Desert Region, May 2017 – Apr 2018

Occupation	Specialized skills	Soft skills	Software and Programming skills
Architectural and Civil Drafters (n=29)	<ul style="list-style-type: none"> Civil Engineering Land Development Project Management 	<ul style="list-style-type: none"> Research Communication Skills Problem Solving 	<ul style="list-style-type: none"> AutoCAD Civil 3D Microsoft Office

Source: Burning Glass – Labor Insights

Exhibit 7 displays the entry-level education level education typically required to enter this occupation according to the Bureau of Labor Statistics (BLS). This chart also displays educational attainment for incumbent workers with “some college, no degree” and an “associate degree” according to the U.S. Census (2015-16) and the minimum advertised education requirement requested by employers in online job ads.

Exhibit 7: Educational attainment and online job ads with minimum advertised education requirements for architectural and civil drafters in the Inland Empire/Desert Region, May 2017 – Apr 2018

Occupations	Typical Entry-Level Education Requirement	Educational Attainment*	Minimum Advertised Education Requirement from Job Ads			
			Number of Job Postings (n=)	High school diploma or vocational training	Associate degree	Bachelor's degree or higher
Architectural and Civil Drafters	Associate degree	61%	18	33%	11%	56%

Source: EMSI 2018.2, Current Population Survey, Burning Glass – Labor Insights

*Percentage of incumbent workers with a Community College Award or Some Postsecondary Coursework

Industry

Exhibit 8 displays the industries that employ architectural and civil drafters in the two-county region. Staffing patterns show the industries that hire the most workers of a specific occupation.

Exhibit 8: Top industries employing architectural and civil drafters in the Inland Empire/Desert Region, May 2017 – Apr 2018

Occupation	Top Industries from Staffing Pattern (NAICS)	Industry Classification from Job Ads	
		Number of Job Postings (n=)	Top Industries from Job Ads (NAICS)
Architectural and Civil Drafters	<ul style="list-style-type: none"> Architectural, Engineering, and Related Services (5413) 65% Residential Building Construction (2361) 4% 	16	<ul style="list-style-type: none"> Architectural, Engineering, and Related Services (5413) Commercial and Industrial Machinery and Equipment Rental and Leasing (5324)

Source: EMSI 2018.2, Burning Glass – Labor Insights

Student Completions

Exhibit 9 shows the annual average regional community college awards (associate degrees and certificates) conferred during the three academic years between 2014 and 2017, with the relevant TOP code. Please note, an award is not equivalent to a single person in search of a job opening since a student may earn more than one award, such as an associate degree in addition to a certificate. Community College student outcome information is from the CTE LaunchBoard based on the selected TOP code and region.

Exhibit 10: Annual average community college student completions for architectural drafting programs in the Inland Empire/Desert Region

0953.10 – Architectural Drafting	Annual Community College Headcount (2016-17)	Community College Annual Average Awards (2014-17)
Chaffey – Drafting Technician: Architectural Associate Degree	28	1*
Victor Valley – Architectural Drafting	21	
Total CC Headcount (2016-17)	49	
Total annual average community college awards		1*

Source: LaunchBoard, IPEDS, COCI

*Chaffey awarded one associate degree in 2016-17



0953.10 – Architectural Drafting Program Strong Workforce Outcomes in the Inland Empire/Desert Region in the Academic Year 2015-16 [unless otherwise noted]:

- Number of course enrollments: 59 (California Median: 260) [2016-17]
- Number of students who transferred to a 4-year institution: N/A (CA: 22)
- Employed in the second fiscal quarter after exit: N/A (CA: 61%)
- Median earnings in the second fiscal quarter after exit: \$11,461 (CA: \$9,876)
- Employed in the fourth fiscal quarter after exit: N/A (CA: 63%)
- The percentage in a job closely related to the field of study: N/A (CA: 80%) [2014-15]
- Median change in earnings: 2% (CA: 41%)
- The proportion of students who attained a living wage: N/A (CA: 64%)

Sources

Economic Modeling Specialists International (EMSI)

Labor Insight/Jobs (Burning Glass)

CTE LaunchBoard

California Community Colleges Chancellor's Office Management Information Systems (MIS)

Chancellor's Office Curriculum Inventory (COCI, version 2.0)

O*Net Online

MIT Living Wage Calculator

Center of Excellence TOP to SOC Crosswalk

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