

Program Endorsement Brief: 0947.20/Heavy Equipment Maintenance Heavy Equipment Maintenance Technician

Los Angeles/Orange County Center of Excellence, March 2020

Summary Analysis

The Los Angeles/Orange County Center of Excellence for Labor Market Research (COE) prepared this report to provide Los Angeles/Orange County regional labor market supply and demand data related to two middle-skill occupations: mobile heavy equipment mechanics, except engines (49-3042), and rail car repairers (49-3043). Middle-skill occupations typically require some postsecondary education, but less than a bachelor's degree.¹ This report is intended to help determine whether there is demand in the local labor market that is not being met by the supply from community college programs that align with the relevant occupations.

Based on the available data, there appears to be a supply gap for the two heavy equipment maintenance-related occupations in the region. **Therefore, the COE endorses this proposed program.** Reasons include:

Demand:

- Over the next five years, there is projected to be **492 jobs available annually** in the region due to new job growth and replacements, **which is more than the 36 awards conferred annually** by educational institutions in the region.
- The national-level educational attainment data indicates 39.3% of workers in the field have completed some college or an associate degree.
- Typical **entry-level hourly wages** for these occupations throughout the region are between \$18.33 and \$23.41, which **are higher than the California Family Needs Calculator** hourly wage for one adult in the region (\$15.04 in Los Angeles County and \$17.36 in Orange County).²

Supply:

- **Four community colleges** in the region offer programs that train students for heavy equipment maintenance occupations, conferring an average of **36 awards annually** between 2015 and 2018.

¹ The COE classifies middle-skill jobs as the following:

- All occupations that require an educational requirement of some college, associate degree or apprenticeship;
- All occupations that require a bachelor's degree, but also have more than one-third of their existing labor force with an educational attainment of some college or associate degree; or
- All occupations that require a high school diploma or equivalent or no formal education, but also require short- to long-term on-the-job training where multiple community colleges have existing programs.

² Living wage data was pulled from California Family Needs Calculator on 3/2/20. For more information, visit the California Family Needs Calculator website: <https://insightcced.org/2018-family-needs-calculator/>.

Occupational Demand

Exhibit 1 shows the five-year occupational demand projections for heavy equipment maintenance-related occupations. In Los Angeles/Orange County, the number of jobs related to these occupations is projected to increase by 5% through 2023. There will be nearly 500 job openings per year through 2023 due to job growth and replacements.

Exhibit 1: Occupational demand in Los Angeles and Orange Counties³

Geography	2018 Jobs	2023 Jobs	2018-2023 Change	2018-2023 % Change	Annual Openings
Los Angeles	3,420	3,599	179	5%	366
Orange	1,171	1,239	68	6%	126
Total	4,591	4,838	247	5%	492

Wages — Typical entry-level hourly wages for heavy equipment maintenance-related occupations throughout the region are between \$18.33 and \$23.41.⁴ Entry-level wages for these occupations are higher than the California Family Needs Calculator hourly wage for one adult in the region (\$15.04 in Los Angeles County and \$17.36 in Orange County)⁵. Experienced workers can expect to earn between \$23.52 and \$43.44, which is also higher than the California Family Needs Calculator wage estimates for both counties. Wage information, by county, is included in Appendix A.

Job Postings — There were 390 online job postings for the two heavy equipment maintenance-related occupations listed in the past 12 months. The highest number of job postings were for heavy equipment mechanic, equipment mechanic, forklift mechanic, equipment technician, and mechanic. The top skills were: repair, heavy equipment, forklift operation, electrical systems, and welding. The top three employers, by number of job postings, in the region were: United Rentals, Crown Equipment Corporation, and Mechanics Hub. Of the 390 online job postings, 38% list a minimum education requirement.

Educational Attainment — The Bureau of Labor Statistics (BLS) lists a high school diploma as the typical entry-level education for both heavy equipment maintenance occupations. The national-level educational attainment data indicates 39.3% of workers in the field have completed some college or an associate degree. Of the 38% of heavy equipment maintenance occupations job postings listing a minimum education requirement in Los Angeles/Orange County, 95% (139) requested a high school diploma and 5% (8) requested an associate degree.

³ Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

⁴ Entry-level wage is defined as the twenty-fifth percentile hourly wage. Wages for experienced workers are defined as the seventy-fifth percentile hourly wage.

⁵ Living wage data was pulled from California Family Needs Calculator on 3/2/20. For more information, visit the California Family Needs Calculator website: <https://insightcced.org/2018-family-needs-calculator/>.

Supply

Community College Supply — Exhibit 2 shows the annual and three-year average number of awards conferred by community colleges in Heavy Equipment Maintenance (0947.20), Heavy Equipment Operation (0947.30), and Railroad and Light Rail Operations (0947.40). The college with the most completions in the region is Santa Ana, with 22 completions. Over the past 12 months, there were no other related program recommendation requests from regional community colleges.

Currently, there are no other institutions in the region providing training students for heavy equipment maintenance occupations.

Exhibit 2: Regional community college awards (certificates and degrees), 2015-2018

TOP Code	Program	College	2015-2016 Awards	2016-2017 Awards	2017-2018 Awards	3-Year Award Average
0947.20	Heavy Equipment Maintenance	Rio Hondo	3	1	0	1
		LA Subtotal	3	1	0	1
		Santa Ana	5	42	20	22
		OC Subtotal	5	42	20	22
Supply Subtotal/Average			8	43	20	24
0947.30	Heavy Equipment Operation	Santiago Canyon	18	0	4	7
		Supply Subtotal/Average	18	0	4	7
0947.40	Railroad and Light Rail Operations	LA Trade	0	0	15	5
		Supply Subtotal/Average	0	0	15	5
Supply Total/Average			26	43	39	36

Appendix A: Occupational demand and wage data by county

Exhibit 3. Los Angeles County

Occupation (SOC)	2018 Jobs	2023 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)
Mobile Heavy Equipment Mechanics, Except Engines (49-3042)	2,851	2,962	111	4%	295	\$23.05	\$30.71	\$42.92
Rail Car Repairers (49-3043)	570	637	67	12%	71	\$18.42	\$21.15	\$23.59
Total	3,420	3,599	179	5%	366			

Exhibit 4. Orange County

Occupation (SOC)	2018 Jobs	2023 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)
Mobile Heavy Equipment Mechanics, Except Engines (49-3042)	1,103	1,169	66	6%	119	\$24.42	\$32.35	\$44.97
Rail Car Repairers (49-3043)	68	70	2	3%	7	\$17.72	\$20.39	\$22.83
Total	1,171	1,239	68	6%	126			

Exhibit 5. Los Angeles and Orange Counties

Occupation (SOC)	2018 Jobs	2023 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75th Percentile)
Mobile Heavy Equipment Mechanics, Except Engines (49-3042)	3,954	4,131	177	4%	414	\$23.41	\$31.22	\$43.44
Rail Car Repairers (49-3043)	638	707	69	11%	78	\$18.33	\$21.06	\$23.52
Total	4,591	4,838	247	5%	492			

Appendix B: Sources

- O*NET Online
- Labor Insight/Jobs (Burning Glass)
- Economic Modeling Specialists, International (Emsi)
- Bureau of Labor Statistics (BLS)
- Employment Development Department, Labor Market Information Division, OES
- Employment Development Department, Unemployment Insurance Dataset
- Living Insight Center for Community Economic Development
- California Community Colleges Chancellor’s Office Management Information Systems (MIS)
- California Family Needs Calculator, Insight Center for Community Economic Development
- Chancellor’s Office Curriculum Inventory (COCI 2.0)

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