C·O·E CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

Emergency Management and Homeland Security

Inland Empire/Desert Region (Riverside and San Bernardino counties)

This workforce demand report uses state and federal job projection data developed before the economic impact of COVID-19. The COE is monitoring the situation and will provide more information as it becomes available. Please consult with local employers to understand their current employment needs.

Summary

- The community college industrial and transportation security program provides the knowledge, skills, and abilities that lead to three homeland security occupational group occupations; two community college-level and one bachelor's degree-level occupation.

- The community college-level occupations in this group are projected to have 44 combined annual job openings through 2024, increasing employment by 6%.

- The 50th percentile hourly wages for the community college-level occupations are between $23.30 and $28.13 per hour, above the regional $21.78 per hour self-sustainable wage standard for a single adult with one child.

- Two regional community colleges offer the industrial and transportation security program, but only one college conferred an annual average of 2 awards over the last three academic years.

- The Centers of Excellence cautiously recommends expanding industrial transportation and security programs due to the low number of annual job openings for community college-level occupations.

Introduction

Jobs in homeland security are as numerous as they are various, with opportunities existing within government agencies and the private sector. Border patrol agents, transportation security screeners, immigration officers, cybersecurity analysts, emergency management directors, and many others work to protect our nation's security (Jones, pg. 5). The California Community College program most closely associated with emergency management and homeland security is the industrial and transportation security (TOP 2105.30) program which provides training on the techniques involved in providing security services to institutions, government entities, and the general public. This program also includes airport and airline security (Taxonomy of Programs, 2012). The occupations selected for this report are relevant to industrial and transportation security programs and are collectively referred to as the homeland security occupational group in this report.

The homeland security occupational group is separated into community college-level and bachelor's degree-level occupations to illuminate job opportunities for individuals with varying education levels and previous work experience. This report's educational supply and employment demand portions focus solely on the

community college-level jobs students are likely to obtain after completing a community college emergency management and homeland security program.

The **community college-level homeland security** occupational group consists of occupations that typically require on-the-job training in addition to a high school diploma. Between 46% and 47% of workers in these community college-level occupations have completed some college or an associate degree. The occupations included in the community college homeland security occupational group are:

- Transit and Railroad Police (SOC 33-3052)
- Transportation Security Screeners (33-9093)

The **bachelor's degree-level homeland security occupation** included in this report typically requires workers to obtain a bachelor's degree in addition to five or more years of work experience. Students enrolled in an emergency management and homeland security program may gain transferable skills. The bachelor's degree-level homeland security occupation included in this report is:

- Emergency Management Directors (SOC 11-9161)

Emergency management directors and transit and railroad police are considered essential critical infrastructure occupations as identified by the Public Policy Institute of California. This classification of occupations is vital in supporting California's basic economic and safety needs (Bohn et al.). Despite the ongoing pandemic, employment demand should continue due to these occupations' critical nature and social distance ability.

Job Counts and Projections

In 2019, there were 547 combined homeland security jobs in the Inland Empire/Desert Region. Employment in this group is expected to increase by 6% over the next five years. The community college-level occupations will have 44 annual job openings, rising by 6%. Transportation security screeners will have the most annual job openings, with 38 annual job openings, transit and railroad police will have the fewest, six annual job openings. The bachelor's degree-level occupation is expected to increase employment by 5% and have eight annual job openings. Exhibit 1 displays job counts, five-year projected job growth, job openings, and the share of incumbent workers age 55 years and greater working in this group.

Exhibit 1: Five-year projections for the homeland security occupational group, 2019-2024

Occupation	2019 Jobs	2024 Jobs	5-Yr % Change (New Jobs)	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)	% of workers age 55+
Community College-level Occupations						
Transportation Security Screeners	379	401	6%	227	38	25%
Transit and Railroad Police	71	77	8%	36	6	Insf. Data
Community College-Level Total	**450**	**478**	**6%**	**263**	**44**	**~25%**
Bachelor's Degree-level Occupation						
Emergency Management Directors	97	102	5%	46	8	16%
Bachelor's degree-level Total	**97**	**102**	**5%**	**46**	**8**	**16%**
Homeland Security Group Total	**547**	**580**	**6%**	**309**	**51**	**23%**

Source: Emsi 2021.1

Exhibit 2 shows the number of job ads posted during the last 12 months and the statewide average time to fill for each occupation. Job advertisements were expanded to the state level to provide generalizable results. There were 26 total job advertisements posted for the homeland security occupational group in the Inland Empire/Desert region, accounting for approximately 6% of the state's job advertisements. The average time to fill information is not available for transportation security screeners and transit and railroad police. On average, employers in the state fill online job advertisements for emergency management directors within 36 days.

Exhibit 2: Job ads and time to fill

| Occupation	Job Ads	Statewide Average Time to Fill (Days)
Emergency Management Directors	365	36
Transportation Security Screeners	90	-
Transit and Railroad Police	8	-
TOTAL	**463**	**36**

Source: Burning Glass – Labor Insights

Earnings and Benefits

Community colleges should ensure their training programs lead to employment opportunities that provide self-sustainable income. The University of Washington estimates that a self-sufficient hourly rate for a single adult with one school-age child is $21.78 per hour or $45,992 annually in Riverside County; $21.24 per hour or $44,867 annually in San Bernardino County (Pearce, 2020). For this study, the higher hourly earnings requirement in Riverside County is adopted as the self-sufficiency standard for the two-county region.

The 50th percentile hourly wages for the homeland security occupational group are between $23.30 and $46.01 per hour, above the regional $21.78 per hour self-sustainable wage standard for a single adult with one child. The community college-level transportation security screeners hourly rate surpasses the self-sufficiency standard at the 25th percentile, $21.83 per hour. Transit and railroad police workers earn a self-sustainable wage at the 50th percentile. Exhibit 3 displays the hourly earnings for the homeland security occupational group.

Exhibit 3: Hourly earnings by percentile
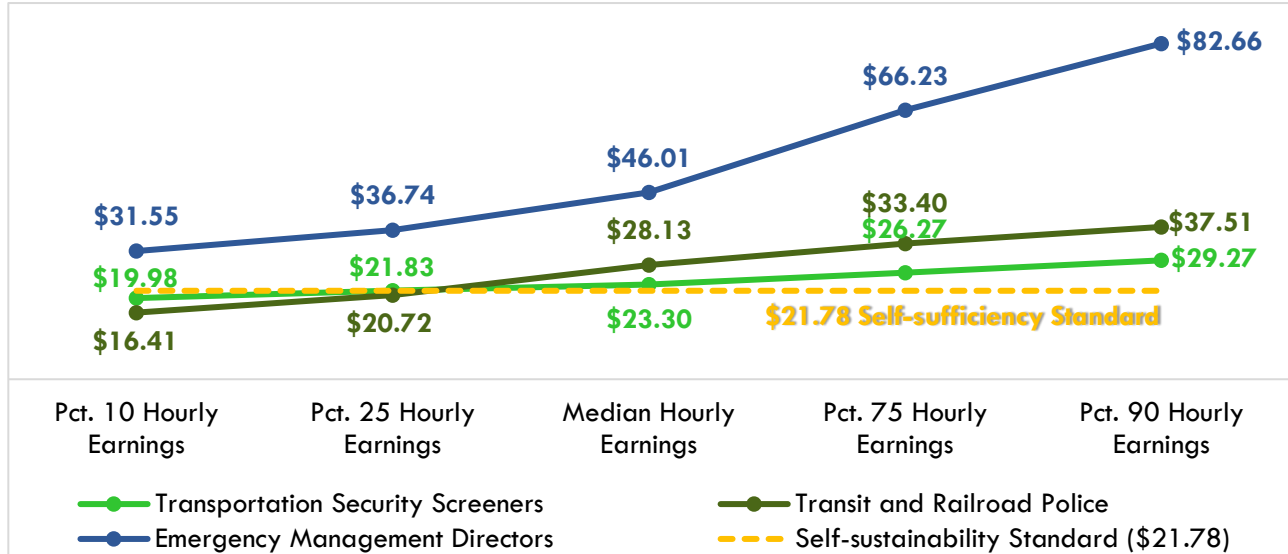
Source: Emsi 2021.1

Benefits information, typically provided by the California Labor Market Information Division's occupational guides, is not available for homeland security occupational (Detailed Occupational Guides, 2021).

Advertised Salary from Online Job Ads

Exhibit 4 displays online job ad salary data for the homeland security occupational over the last 12 months in California. Online job ad salary information reveals that employers are willing to pay the homeland security occupational between $47,000 and $78,000 annually. Advertised wages for emergency management directors and transportation security screeners are above the $45,992 annual ($21.78 hourly) self-sufficiency standard for the region. Consider online job ad salary with caution since only 44% (202 out of 463) of results for these occupations provided information. Furthermore, statewide job ads do not provide insight into the wages earned by homeland security workers in the region. The salary figures are prorated to reflect full-time, annual salary status.

Exhibit 4: Advertised salary information

Occupations	Real-Time Salary Information					
	Number of job postings	Less than $35,000	$35,000 to $49,999	$50,000 to $74,999	More than $75,000	Average Annual Salary
Emergency Management Directors	*168*	5%	12%	35%	48%	$78,000
Transportation Security Screeners	*33*	15%	58%	24%	3%	$47,000
Transit and Railroad Police	*1*	N/A	N/A	N/A	N/A	N/A

Source: Burning Glass – Labor Insights

Employers, Skills, Education, and Work Experience

Exhibit 5 displays the employers posting the most job ads during the last 12 months. Displaying employer names provides some insight into where students may find employment after completing a program. Colleges in the University of California system sought emergency management directors to mitigate the effects of the COVID-19 pandemic.

Exhibit 5: Employers posting the most job ads for the homeland security occupational

Occupation	Top Employers	
Emergency Management Directors *(n=365)*	• Federal Emergency Management Agency (FEMA) • Pacific Gas and Electric Company (PG&E) • U.S. Department of Homeland Security	• University of California • Bureau of Land Management (BLM)
Transportation Security Screeners *(n=90)*	• Transportation Security Administration (TSA) • Trinity Technology Group, Inc. • VMD Company	
Transit and Railroad Police *(n=8)*	• The Geo Group, Inc.	

Source: Burning Glass – Labor Insights

Exhibit 6 lists a sample of specialized and employability skills employers seek when looking for workers to fill homeland security positions. Specialized skills are occupation-specific skills that employers request for industry or job competency. Employability skills are foundational skills that transcend industries and occupations; this category is often referred to as "soft skills." The skills requested in job postings may be utilized to guide curriculum development.

Exhibit 6: Sample of in-demand skills from employer job ads

Occupation	Specialized skills	Employability skills
Emergency Management Directors *(n=339)*	• Budgeting • Scheduling • Project Management • Staff Management • Emergency Preparedness	• Planning • Communication Skills • Physical Abilities • Writing • Organizational Skills
Transportation Security Screeners *(n=86)*	• X-Ray Operation • Public Transit Systems • Handling of Crisis or Emergency Situations • Aviation Security • Baggage Screening	• English • Physical Abilities • Writing • Critical Thinking • Listening
Transit and Railroad Police *(n=8)*	• Vehicle Inspection • Post Trip Inspection	• Problem Solving • Leadership • Communication Skills

Source: Burning Glass – Labor Insights

According to the Bureau of Labor Statistics, approximately (21%-47%) of incumbent workers in this field hold a community college-level of educational attainment; "some college, no degree" and an "associate degree." There were too few online job advertisements for transit and railroad police to obtain reliable minimum advertised education requirement information. Online job ads indicate that most employers' minimum advertised education requirement is a high school diploma or vocational training for transportation security screeners (98%). Employers posting job ads for emergency management directors primarily seeking candidates with a bachelor's degree or higher (89%).

Exhibit 7: Typical entry-level education, educational attainment, and minimum advertised education requirements

| Occupation | Typical Entry-Level Education Requirement | CC-Level Educational Attainment* | Real-Time Minimum Advertised Education Requirement | | |
			Number of Job Ads	High school or vocational training	Associate degree	Bachelor's degree or higher
Emergency Management Directors	Bachelor's degree	21%	225	-	11%	89%
Transportation Security Screeners	High school diploma or equivalent	47%	52	98%	-	2%
Transit and Railroad Police	High school diploma or equivalent	46%	8	N/A	N/A	N/A

Source: Emsi 2021.1, Burning Glass – Labor Insights
*Percentage of incumbent workers with a Community College Award or Some Postsecondary Coursework

Exhibit 8 displays the work experience typically required to enter each occupation and the real-time work experience requirements from employer job ads. While emergency management directors typically require five years or more of previous work experience, the majority (51%) of employers posting job advertisements for this occupation sought candidates with zero to two years of experience. There were too few online job advertisements for transit and railroad police to obtain reliable work experience information.

Exhibit 8: Work experience required and real-time work experience requirements

| Occupation | Work Experience Typically Required | Real-Time Work Experience | | |
		Number of job postings	0 – 2 years	3 – 5 years	6+ years
Emergency Management Directors	5 years or more	253	51%	33%	16%
Transportation Security Screeners	None	74	96%	4%	-
Transit and Railroad Police	None	3	N/A	N/A	N/A

Source: Emsi 2021.1, Burning Glass – Labor Insights

Student Completions for Programs

Exhibit 9 displays completion data for California Community College industrial and transportation security (TOP 2105.30) programs between 2017 and 2020. Chaffey's Homeland National Security program has awarded an annual average of two certificates over the last three academic years. The student completion and outcome methodology are available on page 11.

Exhibit 9: 2016-19, Annual average community college awards for the industrial and transportation security programs in the Inland Empire/Desert Region

TOP 2105.30 – Industrial and Transportation Security (Local Program Title)	Certificate requiring 18 to <30 semester units	Certificate requiring 16 to <30 semester units	Total CC Annual Average Awards, Academic Years 2017-20
Barstow (Emergency Management)	-	-	0
Chaffey (Homeland National Security)	1	1	2
Total	**1**	**1**	**2**

Source: MIS Data Mart

California program outcome data may provide a 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 10. The outcome methodology is available in the appendix section of this report.

Exhibit 10: 2105.30 – Industrial and transportation security strong workforce program outcomes

Strong Workforce Program Metrics: 2105.30 – Industrial and Transportation Security Academic Year 2017-18, unless noted otherwise	Inland Empire/Desert Region	California
Unduplicated count of enrolled students (2018-19)	46	358
Completed 9+ career education units in one year (2018-19)	35%	32%
Perkins Economically disadvantaged students (2018-19)	83%	77%
Students who earned a degree, certificate, or attained apprenticeship (2018-19)	-	27
Transferred to a four-year institution (transfers)	-	36
Median annual earnings (all exiters)	$25,324	$28,242
Median change in earnings (all exiters)	-	2%
Attained a living wage (completers and skills-builders)	-	49%

Sources: LaunchBoard Community College Pipeline and Strong Workforce Program Metrics

Recommendation for Community College-level Emergency Management and Homeland Security Programs

Community college-level homeland security occupations are expected to have 44 combined annual job openings and increase employment by 6% over the next five years. Transportation security screeners will have 38 annual job openings, and transit and railroad police will have six annual job openings. Transit and railroad police are considered to be an essential critical infrastructure occupation. Despite the ongoing pandemic, employment demand should continue due to this classification of occupations' critical health and safety services. The 50th percentile hourly wages for the community college-level occupations are between $23.30 and $28.13 per hour, above the regional $21.78 per hour self-sustainable wage standard for a single adult with one child.

Community college industrial transportation and security (TOP 2105.30) programs are offered at two colleges. The program offered at Chaffey College has awarded an annual average of 2 certificates over the last three academic years.

The Centers of Excellence cautiously recommends expanding industrial transportation and security programs due to the low number of annual job openings for the community college-level occupations in the region (44 annual job openings). Colleges considering this program should partner with applicable employers to document their demand for more workers in this field.

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Appendix: Occupation definitions, sample job titles, five-year projections, and earnings for emergency management and homeland security occupations

Occupation Definitions (SOC code), Education and Training Requirement, Community College Education Attainment

Emergency Management Directors (11-9161)

Plan and direct disaster response or crisis management activities, provide disaster preparedness training, and prepare emergency plans and procedures for natural (e.g., hurricanes, floods, earthquakes), wartime, or technological (e.g., nuclear power plant emergencies or hazardous materials spills) disasters or hostage situations.

Sample job titles: Emergency Management Coordinator, Emergency Management System Director (EMS Director), Emergency Preparedness Coordinator, Emergency Services Director, Public Safety Director

Entry-Level Educational Requirement: Bachelor's degree
Training Requirement: None
Percentage of incumbent workers with a Community College Award or Some Postsecondary Coursework: 21%

Transit and Railroad Police (33-3052)

Protect and police railroad and transit property, employees, or passengers.

Sample job titles: Law Enforcement Officer, Patrol Man, Patrol Officer, Patrolman, Police Captain, Police Patrol Officer, Police Specialist, Railroad Police, Railroad Police Officer, Transit Police Officer

Entry-Level Educational Requirement: High school diploma or equivalent
Training Requirement: Between one and twelve months on-the-job training
Percentage of incumbent workers with a Community College Award or Some Postsecondary Coursework: 46%

Transportation Security Screeners (33-9093)

Conduct screening of passengers, baggage, or cargo to ensure compliance with Transportation Security Administration (TSA) regulations. May operate basic security equipment such as x-ray machines and hand wands at screening checkpoints.

Sample job titles: Security Screener, Transportation Security Officer (TSO)

Entry-Level Educational Requirement: High school diploma or equivalent
Training Requirement: Between one and twelve months on-the-job training
Percentage of incumbent workers with a Community College Award or Some Postsecondary Coursework: 47%

Appendix: Student Completions and Program Outcome Methodology

Exhibit 9 displays the average annual California Community College (CCC) awards conferred during the three academic years between 2017 and 2020, from the California Community Colleges Chancellor's Office Management Information Systems (MIS) Data Mart. Awards are the combined total of associate degrees and certificates issued during the timeframe, divided by three in this case to calculate an annual average. This is done to minimize the effect of atypical variation 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 records provided by 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, 2021a). 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, 2021a).

Job advertisement data is limited to the information provided by employers and the ability of artificial intelligence search engines to identify this information. Additionally, preliminary calculations by Georgetown Center on Education and the Workforce found that "just 30 to 40 percent of openings for candidates with some college or an associate degree, and only 40 to 60 percent of openings for high school diploma holders appear online" (Carnevale et al., 2014). Online job advertisements often do not reveal employers' hiring intentions; it is unknown if employers plan to hire one or multiple workers from a single online job ad or collect resumes for future hiring needs. A closed job ad may not be the result of a hired worker.

Table 1. 2019 to 2024 job growth, wages, entry-level education, training, and work experience required for the homeland security occupational group

Occupation (SOC)	2019 Jobs	5-Year Change (New Jobs)	5-Year % Change (New Jobs)	Annual Openings (New + Replacement Jobs)	Entry-Experienced Hourly Wage (10th to 90th percentile)	Median Hourly Wage (50th percentile)	Average Annual Earnings	Entry-Level Education & On-The-Job-Training	Work Experience Required
Transportation Security Screeners (33-9093)	379	22	6%	38	$19.98 to $29.27	$23.30	$50,700	High school diploma or equivalent & less than 1 month	None
Emergency Management Directors (11-9161)	97	5	5%	8	$31.55 to $82.66	$46.01	$107,000	Bachelor's degree & None	5 years or more
Transit and Railroad Police (33-3052)	71	6	8%	6	$16.41 to $37.51	$28.13	$57,500	High school diploma or equivalent & 1-12 months	None
Total	**547**	**32**	**6%**	**51**	-	-	-	-	-

Source: Emsi 2021.1