



April 30, 2021

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**SUBJECT: HIGH ROAD TRAINING PARTNERSHIPS:
DEVELOPING A NETWORK OF PRE-
APPRENTICESHIP AND APPRENTICESHIP
MODELS IN LOS ANGELES COUNTY (ITEM NO. 17,
AGENDA OF MARCH 31, 2020)**

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On March 31, 2020, the Los Angeles County Board of Supervisors (Board) adopted a motion authored by Supervisor Hilda L. Solis directing Workforce Development, Aging, and Community Services (WDACS), in collaboration with the Chief Executive Officer (CEO) and Department of Public Social Services (DPSS) to develop a Countywide Apprenticeship Plan (hereinafter 'Plan'), leveraging our County's workforce systems to increase the availability and access to pre-apprenticeship and apprenticeship opportunities, help prepare jobseekers for career pathways in high growth sectors, and aid in closing the gap between the supply of skilled and trained workers and industry demands.

The Plan consists of the following major components:

1. Expansion countywide into advanced manufacturing by building upon WDACS' existing employer focused initiatives with Northrop Grumman and Proterra;
2. Identification of opportunities to scale up existing initiatives in construction, hospitality, civil service, and film and digital media;
3. Exploring and establishing new opportunities and partnerships, such as in health care and early childhood education; and
4. Recruitment and training priority populations under the



Workforce Innovation and Opportunity Act (WIOA) and through the County's Greater Avenues for Independence and General Relief Opportunities for Work (GAIN/GROW) programs.

The Plan will build upon the County's America's Job Centers of California (AJCC) system to develop more industry aligned pre-apprenticeship and apprenticeship High Road Training Partnerships. WDACS will partner with a sector intermediary, establish partnerships with a wide range of advanced manufacturing companies, and leverage the AJCC system and its wide network of partners as coordinated and central collaboration sites for pre-employment basic skills trainings for individuals with significant barriers to employment, pre-apprenticeships, and apprenticeships, including virtual access for jobseekers.

We believe that this Plan to increase industry focused training, and placements will lead to greater successes of employing our County's residents in self-sustaining career pathways in sectors that offer family sustaining and long-term career opportunities.

Thank you for the opportunity to partner with County departments to develop and implement an initiative that leverages and enhances the County's workforce systems and to increase industry aligned high road training and employment opportunities for jobseekers. Should you have any questions, please contact me directly, or your staff may contact Kevin Anderson, Special Assistant, at kanderson@wdacs.lacounty.gov.

OS:JRP

Attachments

c: Executive Office, Board of Supervisors
 Chief Executive Office
 Department of Public Health, Office for the Advancement of Early Care and Education
 Department of Public Social Services
 Women and Girls Initiative

COUNTYWIDE APPRENTICESHIP PLAN

INTRODUCTION

On March 31, 2020, the Los Angeles County (County) Board of Supervisors (Board) adopted a motion authored by Supervisor Hilda L. Solis directing Workforce Development, Aging, and Community Services (WDACS), in collaboration with the Office of the Chief Executive Officer (CEO) and Department of Public Social Services (DPSS) to develop a plan for pre-apprenticeships and apprenticeships. The aim is to use these workforce training models to help close the talent gap between the supply of skilled and trained workers and demand for this talent, while expanding career opportunities for priority populations.

BACKGROUND

The State of California has adopted a High Road Training Partnership (H RTP) model as a leading practice in workforce development, calling for an increase in designated pathways where workers are trained for jobs with family sustaining wages. The H RTP model promotes equity and shared prosperity through an inclusive human capital strategy that a) prioritizes job quality; b) supports economic and climate resiliency; and c) links worker-centered, regionally based industry strategies to a statewide skills agenda. Pre-apprenticeships and apprenticeships are deemed as H RTPs as they consist of four (4) interrelated elements: 1) industry-led problem solving; 2) prioritization of employer or business partnerships; 3) incorporation of worker voice throughout partnership efforts; and 4) industry-driven education and training solutions.¹

The United States Department of Labor (DOL) defines apprenticeships as a proven approach for preparing workers for jobs while meeting the needs of businesses for a highly skilled workforce. It is an employer-driven, “learn-while-you-earn” model that combines employer-provided on-the-job training (OJT), with job-related instruction and curricula tied to the attainment of national skills standards. The model also involves progressive increases in an apprentice’s skills and wages. Apprenticeship is a flexible training strategy that can be customized to meet the needs of any business.²

As defined by the DOL, pre-apprenticeships are designed to prepare individuals to enter and succeed in apprenticeship programs.³ Pre-apprenticeships promote a diverse and skilled workforce and prepare participants to meet the basic qualifications for entry into an apprenticeship through an approved training curriculum based on industry standards; educational and pre-vocational services; hands-on training in a simulated lab experience or through volunteer opportunities; and assistance in applying to apprenticeships.⁴

¹ California Workforce Development Board: High Road Training Partnerships <https://cwdb.ca.gov/initiatives/high-road-training-partnerships/>.

² United States Department of Labor – Apprenticeship Toolkit FAQs <https://www.dol.gov/apprenticeship/toolkit/toolkitfaq.htm#1a>

³ *Ibid.*

⁴ *Ibid.*

Apprenticeships are registered with either California's Department of Industrial Relations Division of Apprenticeship Standards (DAS) or DOL's Employment Training Administration Bureau of Apprenticeship Training, which in turn provides technical assistance and support; state or nationally industry-recognized credentials; quality standards; tax credits; and resources to support the apprenticeship programs.

Many bodies of research, stakeholder interviews, leading practices, and programs from similarly situated jurisdictions demonstrate that collaboration between the public sector, industry, community, and education lead to the development and implementation of successful apprenticeship programs. Collaboration yields successful industry-led training programs that produce long-term successes for employers and workers. The DOL notes that apprenticeship programs have high retention rates with 91% of apprentices retaining employment after completion.⁵

PLAN TO DEVELOP AND EXPAND PRE-APPRENTICESHIPS AND APPRENTICESHIPS

The Countywide Apprenticeship Plan (hereinafter "Plan") builds on existing high road initiatives and recommends pathways to develop formalized and scalable pre-apprenticeship and apprenticeship programs. The Plan leverages WDACS' America's Job Centers of California (AJCC) system and partnerships, along with a sector intermediary, to create centralized hubs that focus on developing partnerships and programs and increasing access to more pre-apprenticeship and apprenticeship opportunities. Specifically, the Plan focuses on advanced manufacturing while scaling up WDACS' existing initiatives in key growth sectors that offer high road employment.

The Plan consists of the following components to expand the apprenticeship pipeline throughout the local workforce system.

- Build upon WDACS' existing employer-focused initiatives with Northrop Grumman (aerospace) and Proterra (green and renewable technology) to develop a network of pre-apprenticeships and apprenticeships in **advanced manufacturing** centered on the following components:
 - Contract with a sector intermediary with deep knowledge of and relationships with businesses in advanced manufacturing, as well as specializations in aggregating training needs; assisting educational institutions in aligning curricula to meet industry and employer needs; and facilitating cross-collaboration among multiple organizations to identify and address common organizational or human resource challenges.⁶
 - Implement a hub, which entails enhancing the capacity of one (1) or multiple AJCCs and their wide network of partners as coordinated and central collaboration sites, including virtual access for jobseekers. The sector intermediary will play a

⁵ United States Department of Labor – Apprenticeship Toolkit FAQs
<https://www.dol.gov/apprenticeship/toolkit/toolkitfaq.htm#:~:text=Retention%3A%20Apprenticeship%20programs%20have%20high,advance%20in%20skills%20and%20knowledge>.

⁶ Prince, Heath, and Jerry Rubin. 2006. *Building New Labor Market Institutions: State Policies that Support Workforce Intermediaries*.
<https://ifforg-prod-prime.s3.amazonaws.com/media/documents/BuildNewLaborInt.pdf>.

- central role in facilitating the multiple partners and streamline the business partnerships, training, and placement of trainees.
- Develop and implement, as necessary, a customized basic skills program that will ensure a candidate successfully enters a pre-apprenticeship and apprenticeship program.
- WDACS will identify opportunities to scale up its existing initiatives by utilizing the proposed hub model in construction through Hire LAX and HireUP; in hospitality and civil service through HireUp; and through the Film and Digital Media (F&DM) Career Pathway Program.
- WDACS will explore and establish new opportunities and partnerships to develop pre-apprenticeships and apprenticeships in sectors such as health care, early childhood education and childcare, social and human services, transportation and warehousing, bioscience, and information technology by leveraging the hub concept and the lessons learned through the advanced manufacturing initiative.
- Emphasis will be placed on recruiting and training priority and target populations through the Greater Avenues for Independence and General Relief Opportunities for Work (GAIN/GROW) programs and those identified under the Workforce Innovation and Opportunity Act (WIOA), which include, low income, basic skills deficient, justice-involved, long-term unemployed, recipients of safety net services, housing insecure, youth, former foster youth, dislocated workers, English language learners, displaced homemakers, and veterans.

This Plan is informed by subject matter expertise from the Los Angeles County Workforce Development Board (WDB), which is comprised of local industry partners and experts in business, education, labor, public transportation, workforce, and non-profit organizations. It is also aligned with work of the California Labor Agency and California Workforce Development Board (CWDB). Through an existing partnership with the County, the Worker Education and Resource Center (WERC) supported development of the Plan by conducting stakeholder engagement and providing recommendations that informed the strategic approach.

COUNTYWIDE INITIATIVE FOR ADVANCED MANUFACTURING

WDACS proposes to initially focus on advanced manufacturing as it has the highest propensity for worker and employer success. WDACS will partner with a sector intermediary, establish partnerships with a wide range of advanced manufacturing companies with the support of the intermediary, and leverage the AJCC system and its wide network of partners as coordinated and central collaboration sites, including virtual access for jobseekers. WDACS will build upon its initiatives with Northrop Grumman and Proterra (for description of programs see Table A).

Advanced manufacturing is defined as use of innovative technologies to create existing products and the creation of new products. It can include production activities that depend on information,

automation, computation, software, sensing, and networking.⁷ Advanced manufacturing relies on numerous occupations that require no more than a high school degree and, importantly, offer wages above or near the MIT living wage threshold for a single adult with no children living in LA County (\$19.35).⁸ In addition, as noted in a February 2021 report from the U.S. Bureau of Labor Statistics, manufacturing is expected to add *more* jobs as a result of COVID (compared to its pre-COVID trend) and some select manufacturing industries are expected to perform even better than the manufacturing industry as a whole.⁹ Additionally, the Los Angeles County Economic Development Corporation's (LAEDC) 2021 Economic Forecast¹⁰ highlights manufacturing as a higher wage industry with employment gaps and is projected to have strong recovery post pandemic. This industry also aligns with the State's policy toward a carbon neutral future and is a primary focus for the new Federal Administration. Thus, continued, coordinated, and sustained investment in this industry is advised as an economic recovery strategy.

Table A.

Northrop Grumman & Aircraft Fabrication and Assembly (AFAB) Program – This Program partnership between WDACS, Antelope Valley College, and Northrop Grumman has led to placing over 500 individuals in full-time employment. The AFAB Program provides inexperienced students with entry-level skills for the aerospace industry and experienced students with upgraded skills. Antelope Valley College is one of the few community colleges in the United States offering training in composites fabrication and repair. The program boasts industry-standard equipment with state-of-the-art laboratories and a talent feeder with local high schools. WDACS is working with Northrop Grumman to identify next steps in formalizing this program into an apprenticeship.

Proterra's Electrical Bus Manufacturing Program – This partnership is between Proterra, Citrus College, United Steelworkers (USW) 675, Jobs to Move America, and WDACS. The Electrical Bus Manufacturing Program is a first-of-its-kind workforce training in advanced electric bus manufacturing. It is a customized, nine (9) week training program designed in partnership with production and assembly management at Proterra, a leading innovator in heavy-duty electric transportation, and will help fill union jobs manufacturing battery-electric buses at the company's facility in the City of Industry. This training program targets high priority populations of Los Angeles County, such as: veterans, homeless, low-income, dislocated workers, among others. While in the program, participants receive case management, barrier removal, professional development, job readiness services, and training/job related equipment (e.g., electrical safety boots and laptops). Upon completion of the training program, participants are placed into employment with Proterra. As the training is grounded in foundational concepts and skills, individuals who complete the training are also positioned to compete for jobs with other employers in the industry and enter a career track that will allow for professional upward mobility and a livable wage. The first cohort of fifteen (15) participants launched on October 7, 2020 with a 100% completion rate.

⁷ Advanced Manufacturing National Program Office: Glossary of Advanced Manufacturing Terms - <https://www.manufacturing.gov/glossary>.

⁸ Massachusetts Institute of Technology. <https://livingwage.mit.edu/counties/06037>.

⁹ <https://www.bls.gov/opub/mlr/2021/article/employment-projections-in-a-pandemic-environment.htm>

¹⁰ LAEDC 2021 Economic Forecast - <https://laedc.org/2021/02/17/2021-economic-forecast/>

Partnering with a sector intermediary as a leading practice

The County will utilize an advanced manufacturing intermediary to design and coordinate innovative industrywide and countywide pre-apprenticeship and apprenticeship programs that include entryways for priority populations and create a pipeline of talent for businesses. Intermediaries have deep industry knowledge and relationships, which they leverage to convene and align employers and involved parties, facilitate program development across a variety of stakeholders, navigate federal or state requirements for registration, and connect participants to the public workforce system and supportive services. While large organizations may have the capacity to develop individualized programs, smaller employers are unlikely to have the capacity to develop employer-specific apprenticeship programs. An intermediary can convene numerous employers, lead collaboration, and create industry-wide apprenticeship programs, reducing skill gaps to meet industry demands. The following is one (1) of several intermediary partnership leading practices that inform our Plan.

Sector intermediaries for industry-wide career ladders

An example of a regional and industry-focused intermediary is the partnership between the Workforce Regional Training Partnership (WRTP) and Building Industry Group Skilled Trades Employment (BIG STEP). WRTP/BIG STEP facilitates collaboration between labor and management leaders in the manufacturing industry in Milwaukee, Wisconsin, aligning public training and education resources, and by expanding the employment and training opportunities for current and future workers.¹¹ One of its prominent programs is the Industrial Manufacturing Technician (IMT) registered apprenticeship, designed to build the skills to fit industry needs. Evaluations of the IMT apprenticeship have found that while IMT had fewer participants than other programs, it had a higher percentage of people of color, women, and on average,¹² participants earned 29 percent more in the year following the training.¹³

The partnership between WRTP and BIG STEP will be the primary model that WDACS will employ to establish a pre-apprenticeship and apprenticeship program for multiple advanced manufacturing businesses. The intermediary will be responsible for:

- Identifying and developing employer or business partnerships, administering, and registering the proposed advanced manufacturing program, documenting the model, and proposing a strategy and plan that can scale the hub model across other industries.
- Convening and leading collaboration between County officials, local city officials, industry executives, educational partners, and our county workforce system operators.
- Facilitating formal training partnerships between the County, AJCCs, community colleges, adult schools, Los Angeles County Office of Education, labor partners, and employers; and
- Developing a short and long-term strategy and plan to implement and grow advanced manufacturing pre-apprenticeship and apprenticeship opportunities across Los Angeles County.

¹¹ Center on Wisconsin Strategy (COWS). *Manufacturing Pathways in Milwaukee Bringing Skills and Equity to Manufacturing's Future*. 2018. <https://equityinapprenticeship.org/case-studies/manufacturing-pathways-in-milwaukee>.

¹² *Ibid*.

¹³ Kochan, Thomas, David Finegold, and Paul Osterman. December 2012. "Who Can Fix The "Middle-Skills" Gap?" Harvard Business Review. <https://hbr.org/2012/12/Who-Can-Fix-The-Middle-Skills-Gap>.

Establish a pre-apprenticeship and apprenticeship hub

The workforce system is comprised of interdependent partnerships that include educational institutions, youth services, community organizations, State agencies, and other County departments and organizations. Some of these partner organizations are currently co-located with the AJCCs or collaborate closely to provide services and leverage resources. AJCCs identify and prepare job seekers ensuring they have the interests, skills, aptitudes, and abilities, in addition to removing barriers of participation, to successfully enter and complete pre-apprenticeship or apprenticeship training opportunities. In some instances, AJCC operators may also provide supportive and wraparound services. An effective hub under this Plan will use existing AJCC infrastructure and offices, virtual and physical, to leverage public and private resources to design and administer training programs, recruit talent, and support participants over the duration of the program. The hub will be enhanced by including an intermediary to cultivate business partnerships and facilitate the coordination of all the partners. Core institutional partners will include:

- **Businesses or employers** that identify the skills needed for occupations they offer, inform development of industry-driven curriculum, and provide placement opportunities for apprentices are critical in ensuring the success of program participants. They provide multi-year OJT learning opportunities for jobseekers, such as an apprenticeship.
- **Educational institutions** develop curriculum with input from employers and provide necessary classroom training as part of pre-apprenticeship and apprenticeship programs.
- **County Departments and CBOs** provide a myriad of key wraparound services that ensure the success of program participants. The services can include childcare services, nutrition services, social and mental health programs, housing assistance, and transportation support. CBOs also play a key role in identifying and referring community residents to pre-apprenticeship and apprenticeship programs. In collaboration with our CBOs and County departments, we will develop the necessary customized basic skills training program based on the skills and education required by businesses to ensure compatibility and success of individuals with barriers to employment.
- The **contracted intermediary** will build the capacity of one (1) or multiple AJCCs to serve as the main one-stop for businesses in the sector, education partners, CBOs, County departments, and potential program participants. The intermediary will facilitate program development across stakeholders, navigate federal or state requirements for program registration, and connect participants to the public workforce system and supportive services. This approach will help AJCCs build sector-focused and streamline processes of identifying, training, and placing workers into advanced manufacturing employment and careers with family sustaining wages. AJCCs co-located with community colleges or adult schools are well positioned to maximize the effectiveness of the approach.

SCALING OF EXISTING EMPLOYER-FOCUSED INITIATIVES

In addition to Northrop Grumman's AFAB Program and Proterra's Electrical Bus Manufacturing Program, WDACS has implemented several programs modeled on HRTPs. These programs focus on construction, hospitality, and film and digital media (F&DM).

- **Hire LAX** - The Hire LAX Program is a comprehensive, construction apprenticeship preparation program that prepares program graduates for placement consideration on a Los Angeles World Airports (LAWA) construction project through its contractors and local craft unions. Veterans and women are strongly encouraged to participate in the program.
- **HireUP** - The HireUP program assists individuals who are homeless or at-risk of homelessness, into a career pathway within high-growth sectors with a focus on union jobs in construction and hospitality. HireUp also places participant in civil service jobs. The model leverages Measure H to fund participant stipends while they participate in training, which is not allowable under WIOA. This model is something that can and will be explored as we look at effective pre-apprenticeship and apprenticeship training models.
- **F&DM Career Pathway Program** - In collaboration with Venice Arts, a workforce intermediary, WDACS developed a four (4) tiered model comprised of the following: 1) career exposure through multiple employer engagement events; 2) career exploration, consisting of hands-on workshops; 3) job training; and 4) paid summer internships. Business partners participating across the four (4) levels of training include Disney Animation, MOTIVE Advertising, DreamWorks, United Talent Agency, Sony Pictures, and RIOT Games. This program was launched in February with career exposure and the first cohort of ten (10) participants will begin paid internships this summer. Based on the results from the pilot program, WDACS will explore potential opportunities to develop pre-apprenticeships and apprenticeships in F&DM.

WDACS, in partnership with workforce boards and government agencies throughout the County has established robust programming in the construction industry. The above models have produced lessons learned including the importance of large-scale infrastructure projects and developing customized models for industries, such as film and digital media, that typically do not employ pre-apprenticeships and apprenticeships and are not accessible to economically disadvantaged communities. Additionally, our asset scan of registered apprenticeships displayed a high concentration of programs in construction followed by the manufacturing industry. This allows us to scale these models in the respective industries, as we build future industry focused apprenticeship programs.

HUBS IN NEW SECTORS

The initial hub model will also serve as the foundation to inform future expansion. The proposed hub approach will allow WDACS the ability to 1) further develop partnerships with the DAS and DOL to streamline the processes required to register programs, 2) develop and convene industry partnerships required to facilitate large and small business collaboration, and 3) build a network of educational institutions that could support timely development and execution of training to meet employer needs.

In addition to advanced manufacturing, WDACS will scale the hub model, lessons learned, and leading practices to expand into other high growth and forecasted economic recovery sectors including health care, early childhood education and childcare, social/human services, transportation and warehousing, bioscience, and information technology.

Early childhood education and childcare and health care are two (2) sectors that will grow in the next four (4) years. Given this growth, there is a significant need for trained and qualified health care and childcare providers. As the recently released *Pathways for Economic Resiliency* report identified, the limited access to quality childcare and early childhood education (ECE) has had adverse impacts on women in the workforce. To ensure equitable access to jobs for women and their participation in the labor force, it is critical to have a dual approach focused on training for middle-skill occupations and improving access to quality and affordable childcare.

The pandemic and a growing aging population will continue to increase the demand for health care workers. Seventy-two percent of Los Angeles County's health care workforce is comprised of women. To train for occupations in the health care industry and to ensure access to higher paying jobs frequently requires more intensive, longer-term training programs to qualify for. Given that women share a disproportionate cognitive and time burden for child rearing, providing additional childcare support for women helps free up their time and cognitive bandwidth to pursue those more intensive training programs that end up translating to better paying, middle-skill jobs.

Thus, as part of the economic recovery strategy for the County, along with relevant County departments and external community and business sector stakeholders, WDACS will identify immediate workforce and training needs and align education and training programs in the health care and ECE industries. Specifically, WDACS will work with the Department of Public Health's Office for the Advancement of Early Care and Education (OAECE) to explore policy changes and programs to build career pathways, expand access to safe and quality childcare, while at the same time, tackling issues of low wages and benefits in this industry. OAECE is in the process of developing a College and Career Advisement Toolkit for the ECE Workforce which is aligned with the State ECE Career Lattice and will help inform WDACS' training efforts.

CONSULTATION AND EXISTING REGISTERED APPRENTICESHIPS

Through an existing partnership with the County, WERC conducted relevant stakeholder engagement for this effort. WERC supported development of the Plan by conducting stakeholder engagement and providing recommendations that informed the strategic approach. On behalf of the County, WERC did foundational outreach to workers, labor unions, and relevant stakeholders impacted by efforts to phase out of non-renewable energy industries, healthcare, early childhood education and the transformation of industry sectors in response to COVID-19. This input will be instrumental in implementing the Plan.

An asset scan of existing DAS apprenticeship programs shows an inventory of registered apprenticeships that includes approximately 270 programs in Los Angeles County. The highest concentration is in the construction industry, followed by the manufacturing industry. The great majority of the remaining apprenticeships are outside of the County's high growth sectors. (Reference Appendix B for a summary and list of DAS registered apprenticeships). The sheer number of existing approved programs should be viewed as an opportunity to develop partnerships with both programs and high growth sector employers by delivering a pipeline of educated job seekers in the County. WDACS will use business intelligence and labor market data to prioritize emerging industries and most-needed skillsets as the region begins to recover from COVID-19.

FUNDING

Pending WDB approval, WDACS commits to using a maximum annual WIOA funding of \$200,000 annually, for up to two (2) years starting FY 2021-2022, to engage a workforce or sector intermediary with deep expertise and connection to advanced manufacturing employers in the green and renewable energy arena and industry associations across all five (5) supervisorial districts. According to WIOA Final Rule, 20 CFR § 678.435,¹⁴ intermediaries may be used to provide business services and strategies in conjunction with the local WDB. WDACS will conduct a competitive solicitation process to determine the best suited intermediary to carry out the Plan.

Additionally, the potential of new revenue streams that allow for flexibility, such as Measures J, W, A and M, and CalFresh Employment and Training funds, will allow the proposed program to take advantage of measures that align with County priorities and customize the Plan to provide a skilled workforce.

In addition, as AJCCs are a central aspect of the WIOA legislation, WDACS is maximizing current funding to pay for the cost of the apprenticeship training on an individual basis in combination with other funding sources. In addition, the WDB established a \$1 million Innovation Fund that supports training activities and, with WDB approval, can be allocated in part towards this effort. Furthermore, WDACS is pursuing additional federal funding to support the development and implementation of pre-apprenticeships and apprenticeships.

WDACS will continue to leverage its partners in this arena and is committed to building HRTPs in the County, aligned with the Board of Supervisors' leadership, ongoing efforts by the State of California, and the WDB. WDACS has been active in working with the State to support and inform the statewide effort. To date, the State has invested ten (10) million in HRTPs, with an additional \$165 million committed to advancing clean energy apprenticeships and HRTPs over the next five (5) years. WDACS continues collaboration with the CWDB and is well positioned with proposals that can further the State's and County's HRTF goals for workforce development needs of sectors that offer the most opportunity for quality jobs and careers with family sustaining wages.

CONCLUSION

In summary, WDACS' Plan begins the transition into a more intentional effort to catalyze the coordination and development of pre-apprenticeships and apprenticeship opportunities in L.A. County. This includes the following:

- Establishment of pre-apprenticeship and apprenticeship pipeline focused on advanced manufacturing with a demand for trained and skilled workers and with long-term career pathways opportunities by:
 - Contracting with a sector intermediary to convene stakeholders; develop employer relationships; and facilitate coordination between our workforce system, educational partners, CBOs, labor unions, among other critical stakeholders; and

¹⁴ Federal Register | Workforce Innovation and Opportunity Act | Department of Labor | Employment and Training Administration (ETA), Labor | Final Rule 2016 <https://www.govinfo.gov/content/pkg/FR-2016-08-19/pdf/2016-15977.pdf>

- The creation of an advanced manufacturing pre-apprenticeship and apprenticeship hub comprised of critical partners as listed above; and
- Development and implementation of a basic skills training program to help candidates successfully enter pre-apprenticeship and apprenticeship programs.
- Scaling the hub model to create pre-apprenticeship and apprenticeship models in construction, hospitality, civil service, and F&DM.
- Exploring new opportunities and partnerships to develop pre-apprenticeships and apprenticeships in additional industries such as health care and ECE.

The proposed H RTP career pathway strategy aims to increase the number of available pre-apprenticeships and apprenticeships across the County. In combination with pre-employment trainings, these collaborative experiences will lead to well-rounded educational opportunities that prepare job seekers to be self-sufficient while fulfilling employer needs across industries.

Appendix A:

California's Fastest Growing Industries From October 2016 Through October 2019 (Not Seasonally Adjusted Data)			
<u>Industries That Gained the Most Jobs</u> (Three-Year Change in Number)		<u>Industries That Grew the Fastest</u> (Three-Year Change in Percent)	
Individual and Family Services	98,700	Motor Vehicle Manufacturing	105.2%
Limited-Service Eating Places	64,000	Other Information Services	40.9%
Other Information Services	38,400	Other Heavy and Civil Engineering Construction	32.9%
Computer Systems Design and Related Services	37,100	Data Processing, Hosting and Related Services	32.0%
Local Government Education	33,600	Warehousing and Storage	25.7%
Employment Services	31,900	Software Publishers	23.1%
Warehousing and Storage	31,000	Industrial Machinery Manufacturing	20.6%
Outpatient Care Centers	27,700	Other Schools and Instruction (Private)	20.0%
Building Equipment Contractors	26,600	Residential Building Construction	20.0%
Scientific Research and Development Services	23,800	Building Foundation and Exterior Contractors	19.6%
Management of Companies and Enterprises	22,700	Highway, Street, and Bridge Construction	19.5%
Building Foundation and Exterior Contractors	22,300	Scientific Research and Development Services	18.6%
State Government Education	22,000	Nonresidential Building Construction	17.3%
Residential Building Construction	20,900	Electronic Computer Manufacturing	17.1%
Architectural, Engineering and Related Services	18,400	Spectator Sports	16.0%
Investigation and Security Services	17,800	Couriers and Messengers	16.0%
General Medical and Surgical Hospitals	17,200	Individual and Family Services	15.8%
Accommodation	17,000	General Freight Trucking	15.8%
General Merchandise Stores	16,900	Commercial and Industrial Machinery Rental and Leasing	15.4%
Software Publishers	15,900	Special Food Services	15.0%
Services to Buildings and Dwellings	15,600	Offices of Other Health Practitioners	14.7%
Building Finishing Contractors	14,500	Outpatient Care Centers	14.1%
Other Schools and Instruction	13,200	Electronic Instrument Manufacturing	13.8%
General Freight Trucking	13,100	Beverage and Tobacco Product Manufacturing	13.2%
Data Processing, Hosting and Related Services	13,000	Specialty (not Psychological or Substance Abuse) Hospitals	12.9%
Couriers and Messengers	12,900	Social Advocacy Organizations	12.9%
Offices of Other Health Practitioners	12,800	Architectural and Structural Metals Manufacturing	12.7%
Nonresidential Building Construction	12,700	Computer Systems Design and Related Services	12.4%
Colleges, Universities and Professional Schools (Private)	12,200	Personal and Household Goods Repair	12.2%
State Government Excluding Education	11,700	Air Transportation	12.2%
Electronic Instrument Manufacturing	11,500	Investigation and Security Services	12.2%
County Government	11,100	Building Equipment Contractors	11.9%
City Government	11,000	Waste Management and Remediation Services	11.8%
Special Food Services	10,900	Hardware, Plumb and Heating Merchant Wholesalers	11.5%
Elementary and Secondary Schools (Private)	10,700	Home Health Care Services	11.4%
Activities Related to Real Estate	10,500	Elementary and Secondary Schools (Private)	11.4%
Electronic Computer Manufacturing	10,300		
Motor Vehicle Manufacturing	10,200		
Accounting, Tax Preparation and Bookkeeping Services	10,100		

Source: Employment Development Department

Figure 1: California's Fastest Growing Industries from October 2016 - October 2019; CWDB Unified Strategic Workforce Development Plan, Economic and Workforce Analysis 2020-2023

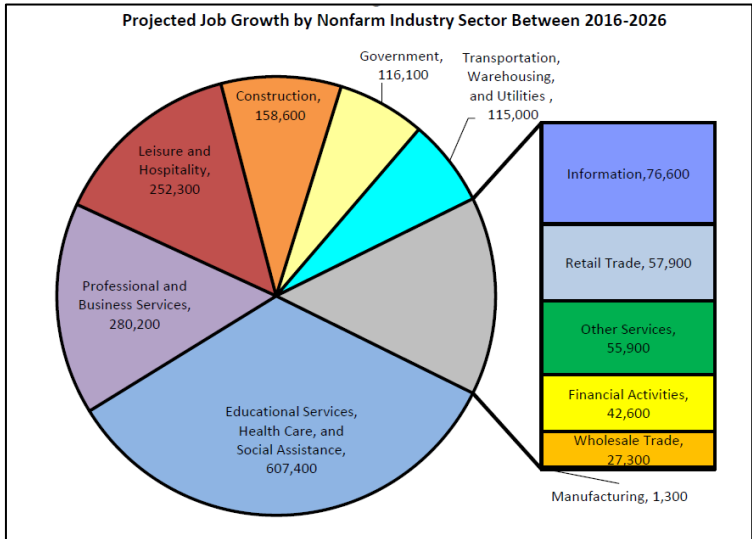


Figure 2: Projected Job Growth by Nonfarm Industry Sector Between 2016-2026; CWDB Unified Strategic Workforce Development Plan, Economic and Workforce Analysis 2020-2023

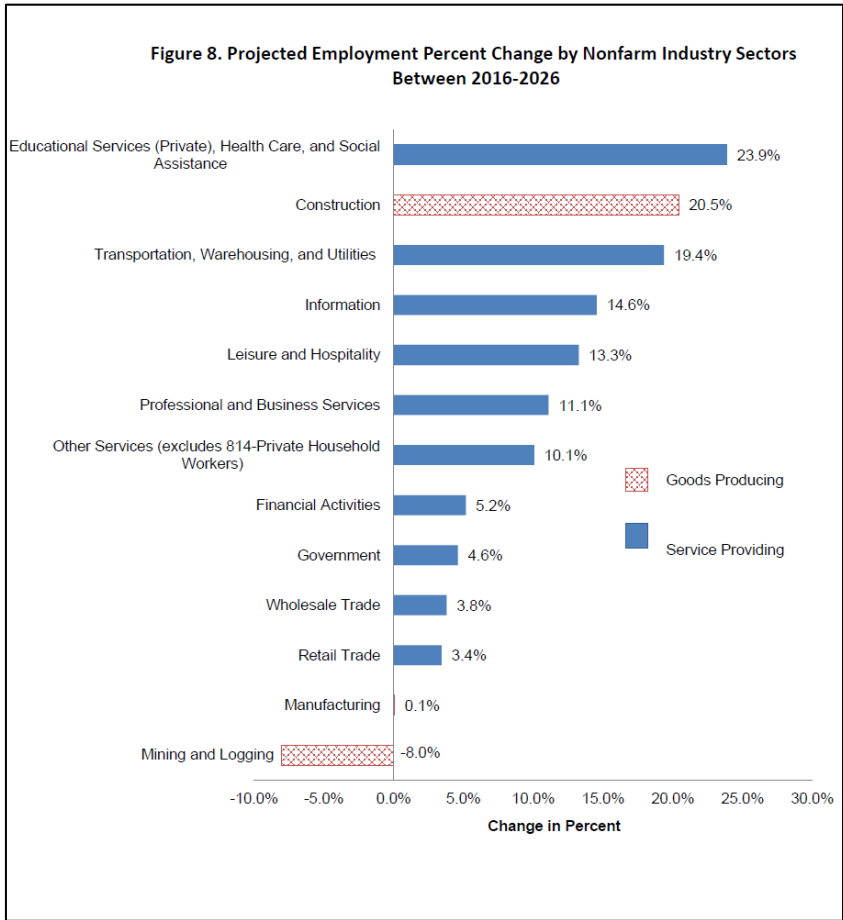


Figure 3: Projected Employment Percent Change by nonfarm Industry Sectors between 2016-2026; CWDB Unified Strategic Workforce Development Plan, Economic and Workforce Analysis 2020-2023

APPENDIX B: Asset Scan of Registered Apprenticeship Programs, California Division of Apprenticeship Standards (DAS)

As noted in the main report, there are 270 apprenticeships registered by DAS in Los Angeles County, and the great majority are either in Construction, Manufacturing, or are not in High Growth Sectors.

Table 1. DAS Registered Apprenticeships by Sector, Los Angeles County

Programs in High Growth Sectors	
Construction	67
Manufacturing	25
Bioscience	7
Transportation and Logistics	6
Professional services	4
Healthcare	4
Hospitality and Tourism	1
Programs Outside High Growth Sectors	156
Total	270

DAS provides a complete list of registered apprenticeships in every County including trade or occupation, wages, and length of apprenticeship.¹ The following table summarizes lists all 270 apprentice trades or occupations. (Many of these have similar titles; we have only consolidated occupation titles in cases where it is clear they are identical.) The average starting wage for some apprenticeships is below the current minimum wage, which may be an indicator that the apprenticeship is dormant, or the data are otherwise out of date. (However, state law does allow for the establishment of an “apprenticeship wage” that is below the minimum wage.²) The average apprenticeship starting wage of \$15.92 is likely lower than the current reality, due to this discrepancy in the DAS data.

Table 2. DAS Registered Apprenticeships by Trade or Occupation, Los Angeles County

Trade or Occupation	Number of Registered Apprenticeships	Average Starting Wage*	Average Program Length (Months)
Cosmetologist	32	\$10.36	23
Barber	31	\$10.41	23
Auto Body Repair	4	\$11.25	26
Plumber	4	\$19.33	57
Sheet Metal Worker	4	\$16.67	57
C N C Machinist	3	\$18.00	32
Electrician (Inside Wireman)	3	\$14.67	56

¹ <https://www.dir.ca.gov/databases/das/aigstart.asp>

² https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=LAB&division=2.&title=&part=4.&chapter=1.&article=

Trade or Occupation	Number of Registered Apprenticeships	Average Starting Wage*	Average Program Length (Months)
HVAC Worker/Technician	3	\$18.50	56
Landscape and Irrigation Fitter	3	\$13.33	48
Electrician	2	\$15.00	57
Industrial Painter	2	\$15.50	48
Maintenance Machinist	2	\$19.00	36
Maintenance Plumber	2	\$18.50	60
Mold Maker	2	\$19.50	48
Plasterer	2	\$17.00	48
Residential Wireman	2	\$10.00	36
Steamfitter / Pipefitter	2	\$23.50	60
Acoustical Installer	1	\$16.00	48
Aerospace Engineer	1	\$15.00	24
Air Balance Testing Technician	1	\$16.00	60
Auto Glass Glazier	1	\$16.00	18
Automatic Screw Machine Set Up Operator	1	\$10.00	48
Automotive Master Mechanic	1	\$23.00	48
Automotive Painter	1	\$12.00	48
Automotive Senior Parts Technician	1	\$21.00	36
Beginning Farm and Ranch Managers	1	\$11.00	24
Boilermaker	1	\$26.00	48
Bricklayer	1	\$14.00	42
Bricklayer (Construction)	1	\$17.00	36
Building Construction Inspector	1	Not Reported	36
Business Development	1	\$11.00	12
Business Operations Specialist	1	\$11.00	24
Cabinet Maker	1	\$15.00	48
Cannabis Nursery Specialist	1	\$11.00	24
Carpenter	1	\$12.00	48
Carpet & Resilient Installer	1	\$14.00	48
Cement Mason	1	\$12.00	48
Certified Nursing Assistant	1	Not Reported	Not Reported
Chainman	1	\$20.00	36
Chemistry Quality Control Technician	1	\$10.00	24
Chief of Party	1	\$47.00	24
Clinical Data Coordinator	1	\$15.00	24
Clinical Research Coordinator	1	\$15.00	24

Trade or Occupation	Number of Registered Apprenticeships	Average Starting Wage*	Average Program Length (Months)
Clinical Trial Associate	1	\$15.00	24
CNC Machine Operator	1	\$11.00	36
Communication & Systems (Craft) Installer	1	\$12.00	36
Computer Support Specialist/Cybersecurity	1	\$13.00	18
Construction Craft Laborer	1	\$18.00	30
Cook-Chef De Partie/Line Cook	1	\$12.00	12
Cyber Security Analyst	1	\$15.00	12
Diesel Engine Mechanic	1	\$29.00	48
Dredge Operator	1	Not Reported	36
Drug Safety Associate	1	\$15.00	24
Drywall / Lather	1	\$16.00	48
Drywall Finisher	1	\$14.00	36
Electrician Construction	1	Not Reported	60
Electronic Systems Technician/Voice Data Video	1	Not Reported	36
Elevator Constructor	1	\$27.00	48
Emergency Medical Technician	1	Not Reported	12
Equipment Operator	1	Not Reported	36
Exhibit Builder	1	\$20.00	36
Fastener Technician	1	\$10.00	24
Field Reinforcing Ironworker	1	\$20.00	48
Field Structural Ironworker	1	\$20.00	48
Fire Apparatus Engineer	1	Not Reported	36
Fire Dept. Training Officer	1	Not Reported	24
Fire Engineer	1	Not Reported	24
Fire Equipment Specialist	1	Not Reported	48
Fire Fighter	1	Not Reported	36
Fire Fighter Diver	1	Not Reported	42
Fire Fighter I I	1	Not Reported	36
Fire Fighter Paramedic	1	Not Reported	48
Fire Inspector	1	Not Reported	24

Trade or Occupation	Number of Registered Apprenticeships	Average Starting Wage*	Average Program Length (Months)
Fire Investigator	1	Not Reported	24
Fire Marshal	1	Not Reported	24
Fire Officer	1	Not Reported	36
Fire Prevention Officer	1	Not Reported	24
Fire Sprinkler Fitter	1	Not Reported	60
Fire Suppression Technician	1	Not Reported	24
Fire/Life Safety, Voice Data, Video & Electronic Security Technician	1	Not Reported	36
Firefighter EMT	1	Not Reported	42
Food Safety Assurance Technician	1	\$20.00	24
Foundry Pattern Maker	1	\$28.00	48
General Manager	1	\$14.00	12
Glazier	1	\$16.00	48
Hardwood Floor Worker	1	\$15.00	48
Hazardous Materials Technician	1	Not Reported	24
Health Data Analyst	1	\$12.00	24
Heat & Frost Insulators, Asbestos & Firestoppers Workers	1	\$15.00	60
Heavy Duty Equipment Mechanic	1	\$29.00	48
Heavy Duty Repair Person	1	Not Reported	36
Heavy Duty Truck Mechanic	1	\$29.00	48
Highway Maintenance Workers	1	\$10.00	6
Housekeeper	1	\$12.00	12
Industrial Machine System Technician	1	\$12.00	24
Industrial Maintenance Electrician	1	\$15.00	48
Industrial Mechanic	1	\$15.00	48
Infant / Toddler Teacher	1	\$15.00	30
In-Patient/Out-Patient Coder	1	\$12.00	24
Insulating Worker	1	Not Reported	48
Internet Sales Manager	1	\$13.00	12
It Electronic Repair	1	\$12.00	12
Laborer Cement Mason	1	Not Reported	36

Trade or Occupation	Number of Registered Apprenticeships	Average Starting Wage*	Average Program Length (Months)
Machine Set Up Operator Fastener Technologist	1	\$10.00	48
Machine Tool Rebuilder	1	\$10.00	48
Machinist	1	\$10.00	48
Maintenance Mechanic	1	\$29.00	48
Manufacturing Technician (Cannabis)	1	\$11.00	24
Marble Finisher	1	\$14.00	24
Marble Setter	1	\$15.00	42
Marketing Managers	1	\$11.00	24
Mason Finisher	1	\$14.00	24
Medical Laboratory Technician	1	Not Reported	Not Reported
Metal Forming Set-Up Technician	1	\$10.00	24
Microbiology Quality Control Technician	1	\$10.00	18
Millwright	1	\$20.00	60
Modular Furniture Installer	1	Not Reported	36
Mold, Die & Metal Surface Finisher	1	\$10.00	24
Municipal Maintenance Machinist	1	\$24.00	48
Network Support Specialist	1	\$18.00	18
Non-Destructive Testing Specialist	1	\$13.00	48
Office Administrator	1	\$11.00	12
Operating and Maintenance Engineer (Stationary Engineer)	1	Not Reported	48
Operations & Maintenance Technician Iv (Electrician)	1	\$19.00	48
Operations & Maintenance Technician Iv (Mechanical)	1	\$19.00	48
Painter	1	Not Reported	36
Painter, Paperhanger and Decorator	1	\$14.00	48
Paramedic	1	Not Reported	24
Pavement Striper	1	\$20.07	30
Permanent Makeup	1	\$11.00	18
Pharmacy Technician (Cannabis)	1	\$11.00	24
Pile Driver	1	\$15.00	48
Pipefitter / Steamfitter	1	\$11.00	60
Plant Equipment Operator	1	Not Reported	36
Plaster Tender	1	\$16.00	36

Trade or Occupation	Number of Registered Apprenticeships	Average Starting Wage*	Average Program Length (Months)
Plumber Maintenance	1	\$17.00	48
Pool & Hot Tub Maintenance Specialist	1	\$14.00	12
Pool & Hot Tub Service Technician	1	\$18.00	12
Power Lineman	1	\$19.00	42
Precision Grinding Technician	1	\$10.00	24
Precision Machining Technician	1	\$10.00	24
Preschool Teacher	1	\$15.00	6
Public Relations Managers/Communication Specialists	1	\$11.00	24
Quality Assurance Associate Auditor	1	\$15.00	24
Quality Management Specialist	1	\$12.00	24
Refrigeration & Air Conditioning Service and Repair (Residential and Commercial)	1	Not Reported	60
Regulatory Affairs Specialist	1	\$15.00	24
Regulatory Compliance Associate	1	\$15.00	24
Release of Information Specialist	1	\$12.00	24
Residential Sheet Metal Worker	1	Not Reported	24
Rock, Sand & Gravel Operator	1	Not Reported	36
Roofer & Waterproofer	1	\$19.00	42
Sanitation Truck Mechanic	1	\$29.00	48
Scaffold and Shoring Erector	1	Not Reported	48
Shipping & Inventory	1	\$11.00	12
Social Media Marketing	1	\$11.00	12
Sound and Communications Systems Installer (Voice-Data-Video)	1	Not Reported	36
Sprinkler Fitter	1	\$18.00	60
Stone Mason	1	\$14.00	42
Teamsters Construction Dump/Cement/Ready Mix Truck & Articulation Driver	1	Not Reported	36
Teamsters Construction Fuel Truck Driver	1	Not Reported	36
Teamsters Construction Low Bed Driver, 5 Axels More	1	Not Reported	36
Teamsters Construction Oil Spreader Truck Driver	1	Not Reported	36
Teamsters Construction Water Truck/Pull Single Engine, Dust Control	1	Not Reported	36
Teamsters Construction Working Driver	1	Not Reported	36

Trade or Occupation	Number of Registered Apprenticeships	Average Starting Wage*	Average Program Length (Months)
Teamsters Warehouseman/Forklift Operator	1	Not Reported	36
Terrazzo Finisher	1	Not Reported	36
Terrazzo Installer	1	\$14.00	48
Tile Finisher	1	\$13.00	24
Tile Setter	1	\$15.00	48
Tool & Die Maker	1	\$10.00	48
Tool and Die Maker	1	\$28.00	48
Tool Maker	1	\$10.00	48
Transit Bus Body Repairer	1	\$29.00	48
Transit Bus Mechanic	1	\$29.00	48
Transportation Systems Electrician	1	\$14.00	48
Truck Trailer Mechanic	1	\$29.00	48
Utility Pipeline Installer	1	\$12.00	60
Warehouse Fulfillment	1	\$11.00	12
Warehouse Manager	1	\$13.00	12
Waterfront Crane Mechanic	1	\$29.00	48
Weatherization Installer & Technician	1	Not Reported	24
Wildland Fire Fighter Specialist	1	Not Reported	18
Wire E.D.M. & Conventional Technician	1	\$10.00	24
Total	270	\$15.92	36