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Research • Planning • Professional Development  
for California Community Colleges

# Final Evaluation Report TAACCCT 2.0

Round 3 Grant Recipient  
Long Beach City College

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# Reader's Guide

The report includes three sections:

1. The Evaluation Snapshot
2. The Executive Summary
3. The Evaluation Report Narrative

**1. The Evaluation Snapshot** provides a brief summary of key evaluation findings and lessons learned. The document was prepared for Long Beach City College (LBCC) to share internally with those who are not familiar with the TAA 2.0 initiative and lessons learned. The document may also be used by LBCC in negotiations with potential investors and partners who want to collaborate in the next iteration of industry-guided short-term training programs based on the lessons learned by TAA 2.0. An additional audience may be community colleges and other entities working on regional workforce development initiatives as well as labor unions considering joint ventures with community colleges.

**2. The Executive Summary** is written in accordance with guidelines from the funder, the US Department of Labor. It begins with a description of the TAA 2.0 program that includes an introduction to the TAA 2.0 construction and preventative maintenance and alternative fuels training tracks. The program description also explains how TAA 2.0 was launched when the original training program TAA 1.0 was reoriented in January 2016. The next section presents the evaluation goals and design and a review of how the reorientation to TAA 2.0 required a complete change in the evaluation plan and implementation design. The next two sections summarize evaluation findings from the implementation and outcomes analysis of each of the two TAA 2.0 training tracks. This is followed by a discussion of lessons learned, research questions raised and a conclusion.

**3. The Evaluation Report Narrative** is an expanded version of the Executive Summary. The document is organized in the same way as the Executive Summary. It includes the following sections:

Section I. Introduction to TAA 2.0 and Evaluation Design

Section II. Evaluation Findings: Construction Pre-Apprenticeship Program (CPAP)

Section III. Evaluation Findings: Heavy Duty

Section IV. Conclusion, Lessons Learned and Research Questions Raised

# Executive Summary

This report presents the Research and Planning Group for California Community College's (RP Group) external evaluation report on Long Beach City College's TAA 2.0 initiative. Funded by a U.S. Department of Labor's Trade Adjustment Assistance Community College and Career Training (TAACCT) Round 3 grant, TAA 2.0 comprises two short-term, not-for-credit, industry-driven training tracks that prepares Long Beach City College (LBCC) students for entry-level occupations in two high growth industries: 1) construction, and 2) preventative maintenance and alternative fuels (termed "Heavy Duty" in this report).

## Program Description & Activities

### From TAA 1.0 to TAA 2.0

TAA 2.0 represents a reorientation of the training initiative originally proposed by LBCC in the college's 2013 request for TAACCT support (referred to as TAA 1.0). TAA 1.0, which aimed to develop career paths in engineering technology was officially launched in October 2013 and ran through October 2015. During the final months of TAA 1.0, LBCC recognized that challenges fundamental to the program warranted a substantive reorientation and plans began for TAA 2.0. With input and approval in December 2016 from the regional DOL office, TAA 2.0 began operating in January 2016, with only nine months to achieve the ambitious outcomes set forth at the beginning of the grant-funded program. Extensions beyond the originally scheduled end-date of September 30, 2016 were subsequently approved by the DOL, providing TAA 2.0 with an additional 11 months of implementation. Overall, TAA 2.0 had 20 months to achieve outcomes originally intended to be accomplished over three years.

#### **TAA 2.0 – Same outcome goals as TAA 1.0, but half the time to achieve them**

*The program outcome goals, originally proposed for TAA 1.0 were carried over to TAA 2.0 even though the training and targeted industries were different and despite the fact that half of the grant period had passed before the DOL approved start-up of TAA 2.0.*

### TAA 2.0 Training Tracks

As noted above, TAA 2.0 provides training to LBCC students in two fields that the college has identified as offering high-wage, high-growth employment opportunities in the Long Beach, CA region. Each of these two workforce development programs is summarized below.



TAA 2.0's construction training component, called the Construction Pre-Apprenticeship Program (CPAP) track, was developed based on the North America Building Trades Union's Multi-Craft Core Curriculum (MC3). Completion of the MC3 leads to an industry-

recognized credential. The instruction also included Occupational Safety and Health Administration (OSHA) and CPR training and certifications. The goal of CPAP was to prepare program participants to successfully compete for entry into union apprenticeship programs in the building trades or apply for other employment offered by the region's rapidly expanding construction industry.



TAA 2.0's Preventative Maintenance & Alternative Fuels (Heavy Duty) track was designed to integrate the college's existing curriculum in alternative fuels with new, industry-guided instruction in preventative maintenance. This training was intended to target individuals with basic to more advanced mechanic/technical skills. The goal was to prepare completers to apply for or advance in technician and heavy duty mechanic positions.

## TAA 2.0 Partners

LBCC proposed to implement the CPAP training initiative in collaboration with Pacific Gateway Workforce Investment Network (PGWIN), an organization that in the past had partnered with LBCC on several workforce development initiatives. PGWIN's role in the project included delivering job placement assistance to program completers and providing program participants with supports such as funds to pay for transportation, tools, work clothes, and union application fees.

LBCC also proposed collaborations with two community-based organizations (CBOs), the Conservation Corps of Long Beach (CC-Long Beach) and Centro CHA. CC-Long Beach committed to hosting some of the CPAP training sessions and both CBOs were engaged to refer clients to the two training tracks; support interview readiness of their referrals; and track client referrals who were placed into apprenticeship, employment or other educational opportunities

Finally, unions, employers, and other industry stakeholders were identified as important partners in the TAA 2.0 implementation process. Their roles included providing input on the TAA training components and instruction; connecting program completers to union apprenticeships and other training-related employment; and hosting tours and providing interview practice.

## Intended Outcomes

The proposed scope of work and outcomes included:

- Train 17 CPAP cohorts with 25 participants per cohort.
- Achieve a 90% CPAP completion rate as well as 70% credential obtainment and 75% of completers finding employment in training- related jobs.
- Implement 16 Heavy Duty cohorts with 25 participants per cohort.

- Achieve a 90% Heavy Duty program completion rate, with 90% of participants obtaining a credential and 75% of completers finding employment in training-related jobs.

## Evaluation Goals & Design

### From the TAA 1.0 Evaluation to the TAA 2.0 Evaluation

The reorientation of TAA 1.0 to TAA 2.0 required a parallel reorientation of the evaluation design and implementation plan. The RP Group developed a comprehensive evaluation plan for TAA 1.0 and implemented a range of evaluation activities that included two site visits, meetings with the TAA 1.0 leadership and their partners, and interviews with the instructors and other members of the implementation team.

In March 2015, however, the findings generated by these evaluation activities left the RP Group sufficiently concerned about the limited progress achieved by TAA 1.0 to write a letter urging the college to take action to remedy the situation. A DOL site visit coincided with this correspondence, and the LBCC leadership was granted permission by the DOL to move forward with TAA 2.0. As such, in February 2016, the RP Group developed a completely new evaluation plan for TAA 2.0. The plan was submitted to the DOL and reviewed and approved by the TAA 2.0 team.

### Evaluation Goals for TAA 2.0

The RP Group approached the evaluation of TAA 2.0 with three major goals in mind. The first goal was to serve as a representative for the DOL in documenting and assessing LBCC's progress toward the proposed outcomes as well as the fidelity to the program design maintained in the implementation process.

The second goal was to work in partnership with LBCC to provide the college with just-in-time information that would facilitate an effective program implementation process. To achieve this second goal, the RP Group provided the TAA 2.0 team with opportunities to review and give input on each evaluation instrument designed for the project, including interview protocols and surveys. In addition, after each major evaluation activity, such as a site visit or an interim outcomes analysis, the RP Group summarized findings in a report that included recommendations for program improvement. Debriefings with the TAA 2.0 team followed to provide opportunities for discussions about what the findings meant and potential need for adjustments in the implementation approach. Finally, the RP Group made adjustments in evaluation priorities to reflect changes in the program implementation process.

The third goal for the TAA 2.0 evaluation was to identify lessons regarding workforce development and retraining programs that could be shared across the entire California Community College system. The RP Group is intensely involved in several statewide initiatives relating to pathway development and the effective delivery of career/technical education (CTE) programs. Findings from the TAA 2.0 evaluation will inform and enhance this work, enabling

colleges throughout California to benefit from the experience of LBCC as they design and implement their own employment training programs.

## TAA 2.0 Evaluation Design

Guided by a logic model that was grounded in LBCC's reoriented Statement of Work (SOW<sup>1</sup>), the evaluation for TAA 2.0 was driven by research questions in three key areas:

1. **Inputs and outputs:** Is TAA 2.0 using resources from the DOL grant and additional inputs leveraged by this resource to deliver the two training tracks proposed in the SOW?
2. **Participant perspectives:** How satisfied are participants with TAA 2.0?
3. **Outcomes:** Is TAA 2.0 achieving the proposed outcomes in terms of participant completion, credential obtainment, and employment in training-related jobs?

The evaluation design then translated these research questions into more specific areas of inquiry, which were investigated using a range of evaluation methods, as outlined in Table 1.

Since the report refers frequently to the SOW, this document is presented in Appendix Attachment A.

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<sup>1</sup> The LBCC's Proposed Statement of Work (SOW) Change for TAACCCT Grant No. TC-25153-13-60-A-6. The SOW was submitted to the US DOL on November 9, 2015

Table 1. TAA 2.0 Evaluation Design

	Areas of Inquiry	Evaluation Methods
<b>Inputs and outputs</b>	<p>Did TAA 2.0 deliver the proposed number of training sessions?</p> <p>Did the training tracks enroll and serve the targeted populations?</p> <p>How effectively did TAA 2.0 engage employers, unions, and other partners and stakeholders in the program implementation process?</p> <p>What changes were made in recruitment and orientation strategies and activities over time?</p> <p>What changes were made in the training program design and support services provided to participants?</p> <p>How did CPAP and its partners support completers with employment placement assistance?</p>	<p>Monthly and then bi-monthly meetings with the TAA 2.0 team</p> <p>Exit interviews with TAA 2.0 team and LBCC leaders</p> <p>Review of program materials and social media sites</p> <p>Two site visits</p> <p>Semi-structured interviews with partners, employers, union leaders, and other stakeholders</p>
<b>Participant perspectives</b>	<p>Were participants satisfied with the TAA 2.0 experience?</p>	<p>Participant exit survey</p> <p>Focus groups (on site)</p>
<b>Outcomes</b>	<p>Did TAA 2.0 achieve the proposed outcomes?</p> <p>What was the experience of TAA 2.0 completers in terms of securing training-related employment?</p>	<p>Analysis of data on program completion, employment status, pre- and post-program wages, time-to-employment, and type of employment</p> <p>Semi-structured interviews with program completers and employers</p>

Although the two training tracks were both short-term, industry-guided, delivered not-for-credit, and concluding in industry certificates, there were significant differences between the two tracks as well. In particular, their target populations, system of supports, training program content, and employment support services were quite distinct from one another. Additionally, each training track engaged entirely different employers, unions, and other stakeholders as partners.



For these reasons, the RP Group conducted two separate implementation and outcomes evaluations. Most of the evaluation resources were directed at the CPAP because this track was launched in January 2016 and ran through August 2017. The Heavy Duty track launched as an 80-hour training program in March 2016, but the program management paused the program for 5 months in August 2016. Heavy Duty was launched again in January 2017 in a new, modular format. At that time, only seven months remained before the end of the grant period.

## Timeline Adjustments and Resulting Evaluation Limitations

The TAACCCT program design provides external evaluators with a year following the conclusion of implementation to document and evaluate participant outcomes and other areas of program impact. In the case of TAA 2.0, however, timeline extensions resulted in the conclusion of program delivery being pushed back to August 2017; as such, program implementation actually extended *beyond* the evaluation period, which concluded in July 2017.

At that time, only preliminary information regarding participants' job placement outcomes was available for CPAP. Moreover, implementation of the modularized version of the Heavy Duty program had launched only seven months prior to the end of the evaluation period. For these reasons, outcomes data, particularly with respect to job placement, should be interpreted with caution since, in many cases, participants have not had enough time to find employment. In response to these limitations, the RP Group decided to gather perspectives on what each of the two tracks achieved by adding interviews with program completers, employers, and other program partners to the evaluation plan.



## CPAP Evaluation Findings

The following section presents key findings from the evaluation of the CPAP track. First, implementation findings are discussed, organized to address the following evaluative questions extrapolated from the logic model:

- Did CPAP deliver the proposed training?
- Did CPAP enroll and serve the targeted populations?
- Did CPAP effectively engage partners in the implementation process?
- What changes were made in the CPAP design over time?
- How satisfied were the program participants with the CPAP experience?

The implementation analysis is followed by the outcomes analysis, which addresses the following evaluative questions:

- Did CPAP meet the proposed outcomes goals?

- What can be learned from CPAP participants' job search following program completion?



## CPAP Implementation Findings

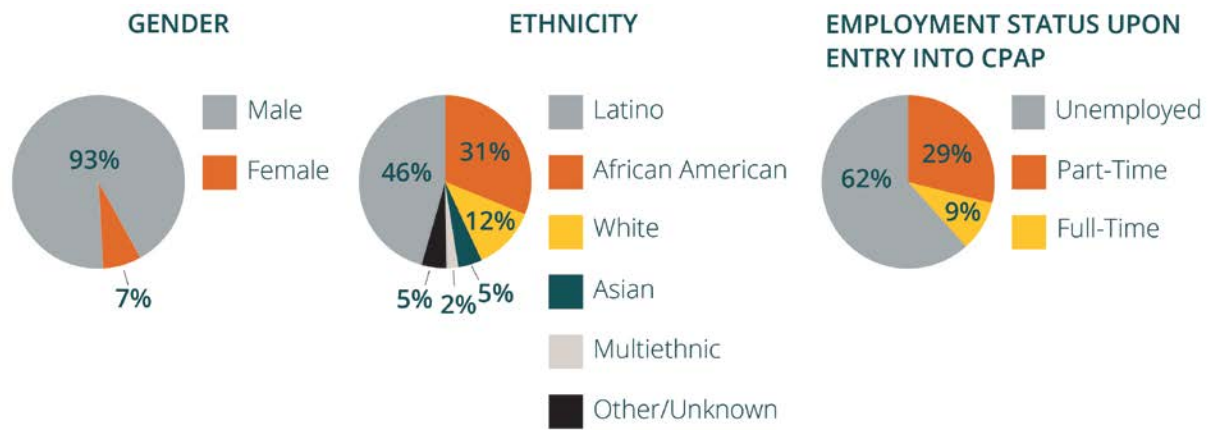
### DELIVERY OF THE PROPOSED TRAINING

LBCC delivered 17 CPAP training sessions, fully meeting the program's target in this area. Each cohort had an average enrollment of 15 participants, which was well below the projected number of 25 participants per cohort proposed in the LBCC's SOW. Several reasons for the lower enrollment pre session are identified and discussed below (see p. 15). They include the fact that TAA 2.0 carried over TAA 1.0's enrollment and outcome goals, although the time period for achieving these goals was half of the original time line planned for TAA 1.0.

## ENROLLMENT OF THE TARGET POPULATIONS

The demographics of the 223 CPAP participants are summarized below in Figure 1.<sup>2</sup> The vast majority of CPAP participants were male (93%), and there was strong representation from both Latino and African-American populations (46% and 31%, respectively). Additionally, the majority of participants were unemployed (61%), and most of those who were employed at the time of enrollment had only part-time work. Overall then, with the exception of the limited number of women enrolled, CPAP largely achieved the goal of serving unemployed individuals from populations underrepresented in union construction jobs.

Figure 1. CPAP Participant Demographics



## PARTNER ENGAGEMENT

Effective partner engagement was a critical factor in the successful implementation of CPAP, and through a substantial investment of time and energy, LBCC was able to achieve some, though not all, of its goals in this aspect of the project.

The key partner in CPAP was unions and in exit interviews LBCC explained the intense effort the TAA 2.0 CPAP team invested in building credibility and relationships with unions and union leaders. These efforts included:

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<sup>2</sup> Data for the pilot/first CPAP Cohort which served Centro CHA clients exclusively were not collected by PGWIN. As a result, the enrollment and outcomes achieved by this cohort were not included in the RP Group's reporting. In September 2017, Centro CHA presented TAA 2.0 with data they had collected on Centro CHA clients participating in TAA 2.0. These achievements are noted in this report, but were provided after the evaluation concluded.

- Going out to union halls and construction sites to meet in-person with union representatives;
- Spending time understanding each of the many different building trades and the distinct requirements and priorities for apprentices;
- Hiring union veterans to teach the MC3 curriculum;
- Bringing TAA 2.0 participants into the workplace on site visits; and
- Inviting union representatives into the classroom to talk about their trade and their own path to employment in that trade.

In the end, in the words of LBCC's Director of Workforce Development, Melissa Infusino: *"We had put LBCC on the map [as a provider of credible union pre-apprenticeship training]."* (RP Group exit interview with Melissa Infusino, 8/11/2017). Ms. Infusino also noted in the exit interview that the Building Trades had been so encouraged by CPAP that they had brought other community colleges to the LBCC campus to visit the program.

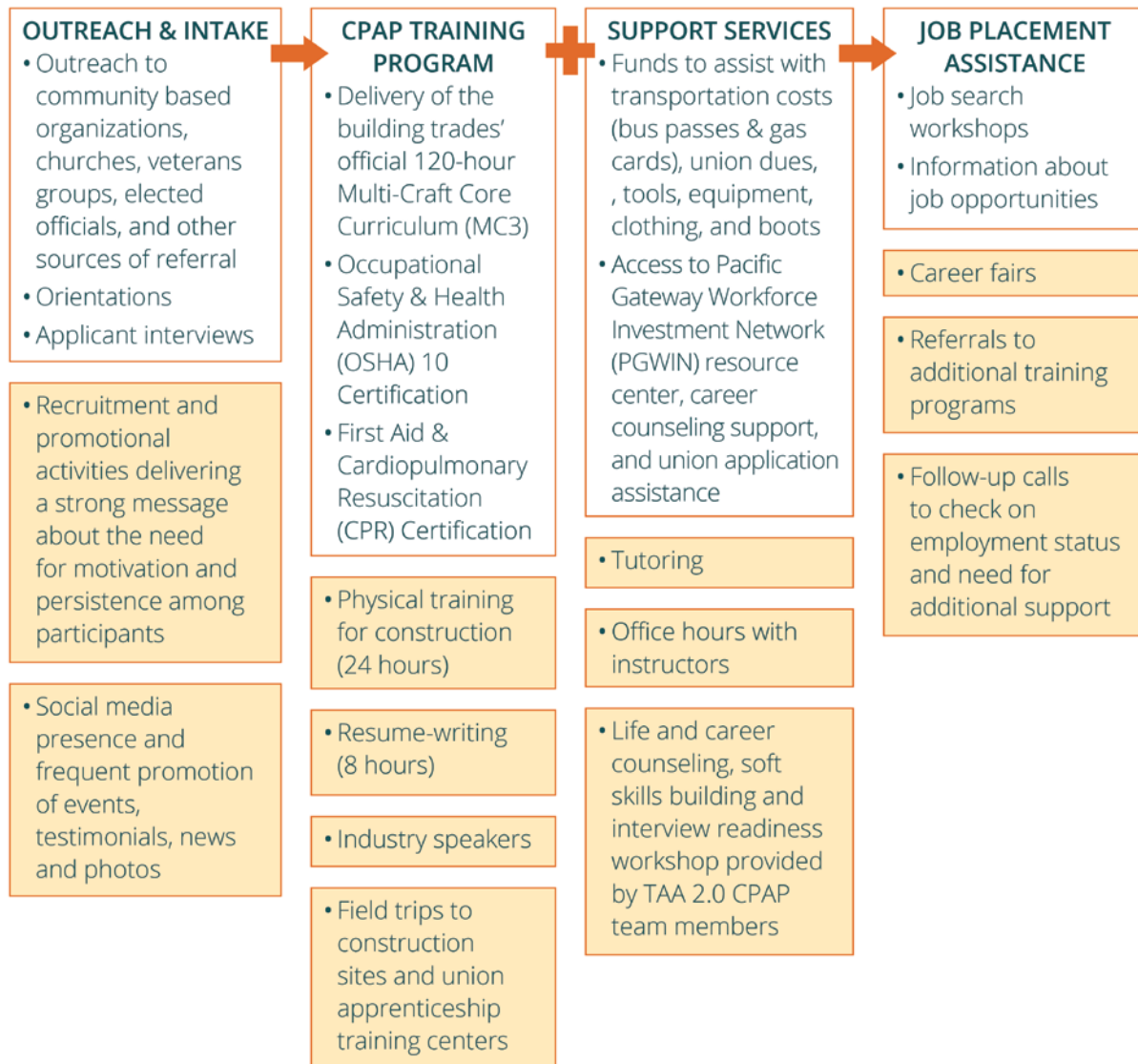
TAA 2.0 partner PGWIN, a sub-contractor in the SOW grant agreement, played a pivotal role in several CPAP components, especially the delivery of job placement support. Most importantly, PGWIN showed tremendous commitment to program completers, checking in with them and providing them with updated information about apprenticeship opportunities until employment was secured, even if doing so took a year or more. In telephone interviews with the RP Group, many program completers cited the support provided by PGWIN as critical to their perseverance and success.

Lastly, partnerships with the two CBOs partners experienced challenges mostly due to the different priorities that each partner brought to the collaboration. The CBOs served as advocates for their clients, who in many cases had to overcome great obstacles just to get to the CPAP classroom; the CPAP team, though, had to be concerned about producing qualified candidates who would help the CPAP program establish credibility with industry. In interviews with the RP Group, both CBO and TAA 2.0 representatives felt there had been too little communication between them. The CBOs also expressed concern that the TAA 2.0 team did not fully understand the challenges their clients struggled to overcome while TAA 2.0 felt the CBOs did not appreciate the challenges they faced in meeting outcome goals. Nevertheless, at the end of the program, Centro CHA presented to the TAA 2.0 team data they themselves had collected on clients referred to CPAP. Among 28 referrals, Centro CHA explained, 23 had found employment, including 2 individuals employed in union apprenticeships and 3 participants who had enrolled in additional LBCC courses. The Centro CHA data included information about the first CPAP cohort which was not included in the PGWIN data collection. Among the 7 participants in this cohort, 6 Centro CHA clients completed the training. These completers are not included in the data presented in this report because the information was submitted after the evaluation completed.

## CHANGES TO PROGRAM DESIGN AND IMPLEMENTATION

As noted earlier, the training programs delivered through the TAA 2.0 initiatives went through significant changes in both design and delivery over the course of the funding period. Figure 2 summarizes the key components of the CPAP model, with additions to the program after its initial launch highlighted in light pink.

Figure 2. Evolution of the CPAP Components



These components were added as the program developed

As can be seen in Figure 2, the TAA 2.0 CPAP team and its partners showed a high level of creativity and flexibility in continuously adjusting program components to reflect input from participants, instructors, union and employer stakeholders, and the evaluation team. Details about how each program component evolved are provided below.

## RECRUITMENT AND ORIENTATION

There was a continuous tension between CPAP's need to meet highly aggressive enrollment goals and the CPAP team's increasing understanding that, as one member of the CPAP team stated: *"This is a challenging program—those who are "hungry" make it. They show up on time, listen to the instructors, they really want to get a job. We can tell within the first week who they are – who will do well"* (RP Group exit interview with Brett Dickstein, 8/8/2017).

During the first half of the program, a wide range of recruitment activities were tested, such as forging partnerships with churches, local politicians, and community-based organizations that at that point had not collaborated with LBCC. At one point, the CPAP team even considered delivering the MC3 in Spanish. At recruitment events and in flyers and other announcements made through venues such as the LBCC website, CPAP orientation sessions were announced. These orientation sessions were delivered several times a week by the TAA 2.0 team members and by partner and sub-contractor, PGWIN.

As the feedback from past completers, unions, and other stakeholders became more explicit, recruitment efforts and orientation strategies were adjusted to emphasize the need for applicants to be highly motivated, committed, and able to persist in what often turned out to be a prolonged search for an apprenticeship. Additional weight was placed on the need for applicants to have a driver's license and a GED, as well as to be physically fit or willing to quickly embark upon a regimen to build strength and stamina.

## TRAINING PROGRAM

Several components were added to the CPAP training program over time, including resume writing and 20 hours of hands-on training through the Paxton Patterson model, physical training for construction. Furthermore, in response to continuous input from participants, efforts were made to contextualize more of the MC3 curriculum to increase hands-on activities. Participant feedback also resulted in the CPAP team adding site visits to construction sites and the hosting of industry speakers in class. The 40-hour math component was the one area of the program that the CPAP team knew needed improvement, but that did not fully achieve the needed contextualization.

## EMPLOYMENT PLACEMENT SUPPORT

PGWIN provided job placement support until CPAP completers had secured employment. At the end of the grant period, PGWIN Construction Pathway Manager, Salvador Barajas noted that he and his colleagues at PGWIN were providing ongoing guidance and support to 85 CPAP completers who were still looking for jobs (RP Group exit interview with Salvador Barajas, 8/28/2017). PGWIN services to these completers includes referrals; opportunities to attend additional training; financial support for transportation expenses, union fees, tools, and clothing; access to PGWIN's employment resource center and equipment available there; notification of job opportunities and invitations to career fairs.

In spring 2017, TAA 2.0 added to the range of employment placement support two CPAP career fairs. Both events were coordinated by Modern Times, a grant implementation sub-contractor. In interviews with the RP Group, CPAP program completers, union representatives, and two employers reported that they had attended one or both of these events. Most of the feedback provided was positive, with both CPAP program completers (see Appendix 1 for the Participant Interview Protocol) and industry representatives (see Appendix 2 for the Stakeholder Interview Protocol and Appendix 3 for a list of CPAP employer interviewees) noting that it was a good way to make connections. Some industry representatives also said they appreciated the opportunity to learn more about LBCC and the CPAP program.

## PARTICIPANT SATISFACTION

A CPAP exit survey that achieved a 66% response rate among program completers found a high level of satisfaction with the program experience. Moreover, 85% or more survey respondents indicated they were “somewhat” or “completely” ready to apply in the workplace new skills and competencies learned in 19 different areas of training. Furthermore, 87% of participants were “very likely” and 9% “likely” to recommend the program to others. (See Appendix 4 for the CPAP Exit Survey Questions).

Survey respondents also expressed a very high level of satisfaction with the CPAP instructional team. Instructors in the program included industry and union representatives as well as industry veterans with hands-on knowledge of what is required in the trades.

In an open-ended question about what they liked best about the program 43 survey respondents (38%) pointed to the hands-on activities. This response was followed by expressions of satisfaction with the instructors (17 respondents or 15%), specifically their teaching methods, commitment to the participants, and industry knowledge. Comments included:

*“I would recommend this program because it's a good place to start to become familiar with the different trades.”*

*“What I liked most about the program was every instructor we had. Every instructor was great, the amount of information they provided us within the short six weeks was very helpful. I just can't thank the instructors enough. Very great people, I wouldn't change a single thing in the program.”*

*“The program is hands on and showing the way to show up to work.”*

In four focus groups conducted in February and April 2016, participants also highlighted the impact of the support they received from each other, providing examples of how they would share food and transportation (See Appendix 5 for the Focus Group Protocol). Focus group participants also applauded instructors for dismissing individuals from the program who were “disruptive” and “not interested in learning.” In all of the focus groups conducted, participants emphasized how much they enjoyed the hands-on training, with a majority asking for an expansion of this program component.



## CPAP Participant Outcomes

### GOALS VERSUS ACTUAL OUTCOMES

In its proposal to the DOL, LBCC identified a number of target outcomes with respect to participants' academic success and employment. A summary of these targets and a comparison to the actual outcomes achieved in CPAP during the funding period is provided in Table 2. As the data indicate, the program had achieved about 50% of each of the proposed outcomes at the end of the evaluation period. However, it is important to remember that due to the shift from TAA 1.0 to 2.0, LBCC produced these outcomes in approximately half of the time that was originally allocated. Had CPAP started at the beginning of the grant period, the program may well have met the targets LBCC proposed to the DOL. Moreover, many participants had not had much time to look for employment at the time the evaluation concluded. Therefore the outcomes data reported here should be considered preliminary.

Further, it should be noted that the pace of placements in jobs, including apprenticeships, increased toward the end of the program. This trend may reflect changes in recruitment strategies, which resulted in the influx of more committed candidates, as well as the program's continuously expanding union and employer partnerships.

*Table 2. CPAP Participant Outcomes*

<b>Program Outcome</b>	<b>Target</b>	<b>Outcomes</b>	<b>% Target Achieved</b>
<b>Enrolled</b>	424	243	57%
<b>Completed</b>	383	187	49%
<b>Earned credentials</b>	298	189	63%
<b>Employed</b>	288	137	48%
<b>Employed in Apprenticeships</b>	Not specified in the SOW	41	N/A
<b>Wage increase</b>	Not specific in the SOW	72	

Since the CPAP's ultimate goal was to prepare participants for apprenticeships, the RP Group conducted additional investigations to determine how many achieved this particular goal and how long it took them to do so. The RP Group found that only 56% of program participants and 66% of those who obtained an MC3 certificate applied to an apprenticeship. The largest number of these individuals applied to the carpenters' union (24), the electricians' union (20), and the laborers' union (17). The acceptance rate varied widely among the more than 15 unions that CPAP completers applied to enter. For example, everyone who applied to enter a roofing



or waterproofing apprenticeship was accepted, while the sheet metal union only accepted one among 17 applicants.

Looking at the demographics of CPAP completers who earned apprenticeships, the average age among those who received apprenticeships was 33. Compared to their representation among CPAP participants, Latinos were overrepresented among those apprenticed, while African-American participants were underrepresented. Women and veterans were overrepresented while individuals with disabilities were underrepresented among apprentices compared to their representation among CPAP participants.

## PARTICIPANT REFLECTIONS ON POST-CPAP EMPLOYMENT

The RP Group conducted phone interviews with 13 CPAP program completers and asked them to discuss their job search and what kind of position they had obtained or were seeking. Key themes that emerged from these conversations include the following:

- **The CPAP shows you the path to a union job.** The program introduces participants to the opportunity of a union career path, teaches them how to navigate their way to an apprenticeship, and provides access to a network that can help them make the right connections.
- **You have to be patient and committed.** For those who are committed, motivated, and willing to persist in a job search that can require months before it pays off, the reward can be life-changing, including substantial union wages, additional subsidized training, employment benefits, and a built-in career ladder.
- **You have to really want it!** For those who are not fully committed to this line of work—including the physical demands of construction work—other training programs may be a better choice.

Case studies based on the participant interviews are presented in the Evaluation Snapshot in an abbreviated format and summarized in the CPAP section of the Evaluation Narrative that follows (pp. 71-73). In addition, the reader will find case studies inserted throughout the evaluation narrative as a reminder of the participants whose lives were affected by the TAA 2.0 program.



## Heavy Duty Evaluation Findings

The following section presents key findings from the evaluation of the Heavy Duty training track. As with the CPAP evaluation findings, first program implementation is examined in accordance with the following evaluative questions that were extrapolated from the logic model:

- Did Heavy Duty deliver the proposed training?

- Did Heavy Duty enroll and serve the targeted populations?
- Did Heavy Duty effectively engage partners in the implementation process?
- What changes were made in the Heavy Duty design over time?
- How satisfied were the program participants with the Heavy Duty experience?

The implementation findings are followed by the outcomes analysis. This section is organized to address the following evaluative questions:

- Did Heavy Duty meet the proposed outcomes goals?
- What can we learn from Heavy Duty employers and a small number of Heavy Duty completers interviewed?



## Heavy Duty Implementation Findings

### DELIVERY OF THE PROPOSED TRAINING

Heavy Duty delivered 16 different modules with an average enrollment of 9 participants. Enrollment began to increase starting in January 2017, reaching a high of 23 during the last month of DOL grant-funded delivery in August 2017.

## ENROLLMENT OF TARGET POPULATIONS

As Table 3 below also indicates, Heavy Duty served 161 individuals. Like CPAP, Heavy Duty was successful in recruiting and enrolling Latino (54%) and African-American participants (21%). The representation of female participants in this male-dominated sector was low (4%). While the age range was large, spanning from 18-59 years of age, most participants were in their early- to mid-thirties.

While the original intent for Heavy Duty was to enroll and prepare local residents who were interested in entering the Heavy Duty sector, the TAA 2.0 team struggled to recruit this target population to the training. As a result, LBCC requested and the DOL approved during the first months of 2017 the inclusion in the training of incumbent workers. By the end of the grant program, 39% of the total population served were incumbent workers.

## PARTNER ENGAGEMENT

Heavy Duty was originally launched with the expectation that the large national waste management corporation, Republic Services, would be a major partner. The TAA 2.0 team spent more than a year engaging in conversations with this corporation at a time when Republic Services was reorganizing and making staffing changes (See Appendix A: RP Group Stakeholder Interview, Heavy Duty, 7/19/2017). According to LBCC's Director of Workforce Development, Melissa Infusino, in retrospect TAA 2.0 "probably showed too much patience waiting for Republic to engage." (RP Group exit interview, 8/11/2017).

In regularly scheduled evaluation meetings with the RP Group, the TAA 2.0 team provided updates on efforts underway to develop new curriculum and engage additional Heavy Duty employers. These conversations started as early as in January 2016 and included discussions of TAA 2.0's plans to hire consultants to reach out to potential industry partners and to host a September 2016 employer orientation and an October 2016 open house for industry.

The Heavy Duty track was first offered as an 80-hour training program in March 2016, but the program management paused the program for 5 months in August 2016. Heavy Duty was launched a second time in January 2017 in a new, modular format, only seven months before the end of the grant period. At that time, with new TAA 2.0 Program Manager, Brett Dickstein, in place and with CPAP well into its implementation phase, the TAA 2.0 team launched a major effort to engage additional Heavy Duty employers (RP Group exit interview with Brett Dickstein, 8/8/2017).

To support this employer outreach, Modern Times was assigned to serve as the business liaison for Heavy Duty. Modern Times had originally been sub-contracted to help engage union leaders and employers from the construction industry, a sector in which the organization had many established contacts. In March 2017, TAA 2.0 redirected Modern Times to focus on Heavy Duty instead of CPAP. Shortly thereafter, Modern Times began to plan a Heavy Duty career fair and invited representatives from the region's waste management, truck rental, and other Heavy Duty companies to the event (RP Group interview with Danielle Lew from TAA 2.0 Partner Modern Times, 7/31/2017).

Eight employers attended the first career fair (July 2017) which introduced Heavy Duty training completers from past and current TAA 2.0 cohorts to industry representatives. At a subsequent career day (August 2017), seven employers attended.

While PGWIN, TAA 2.0's original implementation partner, focused mostly on supporting CPAP participants, the organization also helped alert employers to TAA 2.0's Heavy Duty track, encouraging them to consider hiring completers and attend the career fairs. In this way, Modern Times and PGWIN both played a key role in increasing awareness among the region's employers about TAA 2.0's Heavy Duty training program. Moreover, at the career fairs, PGWIN introduced to participating employers opportunities for subsidized employment through programs such as On the Job Training (OJT) and Worker Experience (WEX). PGWIN AND Heavy Duty also both provided career guidance and support to CPAP and Heavy Duty participants, which at one point led to some overlap and confusion among participants (RP Group interview with Danielle Lew from TAA 2.0 Partner Modern Times, 7/31/2017).

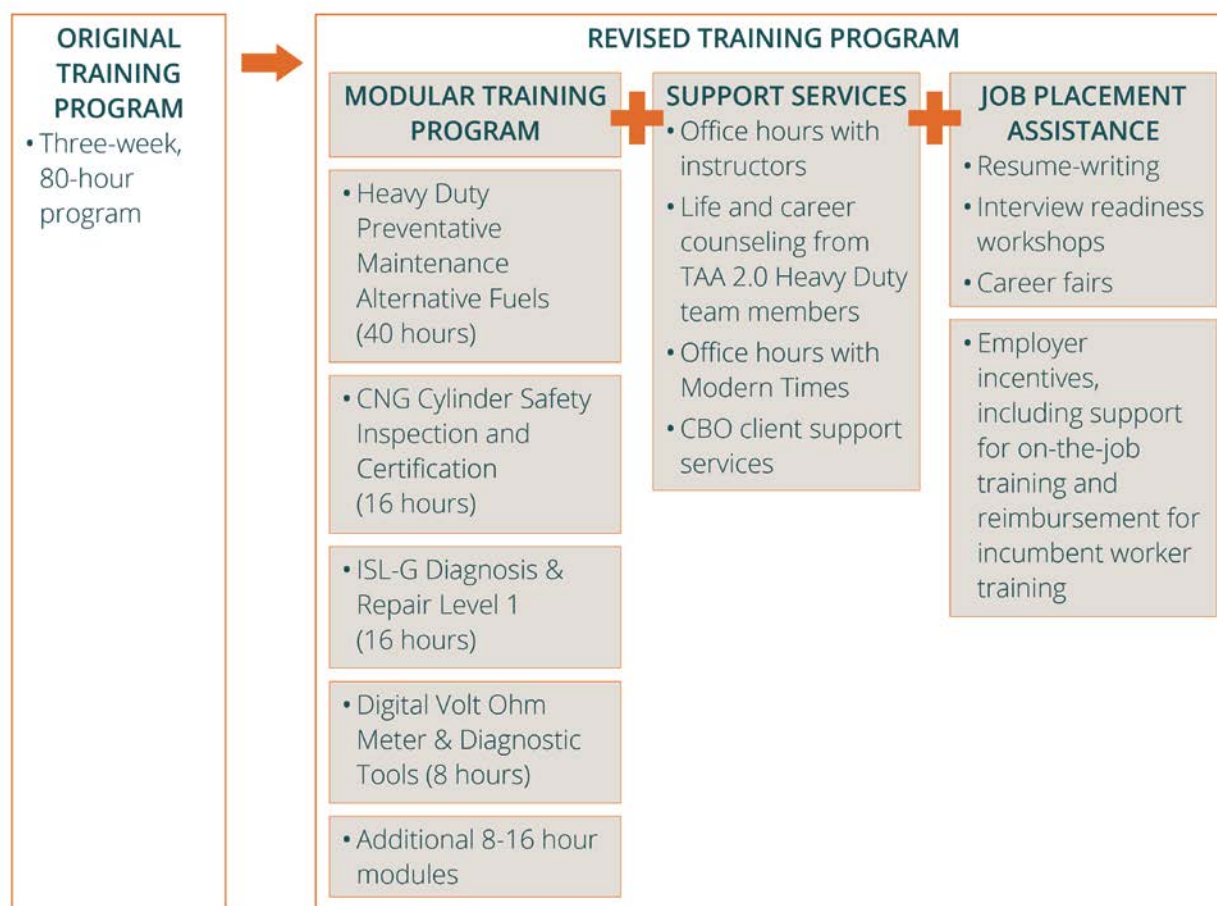
The Conservation Corps of Long Beach (CC-Long Beach), one of the two CBOs that partnered with TAA 2.0 in the CPAP track was also a partner with Heavy Duty. In April 2017, CC-Long Beach signed a contract with LBCC to deliver orientations and recruit CC-Long Beach members into the Heavy Duty program.

In an interview with the RP Group, CC-Long Beach Director of Operations, Kedrin Hopkins expressed enthusiasm about the training opportunity, commenting that he had personally driven CC-Long Beach clients to participate in a Heavy Duty module (RP Group interview with Kedrin Hopkins, Director of Operations, CC-Long Beach, 8/2/2017). Mr. Hopkins also commented that LB-CC referrals who succeeded in completing the Heavy Duty module(s) attended the graduation wearing clothes LB-CC had helped them purchase.

Towards the end of the funding period, TAA 2.0 team members expressed some concern about difficulties they were experiencing with some of CC-Long Beach client referrals. The challenges were similar to those experienced by CPAP with unresolved differences between TAA 2.0 and CC-Long Beach about participant requirements in areas such as punctuality and class participation and engagement. As noted earlier, while the CBOs saw themselves first and foremost as advocates for the clients they referred, the Heavy Duty program needed participants who were, if not fully job-ready, then at least very near reaching this level of preparation.

## CHANGES TO PROGRAM DESIGN AND IMPLEMENTATION

Figure 3. Evolution of the Heavy Duty Program Components



These components were created and added as the program developed.

As was the case with the CPAP, the TAA 2.0 team showed great flexibility and entrepreneurship in modifying the Heavy Duty track in response to input from employers, participants, Modern Times, and the external evaluator. The section below describes how each program component was improved and adjusted during the last seven months of grant implementation, a period that coincided with the launching and testing of the Heavy Duty modules.

### RECRUITMENT AND ORIENTATION

In March 2016 in an evaluation meeting with the RP Group, the TAA 2.0 team explained their intent to engage community-based and veterans' organizations. Additional approaches to recruitment already in progress at that time included bus ads, social media, canvassing in churches, and flyers posted in laundry mats. Six months later, in September 2016, the team engaged industry consultants who had worked in the Heavy Duty sector for decades to support recruitment of participants and engagement of industry partners. Subsequently, when the TAA 2.0 team was given the green light by the DOL to recruit and serve incumbent Heavy Duty

workers, recruitment efforts focused on conveying to employers the value of the training and the fact that the modules were subsidized by a combination of DOL grant and California Employment Training Panel (ETP) support. As noted above (p.20) the CC-Long Beach was also engaged by contract to recruit and refer CC-Long Beach clients to the training. Several CC-Long Beach clients did enroll, although TAA 2.0 and the CC-Long Beach experienced challenges communicating effectively about recruitment requirements.

## TRAINING PROGRAM

The training program was introduced as an 80-hour course to be delivered over three weeks. The RP Group and TAA's employer partners noted that the delivery format would make it difficult for anybody who had to work to enroll. Additionally, a modular approach would make the track more appealing to employers interested in short-term training to upgrade the skills of their incumbent workers. The transition to modular delivery was made in January 2017 with a 40-hour core training called Heavy Duty Vehicle Preventative Maintenance delivered over three weeks in the form of five 8-hour training sessions. To this core component, TAA-Heavy Duty added a continuously expanding number of additional modules requiring 8-24 hours of instruction. Participants could "custom-stack" the modules, earning the certifications and credentials most relevant to their job search or advancement.

The curriculum included repackaged and new content, all industry-guided. The instructor noted in an interview with the RP Group that he typically spent 15-20 minutes lecturing about the skills participants would spend the rest of the day learning and practicing. *"I want them to know what it is like to work a regular 8-hour day,"* he explained (RP Group interview with TAA 2.0 Heavy Duty Instructor, Mark Adair, 6/29/2017).

## SUPPORT SERVICES

Modern Times provided office hours and the participants could also attend office hours with the instructors. In addition, many participants came to rely on Workforce Development Training Coordinator, Maria Andrade-Hernandez for counseling and encouragement. One participant interviewed by the RP Group called Ms. Andrade-Hernandez, *"my cheerleader."* Another participant interviewed commented that Ms. Andrade-Hernandez and the instructor played a pivotal role in helping her build up her confidence and feel ready to *"go out there [to look for employment]."*

## JOB PLACEMENT SUPPORT

As it became apparent that Heavy Duty participants needed assistance getting ready for interviews and to find employment opportunities, several additional supports were added to Heavy Duty. These included an optional 3-hour resume writing and mock interview session offered to all Heavy Duty module completers by Modern Times and also provided by TAA 2.0's own Workforce Development Training Coordinator, Maria Andrade-Hernandez. Modern Times also organized two Heavy Duty career job fairs that combined attracted approximately twenty employers. To connect past participants with the opportunity of the career job fairs, Modern Times tried to reach these individuals through emails, texting, and telephone calls. Modern

Times Marketing & Communications Coordinator, Danielle Lew explained in an interview with the RP Group (RP Group interview, 7/31/2017) that it was almost impossible to get through to the past participants who did not know her. By contrast, Ms. Lew added, efforts carried out by members of the TAA 2.0 team, and especially Ms. Andrade-Hernandez were much more successful. *“They have to see a name they trust and recognize [on the email or on the phone screen]”* she observed (RP Group interview, 7/31/2017). In a related point, PGWIN’s Sal Barajas commented that *“it is essential to stay with the participants from the beginning to the very end if you want to have a real impact and have your advice count”* (RP Group exit interview with Salvador Barajas, 8/28/2017).

The final type of job placement support was the opportunity of employer subsidies. Two types were offered. One was for incumbent workers who could be supported by an Employment Panel Training grant LBCC had entered with the State of California. The other type of subsidy was offered through PGWIN to employers hiring incoming job seekers who qualified for on-the-job subsidies. While the former subsidy probably helped increase participation of incumbent workers in Heavy Duty, companies such as Jiffy Lube and Universal Waste Systems signed up for the latter subsidy program.

## PARTICIPANT SATISFACTION

A Heavy Duty exit survey that was continuously updated to include new modules added by the TAA 2.0 team achieved a 28% response rate (45 responses from among 161 participants). The relatively low response rate compared to the CPAP survey completion rate of 66% was a result of inconsistent implementation of the survey (see Appendix 6 for the Heavy Duty Participant Exit Survey)

All survey respondents indicated they were satisfied with both the training and the instructors’ knowledge of the subject. Quite a large majority (87%) indicated they were “very satisfied” with the former and an even larger majority (91%) described themselves as “very satisfied” with the latter.

In response to an open-ended question about what participants liked best about the training, two themes emerged. First, 20 participants expressed appreciation for the program’s emphasis on hands-on learning. Second, nine participants highlighted the quality of the instruction and/or the dedication and vast knowledge the instructors brought into the classroom. The respondents’ comments included:

*“[I liked best] the way the teacher taught us and went into depth and never had a problem explaining himself several times.”*

*“The instructor has a great knowledge and covered everything.”*

Moreover, all but three respondents indicated they were interested in taking additional TAA 2.0 Heavy Duty modules. The survey also indicated that the training helped put LBCC on the map for local residents unfamiliar with the college. More than half of the survey respondents (24, or



53%) had not known before participating in the Heavy Duty training that LBCC offered training relevant to them. As one respondent noted:

*“Where else can you get actual training from experts in their field before you interview for positions so that you can have an advantage over other entry level applicants AT NO COST?”*

To further assess participants’ satisfaction with the Heavy Duty training, the RP Group conducted a focus group with three current and three past program participants. The focus group participants, like the survey respondents, expressed a high level of satisfaction with the training. In terms of suggestions for how to improve the training, focus group participants asked for more explicit guidance on what to do at the end of the training and for a more expansive range of job placement support services. Among these six focus group participants, two had received job offers, including one who had recently attended a career fair where she had met and spoken with several prospective employers.

## Heavy Duty Participant Outcomes

### GOALS VERSUS ACTUAL OUTCOMES

As with the CPAP program, LBCC set a number of targets for the impact of the Heavy Duty training. When examining the targets and outcomes for Heavy Duty, as summarized in Table 3 it is once again important to remember that the modularized version of the training track was launched only seven months before the funding period ended. Due in large part to this delay, the participant employment outcomes outlined in the grant proposal were not fully achieved, and it is too early to meaningfully report outcomes achieved by the first cohorts of training participants.

Table 3. Heavy Duty Participant Outcomes

Outcome	Target	Outcomes	% Target Achieved
Enrolled	375	161	43%
Completed	338	138	41%
Earned credentials	303	138	46%

Despite the delayed program implementation, 43% of the Heavy Duty enrollment goal, 41% of the completion goal, and 46% of the credential goal were achieved. These data, combined with the growing number of employers interested in hiring from and having incumbent workers trained by the program, suggest that the enrollment and completion goals could have been achieved had Heavy Duty launched in January 2016 as a modular program serving both incoming and incumbent workers. However, with the small TAA 2.0 staff and labor-intensive nature of designing and developing CPAP, Heavy Duty was not prioritized for another year.



During the initial delivery of Heavy Duty (March 2016-August 2016) and during the five-month hiatus that followed, the continued expectation that Republic Services would hire program completers and refer incumbent workers for training discouraged the TAA 2.0 team from investing the little time they had available to approach other employers.

## LEARNING FROM HEAVY DUTY EMPLOYERS

With the end of the evaluation occurring before Heavy Duty participants had sufficient time to find employment, the RP Group decided to focus on the demand-side of employment and on opportunities that might be available for Heavy Duty completers. This assessment of employers' interest in the training program was conducted through telephone interviews with Heavy Duty industry representatives. Employers were asked about their current and projected demand for workers and the employment prospects of Heavy Duty participants. The consensus among the interviewees is that the workforce in aging and that between 30% and 40% of the incumbent workers are of or nearing retirement age. Consequently, there is a growing demand for technicians and mechanics. Several employers also noted that not enough younger people are interested in the kind of blue-collar jobs the preventative maintenance and alternative fuels sectors are generating. For these reasons, the employers underscored that opportunities abound in the industry for individuals who are motivated and interested in work that involves *"getting your hands dirty."* (Appendix 3: RP Group interviews with Heavy Duty Stakeholders). Employers also pointed to the excellent career opportunities and living-wage jobs the sector supports.

## Lessons Learned

The following section highlights some of the many lessons that LBCC and the TAA 2.0 team and its partners learned in the process of designing and implementing industry-driven training programs in partnership with employers, unions, CBOs, and other stakeholders.

### 1. **A tight labor market means that job-seekers are more likely to have significant barriers to employment.**

LBCC's Director of Workforce Development, Melissa Infusino, noted in an exit interview with the RP Group that all of the challenges associated with the implementation of TAA 2.0 were exacerbated by the current very low unemployment rate in the Long Beach region. Given this environment, in many cases those who are not working are unemployed in large part because they did not complete high school, suffer from Post-Traumatic Stress Disorder, or have a criminal record or face other high barriers to employment,—which is the population that TAA 2.0 was recruiting and serving. Over time, TAA 2.0 learned from experience that some potential participants came with employment barriers so significant that they would not benefit from enrolling in either the CPAP or Heavy Duty programs. For example, not having a GED, a driver's license, or access to transportation limited significantly participants' ability to successfully pursue an apprenticeship. Similarly, anybody who could not be on a job site day after day and on time would not be a

good candidate. Ultimately, the TAA 2.0 team members agreed that some participants would have been better off preparing for a less demanding occupation, particularly in the CPAP track.

**2. Flexibility is key.**

Community colleges have to be nimble in order to successfully design and deliver short-term industry-guided curriculum and training that responds to regional labor market needs. Most colleges can probably only achieve the required agility and flexibility by offering these types of short-term trainings as not-for-credit programs as for-credit courses have to go through lengthy institutional reviews before they can be offered to students. Programs such as CPAP need to respond to the demand for different kinds of trade apprentices according to the ebbs and flows of major public construction projects. As such, job demand associated with these kinds of projects is not easy to accurately predict due to issues such as weather, permits, accidents, and delays resulting from inspections, as well as many other variables. Community colleges need to consider whether they have or can develop the capacity to respond quickly to the job opportunities these occupations generate, scaling up and down as needed.

**3. Employer relationships are labor-intensive, yet critical to success.**

Employer relationships are essential to the success of workforce development programs. However, it takes considerable time, resources, and expertise to develop and maintain these relationships. Often, as is the case with TAA 2.0, the staff positions responsible for developing industry partnerships are grant-funded. As a result, there is a high risk when the grant concludes, there will no longer be funds in place to support critical ongoing relationship development and maintenance. Fortunately, TAA 2.0 has two leaders in place who will continue to support the industry relationships that TAA 2.0 developed. However, both individuals have many other responsibilities. Any new grant requests should include funding for industry liaisons.

Additionally, LBCC's experience with employer relationships in the Heavy Duty track underscored the reality that community colleges should not depend on one or even a few employer partners. Much time was spent by TAA 2.0 waiting for Republic Services, their one original partner, to engage in the training program. It was only after additional partners were cultivated that the training track finally took off.

**4. Program components should be aligned with the readiness level of the target population(s).**

Workforce development programs targeting individuals with employment barriers need to offer more than industry-guided and certificated training. It is essential to have in place an outreach and recruitment component that reaches the target populations and accurately conveys to potential participants what is required to complete the training program as well as to parlay that training into a job

opportunity. An array of academic, life management, and other support services are also required. Moreover, the depth and scope of these services need to be carefully considered in advance of program implementation and tuned to fit the specific needs of the target population: the greater the employment barriers, the more extensive the array of supports required. Furthermore, as TAA 2.0 demonstrated, post-program job placement support is critical, and these services need to be available for many months after program completion. Specifically, it is essential to have a tracking mechanism in place to maintain contact with program completers post training to be able to learn about the status of their job search. Such a tracking mechanism was established at the onset of CPAP but not with the Heavy Duty sister program.

The LBCC Workforce Development Director, Melissa Infusino, noted in her exit interview with the RP Group, that community colleges need to consider which workforce development program components they are best equipped to deliver. In the case of LBCC, they see their core competency as training and skill building however they are building capacity to offer job placement assistance. By contrast, Ms. Infusino noted, support or wrap-around services are probably more effectively delivered by CBOs and other partner agencies whose core competencies include case management (RP Group exit interview with Melissa Infusino, 8/11/2017).

**5. Substantive and detailed grant planning and proposal development processes are necessary for successful implementation of new programs.**

Finally, the RP Group wants to draw attention to lessons learned from the TAA 1.0 program that in January 2016 was reoriented to TAA 2.0. The RP Group's Interim Evaluation Report (submitted to the DOL in December 2015) identifies the major challenges that TAA 1.0 encountered. Overall, the TAA 1.0 experience underscores how important it is for grant seekers proposing complex and long-term initiatives to spend months before a proposal is submitted engaging all the key players in the design process including any major industry or CBO partners as well as college leaders and departments whose participation is essential for effective implementation. In addition, grant seekers would benefit from taking the time to conduct interviews with representatives from the group of individuals they propose to serve to test out the design on them. To make this kind of background research and planning possible, the funders of these programs should announce grant opportunities many months in advance and possibly offer additional points to grant seekers who can document step-by-step the planning process and wide participation that shaped their design. In the case of TAA 1.0, LBCC did not have enough time to take all the steps required to ensure that the proposal design was feasible and had the internal and external support required for effective implementation.

## Research Questions Raised

The implementation and evaluation of TAA 1.0 and then TAA 2.0 raised key questions that are relevant to workforce development researchers and practitioners alike. Listed below are some of the most important questions raised. Additional questions are presented in the main body of the report that follows the Executive Summary.

- An increasing number of private and very expensive boot-camps have emerged that provide short-term training to individuals who in many cases have considerable education capital, but want to either enter a new occupation or accelerate their progress in a current field. What role can community colleges play in delivering a parallel kind of short-term and industry-tuned training for individuals who have limited education and work experience and cannot afford to pay (much) for the opportunity?
- What models exist among community colleges nationwide that used the college's not-for-credit division to deliver short-term, continuously updated, and industry-certified instruction? Are there models for how these not-for-credit trainings can be effectively connected to the sponsoring colleges' for-credit programs? Are there models outside of grant funding for community colleges to effectively engage industry in supporting these offerings?
- How can community colleges most effectively work with employers? How are these relationships best developed, expanded, and maintained? Can one individual at a college be the liaison to multiple industries? What happens if and when that person leaves? How important is it for industry to engage with college representatives who have if not a deep understanding of their industry, then at least a high level of familiarity with its needs, priorities, and local leaders? How can community colleges make it easier and more attractive for industry professionals to teach part-time in workforce development programs? How can programs that have used grant support to forge industry relationships effectively maintain and grow these relationships after the grant funding ends? What are the most effective ways to "market" new "blue-collar" jobs to job-seekers? The TAA 2.0 program offered free, industry-certified training that had the potential to help unemployed and underemployed individuals gain entry into occupations that provide a living wage and advancement opportunities. Yet, both tracks struggled to present the opportunity in a way that truly resonated with the target population. Another issue that other TAA evaluations have found that many individuals who have lost long-term jobs do not want to go back to school to learn new skills. Barriers include a past negative history with education and a fear of being older and less capable than other participants. What approaches have other workforce development programs used to increase the appeal of training initiatives targeting the new blue collar occupations, including green technology and union jobs?

- How can CBOs and community college workforce development programs most successfully collaborate? As has been the case with many evaluations the RP Group has conducted of CBO/community college partnerships, this evaluation revealed the presence of different cultures and the existence of priorities on each side that had to be reconciled in order for the partnership to work.
- What kind of background and experience should community colleges prioritize when they build a team responsible for designing and delivering industry-responsive training programs? In the case of the TAA 2.0, the highly effective team members all came with no community college experience which meant they had to quickly learn how the community college processes and systems work. However, each of the team members brought to the program the ability to jump in and do what needed to be done whether it was to learn very quickly how apprenticeships work or learn how to build credibility with stakeholders ranging from union leaders to individuals managing large recycling plants. It was this kind of entrepreneurial spirit that made the team successful in making considerable progress toward the program goals.

There is growing interest in short-term, industry-driven certificate programs that respond to regional workforce needs and priorities. Many community colleges see the opportunity to offer these kind of programs, but struggle with design and implementation. As this report and the LBCC experience demonstrates, it is challenging for an institution that normally delivers semester-long courses that change very little over time to turn around and develop a program that is driven by industry priorities and subject to continuous adjustments.

Despite the difficulties LBCC faced with implementing its training programs as originally envisioned, ultimately both the CPAP and Heavy Duty training tracks showed great flexibility and responsiveness, continuously adapting the program components in response to input from stakeholders of all kinds. The speed of these changes was possible in large part because the tracks were offered by the college's not-for-credit arm and the effort was guided by a culture of entrepreneurship.

Exit surveys revealed that program participants were very satisfied with the training they received, praising the quality of the instruction and the course materials' real-world applications. While CPAP survey respondents wanted even more hands-on instruction and contextualization, Heavy Duty participants praised the track's hands-on approach. Respondents from both tracks noted that the instructors had a high level of credibility because of their industry background and experience.

The partnerships with PGWIN and Modern Times played a key role in providing job placement assistance and, in the case of PGWIN, long-term support to program completers. While effective, these partnerships were supported with grant funding that with the end of TAACCCT Round 3 is no longer available. This then raises the question of how job placement support can be provided to future participants in a cost-effective, scalable, and sustainable manner, should the training components be extended.

CPAP made great progress in building credibility with union representatives in different trades while Heavy Duty spent too much time waiting for one major employer to engage. When the team, with assistance from Modern Times, began to approach other employers, the results were encouraging.

While the overall outcome targets of the two training tracks were largely not met, the programs picked up the pace in terms of recruitment and completion in the second half of the implementation period. If TAA 2.0 had launched CPAP in June 2014 instead of in January 2016, this training program would likely have come very close to reaching or even exceeding its original goals. While it was too early to tell whether Heavy Duty would continue to sustain the increase in enrollment and partnerships that began in January 2017 with the change to a modular delivery format, the employer interviews suggested that local industry is very interested in the Heavy Duty modules.

Furthermore, interviews with program completers documented that both training tracks had the potential to change lives for highly-motivated and persistent individuals who use the many resources TAA 2.0 provides to land jobs that have built-in career ladders, subsidized training, and extensive benefits.

As LBCC moves forward to explore how the relationships and infrastructure developed for both CPAP and Heavy Duty can most effectively be parlayed into additional training opportunities, there is a strong foundation in place upon which the next generation of TAA programs can be designed and implemented.

# Final Report Narrative

The final report narrative is organized into four major sections:

- Section I. Introduction to TAA 2.0 and Evaluation Design
- Section II. Evaluation Findings: Construction Pre-Apprenticeship Program( CPAP)
- Section III. Evaluation Findings: Heavy Duty
- Section IV. Conclusion, Lessons Learned and Research Questions Raised

Section I introduces the TAA 2.0 program as it was described in LBCC’s Statement of Work to the DOL (first submitted in November 2015). This is followed by a parallel description of the evaluation design. The program description and evaluation sections both discuss the impact of changes that took place when LBCC reoriented the originally funded TAA 1.0 to become TAA 2.0. With this reorientation the focus of the training shifted from the design and delivery of for-credit engineering technology pathways to short-term, industry-certified and not-for-credit training preparing participants to apply for union apprenticeships in construction and to enter the heavy duty vehicle maintenance and alternative energy sectors.

Sections II and III present findings from the RP Group’s evaluation of the Construction Pre-Apprenticeship Program (Section II) and of the Heavy Duty program (Section III). Both sections include case studies of program participants.

Section IV offers an overall conclusion that integrates the evaluative findings from each training track. In addition, Section IV identifies lessons learned and research questions raised.

## Section I. Introduction to TAA 2.0

### Program History: From TAA 1.0 to TAA 2.0

#### TAA 1.0

In 2013, Long Beach City College (LBCC) received a Round 3 TAACCCT grant to support the implementation of Alternative Pathways to Engineering Education and Careers (APEEC or TAA 1.0).

The need for the program was based on labor market information documenting a strong need for workers trained in engineering technology and mechanical maintenance. TAA 1.0 was supported by industry partners that included Boeing, Oceaneering International, Inc., and member companies of the Pacific Maritime Association.

The original plan was to recruit 800 TAA-eligible workers, veterans, students, and incumbent workers into stacked and latticed pathways, providing participants with core technical competencies, opportunities to obtain industry-guided certifications, and additional education

in engineering technology, electrical engineering, and mechanical maintenance. Industry partners were to contribute to curriculum development and internships and provide on-the-job-training to further ensure that students left the program ready for work. Participants were to develop skills and competencies that reflected what local employers need, including cross-functional skills that would enable them to work in any of several related industries. Modeled after a TAACCCT Round 2 grantee, Edmonds Community College in Washington State, the primary outcomes included obtaining and retaining training-related jobs and a positive wage impact.

In November 2015, Long Beach City College (LBCC) made a proposal to the DOL to reorient TAA 1.0 to TAA 2.0. This proposal followed a March 2015 letter sent by the RP Group to the LBCC leadership pointing to the urgent need for corrective action and a DOL April 2015 site visit to TAA 1.0 during which the DOL program officer informed the LBCC leadership team that it would be possible to reorient TAA 1.0 to target occupations other than engineering technology. Approval to move forward with TAA 2.0 was granted by the DOL and program implementation started in January 2016.

In its request to the DOL to reorient TAA 1.0, LBCC identified two challenges to implementation of TAA 1.0<sup>3</sup>:

*The first challenge that we encountered was the complexity of the pathways work we were attempting, which was unable to be successfully completed in the timeframe originally planned. Because these pathways included new certificates and classes, and also involved the packaging of classes from between two to four different subject areas, we encountered significant delays in deployment of the program.*

*Our second and most significant challenge was encountered by our major employer partner, Boeing, who began a series of massive layoffs in the Southern California region in 2014. Long Beach was heavily impacted, with Boeing drastically reducing its workforce when production ended on their C-17 planes. Between January 2014 and July 2015, Boeing's California workforce decreased by nearly 2,000 due to layoffs, most of them in Southern California and Long Beach.*

In its interim report to the DOL, submitted in December 2016, the RP Group presented a detailed review of evaluation findings generated from interviews and focus groups with TAA 1.0 participants, stakeholders, and implementation team members. Based on these findings, the RP

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<sup>3</sup> LBCC's proposed Statement of Work (SOW) Change for TAACCCT Grant No. TC-25153-13-60-A-6. The SOW was submitted to the US DOL on November 9, 2015



Group pointed to the following additional challenges to underscore the need for the requested reorientation:

- Limited engagement with TAA 1.0 among college departments and programs outside of Workforce Development Division
- Difficulties with recruitment for TAA 1.0
- Changes in TAA 1.0's leadership and staffing
- Limited partner engagement

Each of these challenges is discussed in detail in the RP Group's Interim Evaluation Report, which was submitted to the DOL in December 2016.

## Program Description

TAA 2.0 was designed to develop and deliver short-term, industry-driven, not-for-credit training preparing participants for entry-level positions in the Long Beach region's rapidly expanding construction and alternative fuels/transportation sectors.

**TAA 2.0 Construction Track:** The Construction Pre-Apprenticeship Program (CPAP) track used the Multi-Craft Core Curriculum (MC3) developed by the North America Building Trades Council (NABTU) and recognized as an industry credential. The instruction also included OSHA, CPR and First Aid certifications. The goal was to prepare program participants to successfully compete for entry into union apprenticeship programs in the building trades, or apply for other employment offered by the region's construction industry.

**TAA 2.0 Transportation Track:** The Preventative Maintenance & Alternative Fuels (Heavy Duty) Track combined LBCC curriculum in alternative fuels with new, industry-guided instruction in preventative maintenance. The program was intended to target individuals with basic to more advanced mechanic/technical skills. The goal was to prepare completers to apply for, or advance in technician and heavy duty mechanic positions.

Program completers from both tracks would be assisted in finding identifying and applying for employment. Those completing the CPAP program would be supported by TAA 2.0 partner, Pacific Gateway Workforce Investment Network (PGWIN) during this phase of the program.

The proposed scope of work and outcomes for TAA 2.0 included:

- Training of 17 CPAP cohorts with 25 participants per cohort achieving 90% completion rate, 70% credential obtainment, and 75% job placement rate
- Training of 15 Heavy Duty cohorts with 25 participants per cohort achieving 90% completion rate, 90% credential obtainment, and 75% job placement rate

## Program Purpose

TAA 2.0's purpose was to help under- and unemployed Long Beach residents, including individuals with barriers to employment, access career-oriented, living-wage, entry-level positions in two rapidly expanding industries. TAA 2.0 proposed to advance this purpose by leveraging:

- LBCC's status as one of the training provider identified under several Project Labor Agreements (PLA) requiring contractors bidding on LBCC construction projects with public funding to use union labor and to provide opportunities for Long Beach job seekers by ensuring that between 30% and 40% of their workforce was from targeted local zip codes.
- Southern California's commitment to low emissions standards and increased use of alternative fuels in heavy duty vehicles. The new requirements, which extend to vehicles entering the busy Port of Long Beach, translates into a need for technicians and mechanics who have been trained in maintaining and repairing low-emission trucks and other heavy duty vehicles, including buses. Moreover, the conversion is occurring at a time when the transportation sector is becoming increasingly concerned about the need to recruit younger workers to replace a workforce where an estimated one in three mechanics and technicians are reaching retirement age.
- The College's relationships with unions, employers and other workforce development partners.

## Evaluation Design

### Evaluation History

In May 2014, the RP Group submitted to the DOL a comprehensive evaluation plan for TAA 1.0 that included implementation, outcomes, and impact analyses. The DOL responded positively to the plan in August 2014, proposing some adjustments related to the impact analysis. These adjustments were made and the revised plan was submitted to the DOL in September 2014.

Evaluation activities completed between May 2014 and November 2015 are explained in detail in the RP Group' Interim Grant Report, submitted to the DOL in December 2015. The evaluation activities included two site visits, interviews with program participants, instructors, partners and stakeholders, and monthly phone meetings with the entire LBCC project team.

As noted above in the Program History section, TAA 1.0 was reoriented to TAA 2.0 in January 2016, although planning for TAA 2.0 began in October 2015.

The DOL's review of TAA 2.0 required several months, and as a result, the final program design was not approved until January 2016, although the intended launch date, according to LBCC's SOW<sup>1</sup> was October 15, 2015 (SOW, p.7). A pilot CPAP session was offered in January 2016, meaning that the start-up experienced an additional 2.5 months delay, further compressing the

implementation timeline. The proposed completion of the training was March 31, 2017 based on a six-month extension of the original completion date of September 2016. The DOL made available to all TAACCCT Round 3 grantees the opportunity of this no-cost extension.

The TAACCCT grant was designed to extend the evaluation one year after the end of implementation. This timeline was cut in half with the six-month extension. Subsequently, realizing that more time was needed to implement both tracks, LBCC requested and obtained an additional extension for five more months, extending the implementation through August 31, 2017.

The RP Group wanted to provide as much flexibility as possible to enable LBCC’s project team and its partners to make progress toward achieving the program outcomes. Accordingly, the RP Group and LBCC agreed to extend the implementation of the evaluation by three months and continue to collect data through June 30, 2016. This new date represented a nine-month extension beyond the originally anticipated September 30, 2016 date, which was intended to provide TAACCCT 3 evaluators with the opportunity to study the impact of the TAACCCT grants beyond the program implementation period. As it turned out, data collection extended into August 2017 to provide time for the completion of the last CPAC cohort and to include in the data collection additional participants in the modular Heavy Duty track, which was fully launched in January 2017.

The RP Group is highlighting the resulting compressed timeline for the evaluation because, along with continuous changes and improvements in the original program design for both training tracks, the result was that the evaluation required continuous adjustment. The changes that were made are introduced below in the Adjustments in the Evaluation Design section (see p. 39).

## Evaluation Framework: Evaluation Questions and Logic Model

As presented in the TAA 2.0 Evaluation Plan and depicted in Table 5 below, the evaluation is guided by three research questions that relate to the inputs, outputs, and outcomes:

*Table 5. Research Questions Driving the Evaluation Design*

Logic Model Component	Research Questions
<b>Inputs and Outputs</b>	1. Is TAA 2.0 using resources from the DOL grant and additional inputs leveraged by this resource to deliver the two training tracks proposed in the SOW?
<b>Outcomes (Participant and Completer Perspectives)</b>	2. How satisfied are participants and completers with TAA 2.0?
<b>Outcomes (Program Perspective)</b>	3. Is TAA 2.0 achieving the proposed outcomes in terms of completion, credential obtainment, and job placement?

The first research question was intended to document “fidelity of implementation,” which refers to the extent to which TAA 2.0 used the grant input from the DOL and other inputs committed to the project to deliver the proposed programs and produce the outputs identified in the SOWs. The second research question was intended to assess satisfaction with the program among participants and program completers. The third research question was designed to document and analyze progress achieved toward outcomes goals for each of the two tracks as described in the LBCC’s proposed SOW.

The RP Group developed a logic model (see Appendix 7) that explains the relationship between the resources that were to be invested in creating and implementing TAA 2.0, the activities and services these resources would support, and the outcomes that would be achieved. The logic model’s outcomes sections presented two timeframes: Shorter-term outcomes were to be achieved by March 31, 2017, based on the expected program completion date in February 2016; longer-term outcomes were to be achieved by September 30, 2017, when the evaluation was scheduled to conclude and the proposed program outcomes would have been achieved.

The RP Group used the logic model to operationalize the research questions into inquiries guiding the evaluation design.

Table 6. Research Questions and Areas of Inquiry

<b>Research Question #1</b>	<b>Areas of Inquiry</b>
Is TAA 2.0 securing the resources and delivering the two training tracks as proposed in the SOW?	<ul style="list-style-type: none"> <li>• Did TAA 2.0 deliver the 17 CPAP and 15 Heavy Duty sessions?</li> <li>• Did TAA 2.0 engage employers and union representatives in the program?</li> <li>• Did TAA 2.0 develop effective partnerships to reach and recruit participants from the target populations?</li> <li>• Did TAA 2.0 and its partners implement effective strategies to recruit participants from the target populations?</li> <li>• What contributions were made by partners and what other resources were committed to the program?</li> <li>• Did TAA 2.0 and its partners provide support to help participants succeed?</li> <li>• Did TAA 2.0 and its partners provide program completers with assistance in identifying and pursuing employment opportunities, including apprenticeships</li> </ul>
<b>Research Question #2</b>	<b>Areas of Inquiry</b>
How satisfied are participants, program completers, and non-completers with TAA 2.0?	<ul style="list-style-type: none"> <li>• How satisfied were TAA 2.0 participants with their training experience?</li> <li>• How satisfied were TAA 2.0 participants with the support provided after the program?</li> <li>• What worked best, and what could be strengthened?</li> </ul>
<b>Research Question #3</b>	<b>Areas of Inquiry</b>
Is TAA 2.0 achieving the outcomes proposed to the DOL in terms of completion, credential obtainment, and job placement?	<ul style="list-style-type: none"> <li>• Did TAA 2.0 serve 825 participants from the target populations?</li> <li>• Did 743 TAA 2.0 participants complete their training?</li> <li>• Did 622 TAA 2.0 participants earn credentials?</li> <li>• Did 38 TAA 2.0 participants enroll in additional LBCC training?</li> <li>• Did 558 TAA 2.0 completers find training-related employment?</li> <li>• Did 390 TAA 2.0 participants retain their jobs two and three quarters after completing TAA 2.0?</li> <li>• Did 100 TAA 2.0 completers experience a wage increase?</li> <li>• Did TAA 2.0 build LBCC's capacity to reach and serve new</li> </ul>

## Adjustments in Evaluation Approach

Continuous adjustments made in the implementation and timeline required corresponding adjustments in the evaluation framework and timeline. For the implementation analysis, particular attention was given to documenting changes made in each of the two tracks and the reasons for these adjustments, which included documentation of instances when the evaluation findings themselves contributed to guide adjustments in implementation. In addition, input was collected to assess satisfaction with the program not only from the perspective of program participants (Research Question 2), but also from instructors, program partners and union, employers and other stakeholders. At the conclusion of program implementation, exit interviews were conducted with all members of the TAA 2.0 project team and representatives from program partners and stakeholders. The purpose of these exit interviews was to capture different perspectives on the program implementation and to document lessons learned.

For the outcome analysis, the data analysis that examined LBCC's progress in meeting each of the stated participant outcomes goals was supplemented by interviews with program completers conducted 1-13 months after program completion.

With implementation of both tracks continuing through August 2017, the RP Group extended the evaluation to capture as much information as possible from participants, and especially, to document outcomes achieved by program completers. The final data collections included surveys conducted on August 10, 2017 by participants in the Heavy Duty Track and CPAP outcome data collected on August 7, 2017.

Although the RP Group extended the evaluation data collection timeframe, the outcomes analysis will inevitably provide only an initial snapshot of employment outcomes achieved by completers in each of the two tracks. For the CPAP, which had 18 months to deliver training to 17 cohorts, the time between program completion and employment for many participants turned out to be much longer than expected for reasons related to construction schedules in major projects, schedules for acceptance of new apprentices, and other factors that will be discussed later in the report. The Heavy Duty track which launched in March 2016 as an 80-hour training program experienced a five-month hiatus between August 2016 and December 2016. Heavy Duty was launched a second time in January 2017 in a new, modular format. With only seven months left to implement this new iteration of the training track, any outcome data related to employment is necessarily limited and incomplete.

## Evaluation Activities

Table 7 below identifies the research activities the RP Group conducted between January 2016 and August 2017 to investigate each of the three research questions guiding the evaluation.

Table 7. TAA 2.0 Evaluation Activities, Jan. 2016-August 2017

Research Question	Evaluation Activities	Schedule/ Dates
1	Regular meetings between RP Group and TAA 2.0 team. Started as monthly, then bi-monthly, and during the last three months of implementation, as-needed. A total of 12 one-hour meetings were conducted between February 2016 and August 2017.	January 2016 – August 2017
1&2	Site visit to LBCC (focus CPAP)	February 2016
1&2	Debriefing of site visit findings	March 2016
1&2	Site visit to LBCC (focus CPAP)	April 2016
1&2	Debriefing of CPAP site visit findings	May 2016
1&2	Site visit to LBCC (focus CPAP)	October 2016
1&2	Site visit to conduct focus group with Heavy Duty participants	June 2017
1&2	Site visit to career fair for Heavy Duty	July 2017
1&2	Interviews with CPAP and Heavy Duty instructor	February 2016 and April 2016, July and August 2017
2	Nine interviews with program partners including PGWIN, Modern Times, Conservation Corps-Long Beach, Centro CHA	July-August 2017
2	Interviews with program stakeholders, including construction unions and subcontractors	June – August 2017
2	Interviews with program stakeholders, including heavy duty employers	July –August 2017
2	Exit interviews with four key members of LBCC's leadership and implementation team	July 2017
3	Interviews with CPAP program participants who completed between April 2016 and June 2017	June-August 2017

3	Analysis of outcomes data	April 2017-September 2017
2	Survey of program participant satisfaction and input (CPAP and Heavy Duty)	June 2016 – August 2017
1	Review of media postings	March 2016-August 2017

Interview, focus group, and site visit protocols were developed for all evaluation activities identified above in Table 7. A sample of these are presented in Appendices 1, 2, 4, 5, 6 and 8 including: Surveys developed to assess participant satisfaction with each of the two training programs; sample agendas of meetings between the RP Group and LBCC; protocols for the telephone interviews conducted with participants and union and employer stakeholders; and protocols used to guide the RP Group’s exit interviews with partners and members of the leadership and implementation team.

## Section II. Evaluation Findings: Construction Pre-Apprenticeship Training Program (CPAP)

### The industry and the LBCC CPAP Program Design

#### Introduction to the industry

TAA 2.0’s CPAP track was designed to prepare the target population for union apprenticeships in Long Beach’s rapidly expanding construction industry. As LBCC noted in its “Proposed Statement of Work (SOW) Change:”

*LBCC is working with the Union to deliver a pre-apprentice training program to prepare local residents to enter into Union apprenticeships, of which there are over a dozen in the building trades. (SOW, p.2)*

The SOW also noted that occupations in the trades area, according to the State of California’s Employment Development Department, comprised more than one-fifth of the region’s fastest growing occupations for 2012-2022.

Further contributing to increase construction employment opportunities for local job seekers was a March 2015 Project Labor Agreement (PLA) with the Building Trades that established a 40% local hiring requirement for publicly funded construction projects in Long Beach, including a multi-year major project at the Long Beach City Center. A second PLA was subsequently signed extending the same local hiring requirement on construction projects at the Port of Long Beach -- the second largest port on the US West Coast. This was followed by a third PLA for construction projects at LBCC.

LBCC was identified in the PLAs as one among a small number of training providers approved to prepare local workers for entry-level union jobs in the construction sector. One of the other



designated training providers was Pacific Gateway Workforce Investment Network (PGWIN), LBCC's key partner in TAA 2.0.

## Target population

The target population was individuals who were unemployed or underemployed, including job seekers facing barriers to employment. A particular priority was to reach members of groups hitherto underrepresented in construction unions, including Latino and African-American and female job seekers.

## Implementation approach

The implementation design presented in the SOW comprised four components:

- Outreach and recruitment
- Training component
- Support services
- Job placement support

The SOW proposed to deliver 17 sessions with an average enrollment of 25 participants per session. After the pilot phase, multiple sessions would run concurrently, including two time periods during which the CPAP track would deliver four sessions to 100 participants (SOW, p. 10).

Each program component, as it was actually implemented, is described below (pp. 53-63) where the report reviews changes made in the program design over time in response to input from participants, stakeholders, and the evaluation team.

## Proposed outcomes

In the SOW, LBCC stated that:

*At the completion of this training track, participants can apply to Union apprenticeships, for which they will be better prepared to enter into due to the training. The Union will move local resident LBCC program completers to the top of the review/consideration list to better increase their chances of entry into the apprenticeship. (SOW, p. 2)*

Outcomes, the SOW proposed, would include:

- Delivery of 17 sessions serving 25 participants each for a total enrollment of 425 participants.
- 90% of the 425 participants would complete the program (383) and 70% (298) would earn certificates.

- 75% of completers (288) would find employment in the construction sector.

## CPAP Implementation Analysis: Fidelity of Implementation

The RP Group's assessment of fidelity of implementation in the CPAP addressed the following inquiries:

1. Did TAA 2.0 deliver the 17 CPAP sessions?
2. Did TAA 2.0 engage employers, union representatives, partners, and community-based organizations in the implementation of the program?
3. Who participated in the CPAP training?
4. What changes were made in the implementation approach over time?

### 1) DID TAA 2.0 DELIVER THE 17 CPAP SESSIONS?

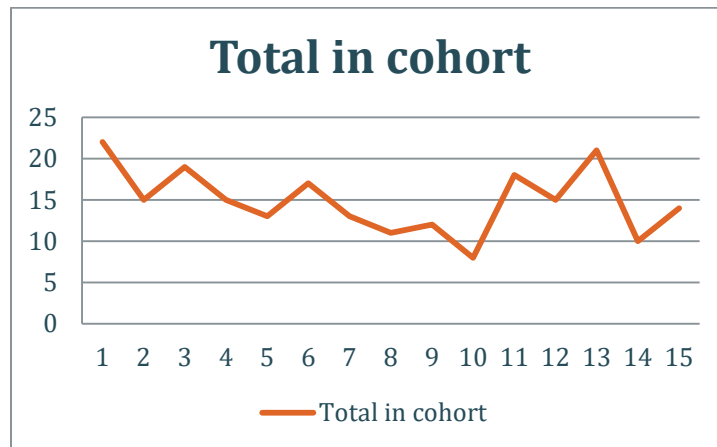
Despite the compressed timeline TAA 2.0 achieved the goal of implementing 17 CPAP sessions with the last such session concluding on August 10, 2017. A total of 16 of these sessions had been delivered when the RP Group concluded data collection on July 31, 2017. An additional 20 participants enrolled in a last session that concluded August 10, 2017 increasing total participation to 243. This enrollment outcome represented just over half (57%) of the 425 proposed in the Statement of Work (SOW). A total of 171 participants completed the training representing 77% of participants who enrolled in Cohorts 2-16<sup>4</sup>. The original goal was a completion rate of 90%, which would have resulted in 383 completers by the time Cohort 16 had been concluded.

Participation, projected in the SOW at 25 individuals per session, was considerably lower than expected with an average enrollment of 15. As depicted in Figure 4 below, participation varied considerably from one session to the next with the largest session serving 22 and the smallest session serving nine. For additional discussion about completion and other outcomes, please see Outcomes section (pp. 67-71).

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<sup>4</sup> PGWIN did not collect data for Cohort 1 which served only Centro CHA client referrals. In data provided to LBCC and shared with the RP Group after the evaluation concluded, Centro CHA noted that 7 of their client referrals enrolled and 6 of them completed Cohort 1. When including this information in the data provided by PGWIN, total enrollment reaches 250 while the number of completers increases to 177.

Figure 4 CPAP: Enrollment by Cohort



There were multiple reasons for why the number of participants per session was lower than anticipated.

One reason was that it took time to establish the network required to effectively advertise the program to the target population. This challenge was exacerbated by the fact that awareness of the benefits associated with union job opportunities was almost by definition low among the target population of individuals who have traditionally been underrepresented in these jobs. Over time, many outreach strategies were implemented but in the end, survey responses indicated that a key source of dissemination was friends and family (27% of respondents in the CPAP exit survey). When taken in connection with another survey finding that 87% of participants were “very likely” and 9% “likely” to recommend the program to others, it seems likely that demand may increase over time as the number of successful completers increases and the program becomes known among a growing number of social networks.

Further contributing to limit enrollment in each section was the continuous tension that existed in the program between efforts to reach and include in CPAP individuals with high barriers to employment and the need to deliver at the end of the program candidates prepared for apprenticeships. The latter goal was further underscored by the fact that TAA 2.0 had to establish a reputation with the unions for producing viable candidates. As former TAA 2.0 Workforce Development Training Manager, Marlowe Paraiso pointed out in an exit interview with the RP Group: “While there was buy-in [in CPAP] from several union leaders in our program from the very beginning, we had to build relationships with each local union.” (RP Group exit interview with Mr. Paraiso, 2/6/2017).

Also contributing to influence the size of each cohort was input from the instructional team whose members believed that 25 was too high a number for safety reasons. Furthermore, during the first cohorts especially, instructors sometimes struggled to keep the cohort focused and on-task and some instances occurred where participants had to be asked to leave for disciplinary reasons (meetings and interviews with instructional team, RP Group site visits February 2016 and April 2016).

Additionally, as pointed out by TAA 2.0 Workforce Development Training Manager Dickstein, as many as 42 CPAP participants withdrew from the program for a wide range of personal reasons that included being homeless and sleeping in a car.

Finally, there was the question of how many apprenticeship candidates the local construction industry could absorb. Some trades, like engineering operators, may have entire years where they do not open the apprenticeship pipeline. Others have regularly scheduled application and testing cycles. Moreover, construction cycles drive demand so at one point, for example, the scaffolding phase of a major project concludes and no more scaffolding workers are needed until the next project launches. In interviews, union representatives noted that the CPAC might be generating more completers than the local industry had the capacity to absorb. This input from the field underscored the need to keep cohorts smaller – so that 15 would be a better size for a cohort than 25.

## 2) DID TAA 2.0 ENGAGE EMPLOYERS, UNION REPRESENTATIVES AND CBOS IN THE PROGRAM?

### EMPLOYERS

The TAA 2.0 team learned during the implementation process that the employers of consequence in construction are the subcontractors since they are the entities that actually carry out the construction jobs and do the hiring. Moreover, many trades require that apprenticeship candidates approach the unions with subcontractor sponsorships. As a result, CPAP completers who wanted to enter these unions needed to cultivate relationships with subcontractors in order to secure their sponsorship.

Subcontractors were directly engaged by TAA 2.0 during site visits to construction sites and at career fairs. Over the course of the two job fairs, 11 subcontractors and other employers attended, including in the second event, several non-union shops.

The connection between subcontractors and participants was supported by PGWIN, which maintained schedules of major public sector construction projects that were under the PLA and sent out regular email blasts to CPAP completers alerting them that, for example, a major project would reach a state where the plumbing and electrical systems would be installed. In interviews, some successful program completers, now working in apprenticeships, explained how they had responded to these alerts by hurrying down to the job site wearing all their work clothes and bringing along their tools. Once there, they used introductions they had practiced in the training program to request a sponsorship from the subcontractor.

LBCC also had a direct line to the PLA Jobs Coordinators from Clark Construction, Parsons and Solis with whom the TAA CPAP team met twice a month to share updated information about CPAP completers, including their resumes.

## UNIONS

Union support was vital for CPAP and the TAA 2.0 team invested a great deal of time and resources to develop and grow partnerships with union leaders and local union representatives from many different trades. LBCC Director of Workforce Development Melissa Infusino explained in an exit interview with the RP Group: *“We hustled to meet them [union representatives] repeatedly and to then produce ready candidates.”* Ms. Infusino added: *“We went to job sites, trailers, and spoke on panels to unions. It was essential that we learned to understand the culture of the unions and show respect for the [union] brother and sisterhood.”* (RP Group exit interview with 8/11/2017)

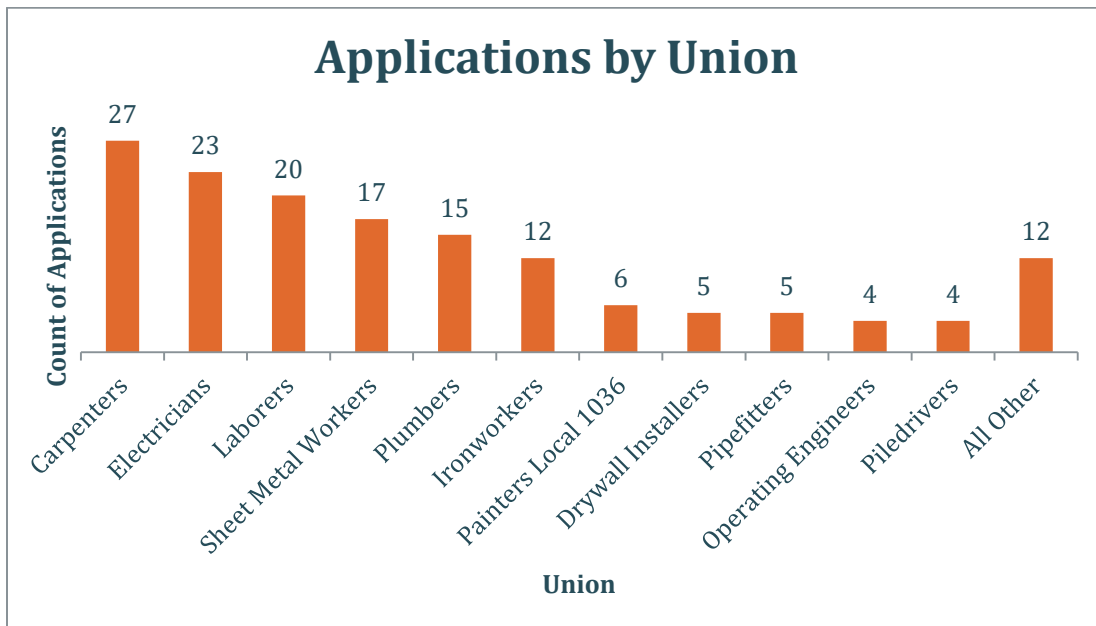
Strategic efforts aimed at establishing CPAP as a credible and effective partner with the unions included:

- Hiring as CPAP instructors union leaders and individuals retired from long-time service working in unions
- Site visits to union halls, training centers, and meetings with union managers and leaders
- Site visits to construction sites, including meetings with workers from different trades and their supervisors
- Inviting union representatives to come to the CPAP program as guest speakers, presenting information about their trade and meeting participants as well providing interview preparation support to students
- Inviting unions to participate in career fairs
- Hiring Modern Times to support the development of relationships with unions

In the exit interviews, the three TAA 2.0 team members agreed that they had not fully realized at the outset *“How much work it was to work with the unions”* (RP Group exit interview with TAA.2.0 Workforce Development Training Manager, Maria Andrade-Hernandez, 8/11/2017).

Challenges included the need for the team to understand over a short period of time how a long list of different trades work and they soon learned that each union has different requirements and processes to guide the application for apprenticeship programs. With program participants applying to more than 11 different unions (see Figure 5 below), the workload continued to expand for the small TAA 2.0 team, which needed not only to understand the apprenticeship entry requirements for each union, but also to try to develop a network of connections with representatives from each.

Figure 5: CPAP Apprenticeship Applications by Trade



Over the course of the program implementation period, TAA 2.0 made several changes in the program design to accommodate input from union partners, including the addition of a 24-hour physical strength and agility component. Taught by a retired union veteran, this training responded to the recognition that many program participants were not ready for or not sufficiently aware of the demanding physical labor that is required in almost all apprenticeship programs. As an example, the Laborers' Union launches their apprenticeship with a three-day boot camp where applicants are required to carry cement blocks, do push-ups, and move around large pieces of lumber.

The program also made continuous improvements in preparing participants for what would be required in order to successfully find an employer who would sponsor them and arrive at the union hall with all the required documentation needed to begin the apprenticeship application process.

In exit interviews, the program team members agreed that they had *“established a good reputation among union partners and put LBCC on the map as a pre-apprenticeship training provider.”* (Exit interviews Infusino and Dickstein, 8/11/2017 and 8/8/2017). This sentiment was echoed by several union representatives who participated in interviews toward the end of the program implementation period. Please see Appendix 3 for a list of union representatives interviewed by the RP Group.

#### PGWIN AND MODERN TIMES

PGWIN and Modern Times (MT) were both paid partners to the grant. PGWIN is a workforce investment network that also was a key partner in the original TAA 1.0 grant design. Modern Times (MT) was added as a partner in September 2016 by LBCC vendor Englander, Knabe and Allen (EKA), an agency hired by TAA 2.0 to engage industry from both the construction and

heavy duty sectors. EKA, which brought to the assignment expertise in Heavy Duty and alternative fuel systems, sub-contracted with Modern Times which had a history of networking effectively with unions and construction employers.

PGWIN supported CPAP participants with all program components from recruitment and orientation to program delivery, wrap around supports and, especially, employment placement assistance. PGWIN's involvement in each program component is discussed in detail below as each program component is introduced.

MT was originally hired to engage more employers and union representatives in the CPAP program. At one time, PGWIN and MT began to overlap in their counseling of program completers. This overlap, and the need for TAA 2.0 to take action to accelerate the development of the Heavy Duty track, resulted in MT being reassigned to provide the same kind of support for this track as PGWIN was providing for the CPAP track.

However, MT's event planning skills were also tapped by CPAP in the development and coordination of two CPAP career fairs that provided program completers with opportunities to meet union representatives and potential employers.

#### COMMUNITY-BASED ORGANIZATIONS

Community-based organizations (CBOs) that partnered with TAA 2.0 included the Conservation Corps of Long Beach (CC-Long Beach) and Centro CHA.

In an interview conducted at the end of the program implementation period the CC-Long Beach Director of Operations, Mr. Kedrin explained that his organization began collaborating with TAA 2.0 in the early months of 2016 to refer clients both to the CPAP and Heavy Duty Tracks. However, Mr. Kedrin recounted that, when CC-Long Beach client referrals began to attend the CPAP, it soon became clear that many of them were not ready. The main challenge, according to Mr. Kedrin, was that the CC-Long Beach referrals were unprepared for the 40 hours of math instruction that is a critical part of the MC3 curriculum. As a result, Mr. Kedrin noted, CC-Long Beach started to refer clients to TAA 2.0's Heavy Duty track. (RP Group interview with Kedrin Hopkins, Director of Operations, CC-Long Beach, 8/2/2017)

The realization that the CC-Long Beach participants were not ready for the MC3 curriculum occurred after at least instructor had participated in the MC3 training during the early months of 2016 and been certified by the Trades Council to deliver the training. Early plans that did not come to fruition also included CC-Long Beach hosting training sessions in its own facilities.

Centro CHA, a community based organization that serves underrepresented individuals with barriers to employment was also a partner in CPAP and the CPAP pilot (also referred to as Cohort 1) served Centro CHA client referrals exclusively. While 6 of the 7 Centro CHA client referrals completed the pilot CPAP, Centro CHA referred an additional 21 clients to subsequent cohorts.

As was the case with the CC-Long Beach referrals, some Centro CHA participants struggled with the rigorous training program. In an interview with the RP Group, Centro CHA Program

Coordinator, Robert Castillo explained that his CBO had referred about 30 participants to TAA 2.0. The referrals were, in Mr. Castillo's words, "individuals with limited social capital," who often were not successful in completing the program due to challenges ranging from lack of transportation to difficulty with the math and math-based part of the MC3 training, and difficulties managing in a structured classroom environment (RP Group interview with Robert Castillo, 8/3/17).

In an earlier interview conducted in March 2016 with Centro CHA, Executive Director, Ms. Jessica Quintana reflected on lessons learned from the first CPAP cohort and the Centro CHA clients who were referred to this pilot session. She underscored that most Centro CHA participants were not able to meet the math requirements for entry into the program adding that Centro CHA was considering adding a math boot camp or finding and linking potential applicants with online math instruction to help more of their clients prepare for the Construction program. (RP Group interview with Jessica Quintana, 3/18/16)

In both interviews the RP Group conducted with Centro CHA, the organization's representatives recognized the opportunity that the training could potentially offer to their clients, but also highlighted the barriers to participation and completion. Ms. Quintana noted, "It is a big commitment to participate. We will have to screen out a lot of people" (RP Group interview 3/18/2016). She also underscored that it was very important for Centro CHA to explain to potential applicants to the CPAP track the requirements and expectations for successful participation.

In the Centro CHA interview conducted more than a year later, Mr. Castillo expressed some concern about CPAP's low tolerance for tardiness. He noted that, "Some [Centro CHA referrals] did not have transportation, but did their best to be there." Nevertheless, he added, CPAP sometimes does not fully appreciate the challenges that Centro CHA clients confronted. These concerns are echoed in the interview that the RP Group conducted with CC-Long Beach about difficulties their referrals had encountered participating in the Heavy Duty program and they underscore the tension between two key program priorities: The goal of recruiting and serving participants from underrepresented populations with barriers to employment and the goal of delivering to employers job-ready and reliable trainees.

In the case of the CPAP track, the challenges were even greater than in Heavy Duty because of the need for participants to demonstrate very high levels of motivation and persistence (see subsequent discussion of Outreach & Recruitment, pp. 53-56).

In an exit interview, the TAA 2.0 leadership noted that while they had engaged CC-Long Beach as a paid partner to participate in the program, no such arrangement had been in place with Centro CHA, which meant that Centro CHA had limited incentive to invest time and effort in the partnership and showed limited engagement in partnership meetings.

Nevertheless, data provided by Centro CHA to LBCC in September 2017<sup>2</sup> showed that 27 of 28 of the CBOs referrals completed the CPAP training and that 23 of these completers were subsequently employed. This included five CPAP completers who found training-related employment with two of them entering union apprenticeships.



In February 2016, the RP Group had the opportunity to meet Centro CHA participants in CPAP. In the RP Group's February 2016 site visit report, the following description was offered about how the Centro CHA referrals described the extensive support they had received from the Centro CHA:

*[Centro CHA] representatives come to the classroom periodically to ensure participants have what they need to be successful. Centro CHA, the participants explained, began in the second week of the program to provide financial support and incentives to them, allowing them to buy tools, belts, clothes, boots, bus passes, lunch and other items that support their full engagement in the program and that prepare them to apply for work after they complete PCA. The participants, when asked, strongly supported Centro CHA's decision to hold off on the financial support until the second week of the program. This way, they explained, the incentives were indeed a reward that only went to those who were committed to succeeding. (Report summarizing findings from the RP Group's Site Visit to TAA 2.0, February 17, 2016)*



### **Participant Case Study 1**

*Lydia applied to the Local 433's Ironworking Apprenticeship Program while she was still attending the CPAP program, but learned there was a long waiting list. She had her lucky break during a class visit to a construction site where she approached the supervisor and showed such determination and commitment that she was called up shortly afterwards to participate in a special boot-camp for women in the trades. After completing the tough and physically demanding three-week boot-camp, Lydia was in. She reflects, "You have to stay in shape. This is hard physical work." She adds, "You cannot wait for the next person to do things for you. It takes work to get in [to the union]."*

### 3) WHO PARTICIPATED IN THE CPAP TRAINING?

Table 8. CPAP Participants by Characteristics and Background

Characteristic and Background	All		Completers	
	Count	Percent	Count	Percent
Female	16	7%	12	7%
Veteran	14	6%	12	7%
Disability	5	2%	1	1%
Ethnicity				
Latino	102	46%	73	43%
Black/African American	69	31%	57	33%
White	27	12%	24	14%
Asian	10	5%	7	4%
Multiethnic	5	2%	4	2%
Other/Unknown	10	5%	6	6%
Total	223	100%	171	100%

Note: As cohort 17 (n=20) had not finished at the time of final data access, there are no outcomes for that group of students and their data are therefore not included in this analysis

The largest group of participants was Latinos (46%) followed by African Americans (see Table 8 above). These two groups were identified by the program as a recruitment priority as they represent populations underrepresented in union construction jobs. The program was successful in prioritizing the recruitment of these populations in a series of outreach activities that are described in more detail below (see CPAP Outreach & Intake, pp.53-56).

Table 9. TAA 2.0 C CPAP Participants by Employment Status

Employment status at program entry	All		Completed MC3 Certificate		Apprenticed	
	Count	Percent	Count	Percent	Count	Percent
PT	65	29%	58	31%	14	34%
FT	21	9%	19	10%	3	7%
Unemployed	137	61%	110	59%	24	59%
Total	223	100%	187	100%	41	100%

Over 60% of participants (61%) were unemployed upon entry into the program, while just under 10% held full-time jobs. Participants who started out with part-time employment were slightly more likely to end up in an apprenticeship than participants who started out working full-time or unemployed.

In interviews with the RP Group, the instructors and TAA 2.0 program team members underscored the diversity of the participants not only in terms of ethnicity, employment status, and age, but also in terms of math preparation, learning disabilities, mental health, criminal justice background, and—more than anything—commitment to the program. The participants also included several individuals who were homeless and participants who had to take several buses to get to the program every day.

The survey conducted at the end of the training program underscored the wide differences in math preparation among participants, the range of expectations for wages after the training (from \$14/hour to \$35/hour) and previous union membership.

Section 4 below explains how the program developed and over time refined its approach to outreach and recruitment from a strategy of casting a wide net to an approach that was guided by the TAA 2.0 team’s increasing awareness about the need for completers to be highly motivated and persistent in order to get accepted into union apprenticeships.

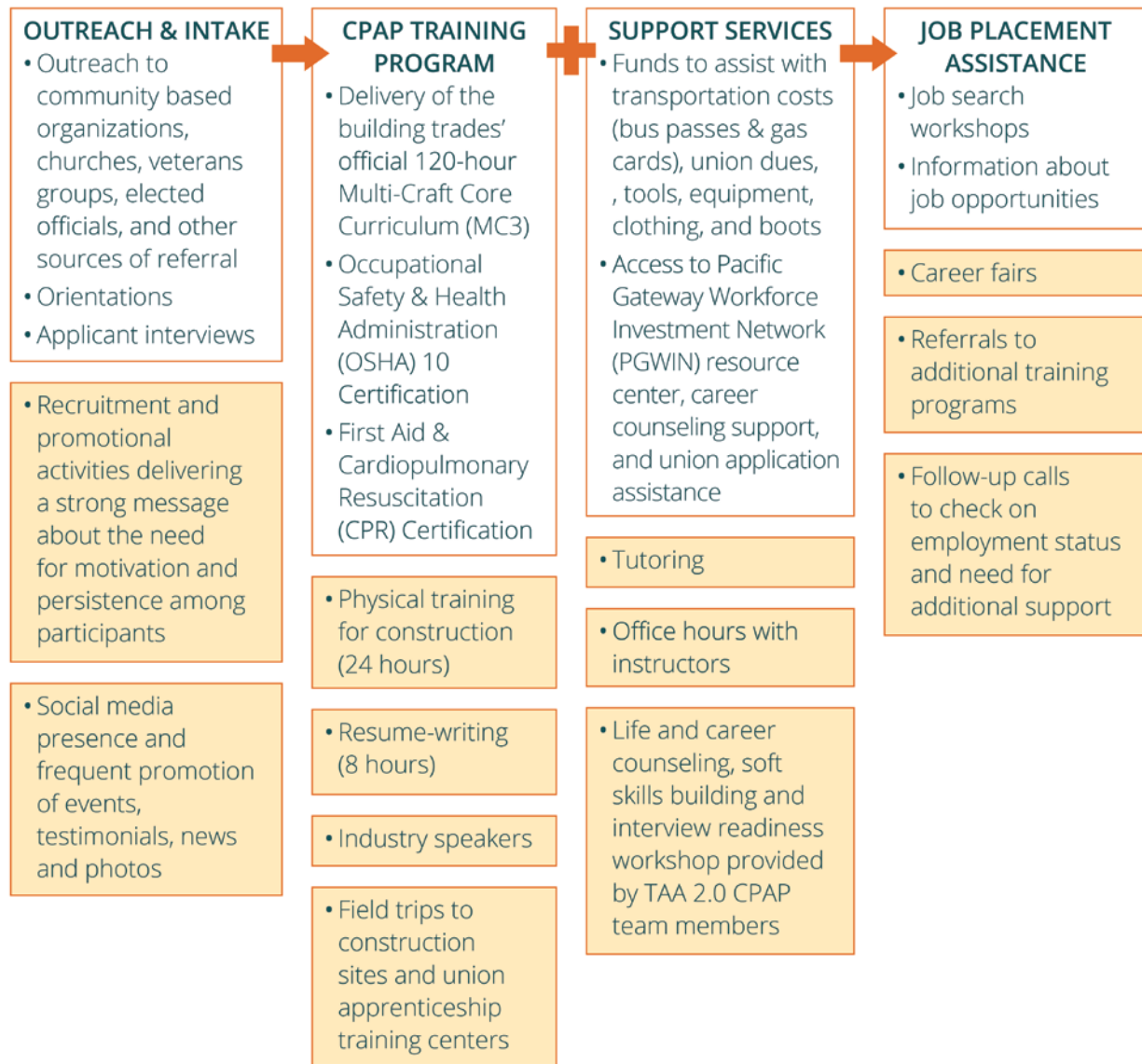
#### 4) WHAT CHANGES WERE MADE IN THE IMPLEMENTATION APPROACH OVER TIME?

The CPAP comprised four program components:

- a) Outreach and intake
- b) CPAP training program
- c) Support services
- d) Job placement assistance

The following section describes for each of the four program components adjustments and changes made over time in response to input from participants, stakeholders, and the evaluation team. The sum total of these changes is visually represented in Figure 6 below:

Figure 6. The Evolution of the CPAP Program Design



These components were added as the program developed

#### a) Outreach and intake

During monthly calls between the TAA 2.0 team and the RP Group evaluation team and during site visits to TAA 2.0, the RP Group had the opportunity to learn from the TAA 2.0 team about the range of recruitment strategies TAA 2.0 was conducting and assessing. These strategies included presentations in churches and outreach to community based organizations serving target population groups, including veterans and unemployed and underemployed youth.

The in-person outreach was supplemented by social media postings, radio announcements, and advertisements on strategically selected bus routes.

The program also engaged local elected officials, inviting them to post announcements about the training on their FaceBook pages and in other announcements that would reach their constituency.

Social media use by TAA 2.0 also included Instagram and Twitter, where TAA posted short videos of training sessions and photo collages featuring participants at work using tools and setting up scaffolds.

PGWIN served as a continuous partner in this recruitment effort and hosted two of four weekly orientation sessions about the program offered to prospective participants with the other two sessions offered by the TAA 2.0 team at the LBCC campus.

Over time, the program also engaged past completers in the outreach process and employed part-time an LBCC student to create and maintain for the program a strong social media presence.

While various approaches to recruitment were launched and tested, it became increasingly clear that the orientation and interviews needed to convey very clearly three key messages:

1. The program is a stepping stone or an accelerant to the ultimate goal of an apprenticeship and a career working for a trade union.
2. Program participants would receive a lot of support and guidance, but success in landing an apprenticeship would ultimately depend on their capacity and determination to show commitment, motivation, and persistence.
3. Getting an apprenticeship could take months and the participants would have to be ready and able to manage this wait.

Additionally, in the words of the Workforce Development Program Coordinator, Maria Andrade-Hernandez: *“Once they entered the program, participants had to determine early on which industry they wanted to pursue and apply for the apprenticeship right away and learn the steps to apply to and get into the union.”*

*The following was submitted to the RP Group by one of the CPAP instructors. It presents an assessment of key conditions for successful participation in the construction training program; qualities required by union sponsors upon completion; and a comparison of qualities TAA program candidates and completers have compared to the qualities that sponsored apprenticeship candidates possess.*

#### *Job Readiness and Entry Requirements*

- *Willing to be engaged not just compliant*
- *Valid California driver's license*
- *Reliable transportation to a job site (car or motorcycle)*

#### *Qualities to Secure Sponsorship from Subcontractors*

- *Completion of MC3 program*
- *Good work history in any industry or successful academic history*
- *Employer recommendation from any industry*
- *Recommendation from the MC3 program*
- *Able to communicate his/her qualities to a potential sponsor*
- *Exhibit a positive presence of physical strength. (not overweight, no smokers' breath)*

#### *MC3 Candidates Compared to General Population of Apprenticeship Candidates*

- *Above average in academic knowledge*
- *Below average in physical strength*

#### *MC3 Graduates Compared to Sponsored Apprenticeship Candidates*

- *Similar academic knowledge*
- *Below average in physical strength*

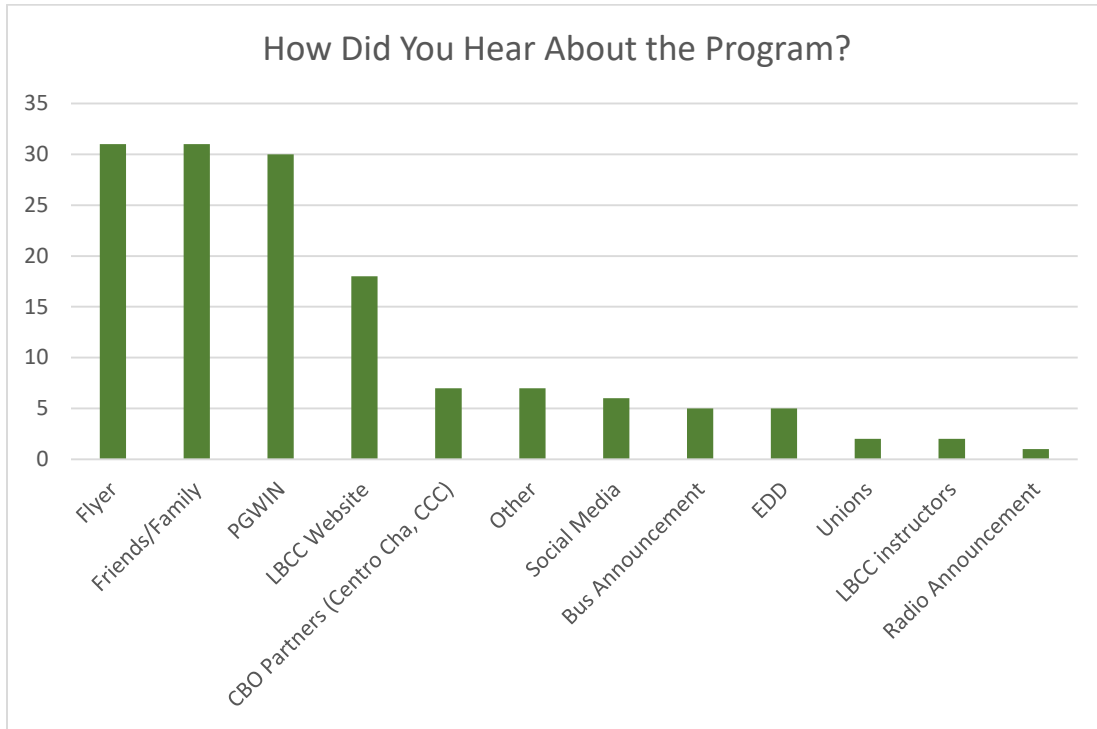
A union veteran who was hired to inject into the training track physical training for construction summarized for the evaluation team what was required and what unions were looking for in applicants. (See side bar)

The messages about the need for participants to be highly self-motivated and, the word the TAA 2.0 team used often was "hungry," was reflected in the program's later iteration of advertisement material whereas earlier outreach focused on the job opportunities available in the industry without thoroughly conveying that program completion would not automatically result in a union apprenticeship.

Feedback from unions, program completers, and other stakeholders also persuaded the team that physical fitness and flexibility, and mastery of at least some soft skills were key to successful outcomes at the end of the training.

As depicted in Figure 7 below, survey findings suggested that most of the participants learned about the training program from three sources: PGWIN, TAA 2.0 flyers, and friends and family. In a distant fourth place as a source of information about the program was the LBCC website (12% or 18), while 5% learned about the program from CBO partners, Centro CHA or CA Conservation Corps. The survey was conducted at the end of the program for cohorts 6-17 with a 66% response rate.

Figure 7: CPAP Participant Survey Findings on Effective Referral Sources



While the evaluation team was initially very excited by the TAA team’s efforts to reach potential participants through the innovative use of social media and outreach to community partners that had thus far not collaborated with LBCC, the survey findings seem to suggest that these outreach approaches were less effective than more traditional methods.

Nevertheless, the use of social media and the documentation with short videos and testimonials of success cases for individuals who were placed into union apprenticeship and jobs may have helped program participants engage “friends and family.” Furthermore, the well-documented visual images of the program can surely be used in efforts to leverage additional support and it can be used by program completers to showcase to potential employers the training they completed.



### Participant Case Study 2

*Rafael, a veteran, had been unemployed for three months when he started the CPAP program. After completing CPAP and then passing Local 12's apprenticeship test for surveyors, he now works at least 40 hours a week. "I sometimes have to get up for work at 2 am," he said. "It is hard, but I love it as soon as I start working."*

#### b) CPAP training program

The Construction program was launched in January 2016 with the following announcement from LBCC:

*The Construction Pre-Apprenticeship training is a six-week (140 hours) program that prepares participants for union apprenticeship programs or employment in the trades. Some of the hands-on skills to be taught include cabinet making, cement masonry, green technologies, H.V.A.C., plumbing, surveying and weatherization.*

*Participants are trained on Los Angeles County/Orange Counties and receive three industry recognized certificates: Building Trades Multi-Craft Curriculum (MC3), 10-hour OSHA Certification and CPR/First Aid Training Certification.<sup>5</sup>*

Over the next 18 months, the program was continuously strengthened based on input provided by participants, industry and other stakeholders, including the external evaluator. The following components and features were added and modified as the program expanded from six to eight weeks:

**Addition of resume writing component:** This two-day workshop was delivered by PGWIN and designed to help participants develop a strong resume that strengthens their candidacy for

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<sup>5</sup> <http://www.lbcc.edu/CAED/construction.cfm>, downloaded 9/27/2017



entering the trade they are targeting. The workshop also included opportunities to practice elevator speeches and mock interviews.

**Addition of physical training for construction component:** As noted throughout this document, apprentices need to be physically ready to perform the required responsibilities and hard labor. Hence, when integrated into CPAP, the physical agility training was designed not only to get participants ready for an interview, but also to teach them what they need to do to prevent injuries that can compromise their union careers.

**Increase in field trips to industry and union halls and apprenticeship training centers and in-class presentations from industry speakers:** As the network with industry expanded and as instructors with union and industry connections joined the teaching team, the program enjoyed new opportunities to engage union representatives directly in the training through field trips to union halls and construction sites. Additionally, union representatives came to class to talk about their trade and also often to share their own journey and career as a union worker with the participants and to provide feedback to students on their final presentations and engage in interview preparation. PGWIN supported these activities, using its own connections to create ever more opportunities for participants to be exposed first-hand to the work required and to meet individuals who could serve as role models. In focus groups and interviews as well as in open-ended survey responses, participants continuously expressed how much these experiences helped them feel inspired and motivated and provided them with an understanding of what was required to get on the union track.

**Increased opportunities for hands-on applications:** During an early focus group, participants enthusiastically called out “using the power tools,” when the RP Group asked what they liked best about the program. In subsequent focus groups and surveys, participants continuously asked for more opportunities to actually engage in the trades through hands-on assignments. The strong desire by participants to use their hands created a dilemma for the program team as the message from union leaders was that they wanted better soft skills and would train new apprentices once they came on board in how to do the trade. The dilemma persisted throughout the program, although it became less of an issue once the recruitment and orientation sessions were adjusted to emphasize the limited nature of hands-on applications that would be offered in the program. In addition, the program made efforts to increase hands-on applications through the addition of the 20-hour Paxton Patterson model of applied learning in construction and the 24 hour physical agility for construction training.

**Math instruction:** The MC3 training includes 40 hours of math instruction and this component was difficult for many participants who either arrived with only rudimentary math skills or had taken math so long ago that they had forgotten most of the material. In an exit survey completed by approximately two thirds of completers (see pp. 64-65 for a review of survey highlights), more than one third of survey completers indicated their math preparation was limited to elementary algebra or lower level math (37%) while slightly under one third (32%) had completed intermediate algebra, and the remaining 31% college algebra or higher. Additionally, 50% indicated they had last studied math within the past two years, while it had been six years or more for 27% of the participants.

In interviews conducted with program completers, the importance of the math instruction was emphasized by many who felt that the review had helped them do well on critical apprenticeship tests. However, the instructional team seemed to struggle throughout the program on how to teach to classrooms that included individuals with recent, higher-level math instruction as well as a majority of participants who were underprepared or had forgotten a lot of what they had learned previously. The online instruction that was attempted, received poor marks from many participants who recounted the software was not working well.

### The Instructional Team

*In an exit interview with the RP Group (see Appendix 3), TAA Workforce Development Training Manager, Brett Dickstein reflected on the teaching team, which also included two LBCC instructors: “The two instructors who came in with no teaching experience are natural teachers. They have served as mentors for years and are perfect in front of a classroom.”*

*The instructional team included a woman with a long history of working in the union and a personal story of how she worked incredibly hard to get her union job. This instructor brought to the team a compelling instructional approach that drew heavily from her own experience and emphasized the range of opportunities for work that can be provided by the union.*

*An additional union veteran was subsequently added to the team to teach the physical fitness and agility component. This instructor also explained that he provided step-by-step guidance to participants on what they needed to make a favorable impression in union hall and to a prospective employer. His advice included everything from having the paperwork ready, to dressing in the right way, to having an elevator speech ready that explained why the participant wanted to enter a particular trade and what he/she had to offer to potential employers.*

*The instructional team also included a general contractor who could speak with authority about what employers are looking for and provide instruction on a range of crafts.*

### c) Support Services

Program supports were provided by TAA 2.0, PGWIN, and MT. In addition, CBO partner Centro CHA provided support to clients they had referred to the program.

TAA 2.0 provided supports both inside and outside of the classroom. One type of support sought to address a major barrier to success in the program: lack of math preparation. Once this challenge surfaced in the classroom, instructors tried to address it by making themselves available to provide additional help to struggling participants at the beginning or end of class. In addition, they encouraged participants to enroll in online introductory math courses. LBCC also created math preparation booklets with specific practice activities pulled from union tests. Additional efforts included connecting participants with tutoring programs offered at LBCC for-credit students, although very few participants took advantage of this resource.

In the exit survey, which also revealed that participants struggled the most with the math or math-based program components, 47% of respondents indicated that they asked the instructor

for help before or after class when they did not understand something. Even more students relied on their peers. More than two-thirds of the participants (68%) said they ask other cohort members for help if they did not understand something.

The instructors also tried to integrate into their instruction basic life management skills, including personal financial planning. The RP Group witnessed this instruction during a site visit to a class when during a math class, an instructor was explaining to the class how one of the participants could calculate monthly payments on a car he was considering buying. The instructor later explained to the RP Group that he regularly tried to inject into the curriculum mini-sessions that used real life situations to provide guidance in areas ranging from making a budget to managing time.

Additional supports provided by TAA 2.0 included efforts to intervene early when participants did not come to class on time or failed to show respect in class for the instructor and/or fellow students.

The cohort members themselves also supported each other. In all the focus groups the RP Group conducted with program participants, the importance of this dynamic was highlighted by both the participants and the instructors. In one focus group, participants explained that they would call each other if somebody had not showed up and help each other out with transportation. They also often shared food and when one participant's wife had a baby, his classmates built a dresser for the new member of his family.

Additional supports included opportunities to meet with key members of the TAA 2.0 team or with the instructors. Some of these sessions revealed the need for supports the program was unequipped to deliver including access to transportation, help with homelessness, and time management issues.

In order to inform and encourage participants to consider enrolling in LBCC's for-credit construction courses, the TAA 2.0 team invited representatives from LBCC's Enrollment Offices to CPAP. They also sought to introduce as a resource to participants the LBCC's Adult Basic Education Tutoring Program. However, there was a \$15 mandatory fee associated with enrolling to use this service, which served as a disincentive for many participants.

PGWIN provided participants with a wide range of additional supports ranging from Metro and gas cards to tools and work clothes. PGWIN Construction Pathway Manager Salvador Barajas (please see Appendix 3) estimated that "80% of participants had barriers to employment and that many were completing a training program for the first time." PGWIN was able to provide career guidance and counseling to these participants as well as access to the PGWIN Resource Center and Computer Lab.

Finally, Centro CHA provided a wide range of supports to clients the CBO referred to the program. Centro CHA representatives would attend the early cohorts, which included a large number of Centro CHA referrals to check in on their clients and their need for help. The CBO's incentives included direct financial rewards for continued participation as well as tutoring, career counseling, and referrals to other agencies and CBOs.

Over the course of the program, as the emphasis shifted from the front end to the completion end of the program, supports became increasingly focused on helping participants apply early for apprenticeships so they could get on the list of applicants from the start; providing counseling and guidance on how to make a good impression in Union Hall and having all the right documentation ready; and on coaching participants on what they needed to do, step-by-step, after they completed the program to successfully land the apprenticeship they wanted.



### Participant Case Study 3

*It took Peter more than a year from the time he completed the CPAP to the day he was admitted into the International Brotherhood of Electrical Workers' boot-camp – the first step toward becoming an apprentice in the electrical trade. Peter started building his network and adding skills to his resume from the day he completed the CPAP training. He worked for contractors, attended a course that prepared him for the apprenticeship math test, and went job sites to build his network and show his determination. While Peter attributes much of his success to the training and support he received from CPAP and program partners, his advice is that “you have to get yourself in [the apprenticeship door].”*

#### d) Job Placement Assistance

Post-program support and job placement assistance was provided by PGWIN, Modern Times, and the TAA 2.0 team.

Leading this effort, PGWIN offered extensive support to program completers with services that ranged from follow-up workshops, regularly scheduled phone check-ins, individual counseling, and even, in some cases, additional training and financial support. PGWIN's Salvador Barajas, met several times with the RP Group to update the evaluation team on the range and depth of supports provided by PGWIN to program completers, including an exit interview where he reviewed how supports had changed over time. In this exit interview that took place after the program had ended (see Appendix 3), Mr. Barajas explained that he continues to provide employment placement support to 89 program completers who are actively seeking employment. These individuals, Mr. Barajas explained will be eligible for assistance from PGWIN until they find employment, as long as they demonstrate a continued interest in receiving support. “PGWIN provides them with leads [to employers] and informs them about upcoming [apprenticeship] testings,” Mr. Barajas explained. “We try to reach out to them once a month to keep them engaged.”

In the exit interview with the RP Group (see Appendix 3), Mr. Barajas agreed with other interviewees from the TAA 2.0 team that the time it took for completers to secure an apprenticeship and work had been unexpectedly long. Table 10 below shows an average number of days of 118 from training completion to an apprenticeship in the trades for the 41 individuals who had obtained apprenticeships by the beginning of August 2017. Table 11 indicates that for the 73 individuals who found employment (including the apprentices), the average time from program completion was 93 days. As the standard deviations indicate, there was great variation in how long completers had to wait, especially among those who found apprenticeships. While some moved straight from completion to work, others waited months, including one participant who found an apprenticeship only after working toward this goal for 441 days.

*Table 10. Days From CPAP completion to Apprenticeship in Days*

<b>Valid N</b>	41
<b>Missing</b>	182
<b>Mean</b>	118
<b>Median</b>	80
<b>Std. Deviation</b>	150

*Table 11. Days From CPAP completion to Employment*

<b>Valid N</b>	73
<b>Missing</b>	150
<b>Mean</b>	93
<b>Median</b>	62
<b>Std. Deviation</b>	96

Due to the long wait, PGWIN offered and paid for additional training and once completers found work, helped them pay for tools and union dues – which can run as high as \$600 in initiation costs.

In interviews the RP Group conducted with completers, one participant explained that he had met with Mr. Barajas approximately five times after completing the program. Three of these times, others had been part of the conversation about how to find work, and twice the then job seeker had received individual job search counseling. PGWIN had also provided this completer

with a list of construction schedules and helped pay for additional training from PJobs, an organization that provides training to individuals wanting to enter the construction trades. Once the interviewee got the apprenticeship, PGWIN had paid the union dues and helped pay for the tools that new apprentices are expected to bring to the job site.

TAA 2.0 also provided support to program completers. Once it became clear that it took time and more persistence and effort than anticipated for program completers to find and get accepted into apprenticeships, the program collaborated with PGWIN to arrange construction site visits for completers. A few such events were hosted in May and July 2016, providing completers with opportunities to meet potential employers and share lessons learned with fellow job seekers and program completers. In addition, TAA 2.0 stayed in contact with many completers, including a large number of apprenticeship seekers who reached out to Workforce Development Training Coordinator, Maria Andrade-Hernandez for job counseling, advice, and even emotional support.

In September 2016, to further support employment placement and engage unions and employers, TAA 2.0 hired Modern Times to expand and deepen relationships with industry.

In May and July 2017, Modern Times worked with TAA 2.0 to offer career fairs for CPAP program completers as well as members of the current CPAP cohort. The first event took place on May 24 and attracted 16 stakeholders, including eight union representatives, two PLA administrators, and two employers. Two months later at the second career fair, 22 stakeholders attended, which included seven union representatives, three PLA coordinators, and seven employers. According to Modern Times, the increase in employers attending the second career fair could well be an indicator that the program's credibility as a source of good apprenticeship candidates is growing. One participating employer noted:

*We get nervous when we look at pre-apprenticeship programs. "We like to hire people we know. So we like career fairs. We can come and talk to people and see what they are willing to do. It is nice to talk to them to test their level of enthusiasm" (see Appendix 3 for list of CPAP stakeholder interviewees)*



#### Participant Case Study 4

*Gustavo is working in a warehouse, but every chance he gets, he puts on his work clothes and grabs his tools to make the rounds of construction sites. He completed the CPAP program in November 2016 and will continue to build his network and show his commitment to the trades until he is accepted into a carpentry apprenticeship. His commitment and initiative was made clear when he said “It is up to me to get out there [and find a union job].”*

## CPAP Implementation Analysis: Training Participant Satisfaction with the CPAP

Participant satisfaction was assessed through a survey conducted at the end of each training session and through focus groups implemented with two of the earlier cohorts during the RP Group’s site visits to the program in February and April 2016.

The following section presents findings from each evaluation activity.

### Survey Findings

Survey respondents consistently expressed a high level of satisfaction with the program experience with almost all (98% of 114 survey respondents) indicating it was “very likely” (87%) or “somewhat likely” (9%) they would recommend the training to a friend. In explaining why they would or would not recommend the program, survey respondents explained:

*I would recommend this program because it's a good place to start to become familiar with the different trades.*

*The online [math] courses need major improvement and caused confusion in our program. I recommend the online segment be reconfigured and streamlined. Nonetheless, this program is amazing and the opportunities that are offered are almost too good to be true but they are most certainly are any individual who has courage to challenge themselves won't regret it.*

## Participant Survey

*The RP Group collaborated with the TAA 2.0 team to identify what kind of information and feedback would be most useful for the implementation team to collect from program completers. Several drafts of a completer survey were passed back and forth in addition to guidelines from the RP Group on survey implementation, which advised that instructors be asked to conduct in class during the last week of instruction. This process was not clearly followed, and as a result, survey response rates varied considerably and one cohort missed the survey entirely (Cohort 15). In other instances, the survey was conducted as proposed by the RP Group with response rates from 85%-95%, but often it was emailed to completers after they had left the program. Overall, responses were collected from 114 participants in Cohorts 6-17. Based on the 172 completers in these cohorts, the response rate is 66%.*

*While the survey completers may not necessarily be representative of all the program completers, findings across the surveys were so consistent that the RP Group suggested in March 2017 that a saturation point may well have been reached. The RP Group advised that evaluation resources be shifted from the survey to support more interviews with program completers. The TAA 2.0 team agreed to make this adjustment in evaluation priorities. (Please see Appendix 4 for the CPAP Exit Survey Protocol)*

Survey respondents were most likely to be struggling in the curriculum with the 40-hour math component and with those program components that were most math-intensive, especially blueprint reading and surveying. While almost none of the survey respondents found any part of the curriculum to be “very challenging,” almost half (45%) of survey respondents found the blueprint reading component to be “somewhat challenging.” In second and third place in terms of the number of participants who found the components “somewhat challenging,” came surveying (29%) and math (24%). Here is how some CPAP representatives responded to a question asking them to explain why they found certain subject areas challenging:

*Surveying is difficult because it requires math and math is hard for me because I wasn't taught well due to foster care.*

*Blueprint reading and surveying was a little difficult based on having to utilize math and I haven't taken any math in a long time.*

*Math, because it's been so long since I've been in school.*

In response to a question about how prepared they felt to practice in the work

place the different skills and competencies they had studied, participants' responses once again reflected the challenges that some of them experienced with the math-based construction skills, especially surveying and blueprint reading. These were the only two skills that more than 10% of survey respondents felt they were not yet ready to practice in the workplace (see Table 12 below,



Table 12. CPAP Participant Exit Survey Findings: Assessment of Readiness to Use New Skills

	Completely ready	Somewhat ready	Not ready	Unsure	Not applicable
<b>OSHA 10 Certification</b>	73%	15%	0%	2%	11%
<b>CPR/First Aid Training Certification</b>	75%	17%	0%	0%	9%
<b>Basic Math for Construction</b>	66%	32%	0%	2%	0%
<b>Blueprint Reading</b>	28%	54%	12%	5%	0%
<b>Construction Health and Safety</b>	75%	23%	2%	0%	0%
<b>Construction Industry</b>	68%	31%	0%	1%	0%
<b>Diversity in the Construction Industry</b>	74%	24%	0%	3%	0%
<b>Financial Responsibility</b>	70%	24%	2%	2%	3%
<b>Green Construction</b>	43%	35%	7%	5%	10%
<b>Heritage of the American Worker</b>	61%	27%	1%	4%	7%
<b>Tools and Materials</b>	78%	21%	1%	0%	0%
<b>Carpentry</b>	46%	32%	3%	4%	17%
<b>Cement Masonry</b>	47%	37%	4%	1%	11%
<b>Green Technologies</b>	40%	40%	4%	4%	11%
<b>H.V.A.C.</b>	37%	43%	8%	4%	9%
<b>Plumbing</b>	56%	29%	7%	3%	5%
<b>Surveying</b>	32%	48%	14%	3%	3%
<b>Weatherization</b>	39%	39%	7%	3%	12%
<b>Sexual Harassment</b>	78%	16%	3%	0%	3%

In an open-ended question that asked what they liked best about the program, 43 survey respondents (38%) pointed to the hands-on activities. This response was followed by expressions of satisfaction with the instructors (17 respondents or 15%), specifically their teaching methods, commitment to the participants, and industry knowledge. Comments included:

*“What I liked most about the program was every instructor we had. Every instructor was great, the amount of information they provided us within the short six weeks was very helpful. I just can't thank the instructors enough. Very great people, I wouldn't change a single thing in the program.*

*The program is hands on and showing the way to show up to work.*

## CPAP Participant Outcomes Analysis

### Methodology

Personnel from the Pacific Gateway Workforce Investment Network (PGWIN) conducted intake interviews with participants to establish their demographic profile and contact information along with their employment and wage history, where available. Follow-up interviews were conducted periodically by PGWIN personnel to ascertain whether key apprenticeship and employment outcomes had occurred. After the grant funding concluded, PGWIN continued to reach out to program completers, offering them a wide range of options for support, including payment of union dues, initiation fees, and transportation. PGWIN documented these interactions and the information was collected in files maintained on each participant.

PGWIN shared this information with the RP Group on 11/9/16, 4/17/17, and 7/24/17 with a final data pull completed on 8/7/2017. The RP Group analyzed demographics of the students as well as outcomes achieved by program completers, including application to an apprenticeship, entry into an apprenticeship, employment, wage gains, and enrollment in subsequent training.

## Outcomes proposed compared to outcomes achieved

Table 13: CPAP Target and Actual Participant Outcomes

Program Outcome	Target	Outcomes	% Target Achieved
Enrolled	424	243	57%
Completed	383	187	49%
Employed	288	137	48%
Employed in Apprenticeships	Not specified in the SOW	41	N/A
Wage increase	Not specified in the SOW	72	N/A

## ENROLLMENT & COMPLETION OUTCOMES

The total number of participants enrolled reported in Table 13 above is 243 and includes 20 participants in Cohort 17 which ended in August 2017, after the evaluation had concluded. This represents 57% of the target outcome of 424 participants. According to TAA 2.0, additional and updated outcomes information provided to LBCC after the RP Group's data collection concluded (7/31/2017) suggest that the final number of enrollments and completers were 258 and 216 respectively. The adjustments concern participants who were not accounted for by PGWIN, but instead by CBO partner Centro CHA. The RP Group refers readers to LBCC for additional clarification about outcomes reported and achieved after the completion of the evaluation.

According to the data provided to the RP Group by PGWIN, a total of 187 participants completed the program and obtained the Multi-Craft Core Curriculum (MC3) certificate (84% of those who had completed the program by July 31, 2017). A total of 189 individuals, including two participants who did not complete the program, obtained OSHA certificates (85%), while 179% completed CPR certificates (80%).

Compared to the intended outcomes the program achieved just below half of the target for completion. However, these outcomes were achieved in approximately half the time that the original grant program had proposed.

## EMPLOYMENT AND WAGE OUTCOMES

In terms of employment outcomes, while 86 were employed upon program entry, 137 (of the 223 program completers from cohorts 2 through 16) were employed as of the final data pull on August 7, 2017. This includes 56 program completers who obtained training related employment (30% of completers) and 23 program completers who obtained new, non-training related employment (12% of completers). Among the former group of completers in training-related employment, 35 went from unemployed to employed in the field while 21 went from having had other employment to becoming employed in the field. Among the latter group of completers in non-training related employment, 16 went from unemployed to employed in the field while 7 went from other employment to new, non-training employment.

Overall, about 40% (89/223) of training participants indicated an outcome that corresponds to a positive development in their work life or career (i.e., wage gain; PT to FT employment; from no benefits to having benefits; entered postsecondary or further training; became employed;

entered an apprenticeship). The most frequent positive outcome was transitioning from unemployed to employed (n=51), although a positive wage gain was also fairly common (n=21).

Among those who obtained employment related to the training, the average wage was \$18.37, with a standard deviation of \$6. The range was from \$11.50 to \$40.40. This average wage of \$18.37 compares favorably to average wages for entry-level construction occupations such as carpenter helper (\$13.85), construction laborers (\$16.07), and construction-related work, all others (\$17.73).<sup>6</sup>



### Participant Case Study 5

*Laid off from a Toyota plant after 12 weeks of service, Sergio took the apprenticeship plumbing test immediately after completing the CPAP. He did very well, thanks to the MC3 math refresher. However, according to Sergio, “There was something like 80 people on the waiting list for apprenticeship plumbers at the time.” Sergio took a job working in a warehouse while he waited for his chance. A year later, Sergio finally got the call from a subcontractor who needed workers immediately. Sergio showed up promptly and has been working as a plumbing apprentice ever since.*

## APPRENTICESHIP APPLICATIONS AND OUTCOMES

Since the CPAP’s ultimate goal was to prepare participants for apprenticeships, the RP Group conducted additional investigations to determine how many achieved this particular goal and how long it took them to do so. The RP Group found that only 56% of program participants and 66% of those who obtained an MC3 certificate applied to an apprenticeship. The largest number of these individuals applied to the carpenters’ union (24), the electricians’ union (20), and the laborers’ union (17). The acceptance rate varied widely among the more than 15 unions that CPAP completers applied to enter. For example, everyone who applied to enter a roofing or waterproofing apprenticeship was accepted, while the sheet metal union only accepted 1 of 17 applicants.

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<sup>6</sup> Comparison wage data obtained from [www.onetonline.org](http://www.onetonline.org) on 8/25/17.

PGWIN’s Construction Pathway Manager identified a number of possible reasons why some program completers did not apply for an apprenticeship, or have yet to do so. Some completers may not meet basic apprenticeship requirements which in some trades include possession of a driver’s license and car; a clean background check (e.g., on probation); successful completion of the Mechanical Aptitude Test (MAT); and/or a clean drug test. Other reasons for not applying or holding off on applying may be that the apprenticeship of choice does not accept applications more than a few times a year or that the program completer has been unsuccessful in getting a contractor to sponsor him or her, a requirement for an apprenticeship application in some trades.

There were some apparent differences between those who obtained apprenticeships and those who did not. For instance, among those who did obtain apprenticeships, the median age was 33, whereas the median age of those who applied, but did not get an apprenticeship was 26 (see Table 14 below).

Table 14. CPAP Participants by Age

Characteristic	All		Completers		Apprenticeships	
	Mean/ Median	Range	Mean/ Median	Range	Mean/ Median	Range
Age	30.6/26	17 to 62	30.8/26	17 to 62	32.8/32	18 to 59

In terms of ethnicity, gender and other background characteristics of those who obtained apprenticeships, Latinos were overrepresented and African-American participants were underrepresented, relative to their representation among all CPAP participants. Women and veterans were overrepresented while individuals with disabilities were underrepresented among apprentices.

Table 15: CPAP Participants by Gender, Ethnicity and Other Characteristics

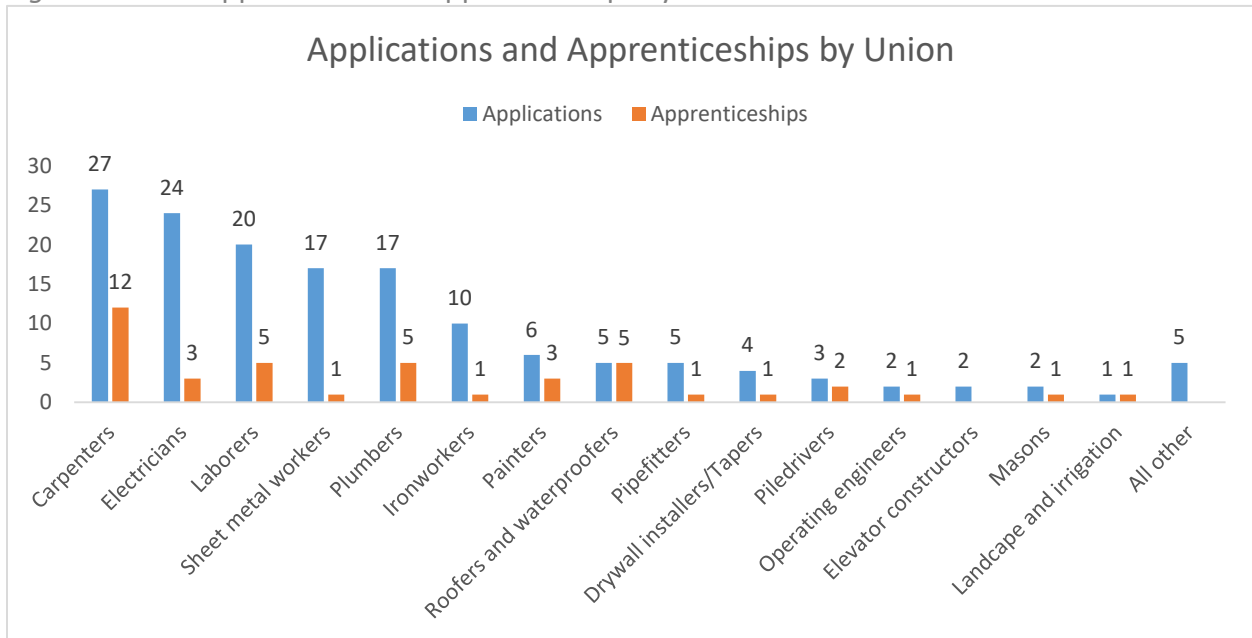
Characteristic	All		Apprenticed	
	Count	Percent	Count	Percent
Female	16	7%	5	12%
Veteran	14	6%	4	10%
Disabled	5	2%	0	0%
<b>Ethnicity</b>				
Latino	102	46%	21	51%
Black/African American	69	31%	7	17%
White	27	12%	7	17%
Asian	10	5%	3	7%
Multiethnic	5	2%	2	5%
Other/Unknown	10	5%	1	2%
<b>Total</b>	<b>223</b>	<b>100%</b>	<b>40</b>	<b>100%</b>

In exit interviews, the RP Group asked PGWIN and members of the TAA 2.0 team why they thought the rate of successful apprenticeship outcomes varied so much among the two largest

ethnic groups participating in the program. Nobody knew and, in fact, the discrepancy in apprenticeship entry had not been noticed until the final outcomes data became available. The RP Group recommended and interviewees agreed that they would closely monitor this pattern if additional support becomes available to continue the training.

Another variable related to apprenticeship entry is the union that an applicant pursues in his or her application. As shown in Figure 8 below some unions (e.g., Carpenters, Painters, Plumbers, Laborers, Roofers) were much more likely to take apprentices than others (e.g., Sheet metal, Iron Worker, Electricians).

Figure 8. CPAP Applications and Apprenticeships by Trade



The “all other” category includes: Allied trades; HVAC; Millwrights; Stationary. Note that many participants applied to several different unions.

## Outcomes in the Participant’ Own Voices: Interviews with completers 1-13 months after they completed

### Interview Findings

To supplement the information generated by the outcomes analysis of data on program participants and to add context to what remains very early outcomes findings – particularly given the unexpectedly long time that it took for many program completers to enter an apprenticeship program and start working -- the RP Group proposed to significantly expand the number of interviews to be conducted with program completers.

A total of 13 individuals participated in the phone interviews, which included a disproportionate number of individuals who had successfully entered apprenticeships (8 or 62%) and participants working in other jobs or not working at all (5 or 38%). It should be noted that among the five

individuals identified by the TAA 2.0 for phone interviews who had not applied for an apprenticeship program, only one could be reached and she did not agree to an interview.

### Methodology for CPAP Participant Phone Interviews

*The LBCC project team provided the RP Group with a list of program completers comprised of participants from a range of program cohorts. The RP Group specifically requested to be connected with three groups of completers: individuals who had been accepted into an apprenticeship; individuals who had applied to an apprenticeship program, but not yet been accepted; and individuals who had not applied to an apprenticeship program.*

*The RP Group was provided with a list of 28 individuals including participants from each of the different three groups and completers from different cohorts. A total of 21 of these individuals were contacted and offered as an incentive \$25 for a half-hour telephone interview. This incentive was underlined in an email and in subsequent messages left of phone machines and in follow-up calls. The RP Group discovered in the process of reaching out to these completers that few of them responded to emails and that the best way to connect was to call in the early evening and conduct the interview immediately. The interviews were conducted in July and August 2017. All interviews were recorded and transcribed.*

Key findings echoed the input and reflections the RP Group collected in interviews with the TAA 2.0 team members, program instructors, PGWIN and other partners, union representatives, and other stakeholders, including:

- While some interviewees had been lucky to complete the training at a time when one or more subcontractors were looking for apprentices in their trade of choice, many had completed the program at a time when their name was added to long waiting lists of other would-be apprentices.
- The completers who were successful at securing union apprenticeships all showed a tremendous amount of initiative and motivation. They followed the instructions they had received from the instructors and guest speakers in the way they went to the union hall to present themselves, they persisted in going out to the job sites wearing their work clothes and carrying their tools, and once they were hired, they showed up consistently on time and eager to work.
- The physical readiness and importance of being fit was consistently highlighted by interviewees. One woman, working as a sheet metal worker, noted that

she is physically small, but works hard to stay fit, including by doing lots of push-ups and other exercises to “strengthen her legs.”

- Those who had not been successful at securing union apprenticeships included completers who did not have transportation or had not completed a GED. In addition, there were completers who instead of going out into the workplace to build a network through face-to-face contact, had limited their job search to sending emails and resumes to prospective employers.
- Some interviewees explained that there is abundant work in their field at this time, which was not the case several months ago, a finding that underscores the cyclical

nature of construction work. These interviewees were recently-hired plumbers and roofers who noted that although they had initially gotten short-term assignments, there had either been others waiting for when they were done or the same subcontractor had hired them again for a different job.

- Some interviewees stressed the importance of the math preparation they had received, noting how the refresher had helped them do well on the apprenticeship math test and moved them up on the waiting list for work. This result was the case for apprentices now working as surveyors, electricians, and plumbers.
- While some interviewees had started their path to an apprenticeship being fully committed to one trade, others were considering changing trades even after starting their apprenticeship.
- Many interviewees noted how important it had been for them to get help from PGWIN with gas cards, tools, and union dues. Several interviewees also noted that they had continued to stay in touch with PGWIN for many months after completing the program.
- Many interviewees who had been successful at securing union apprenticeships noted that their training program included many participants who, in their opinion, did not have the motivation and persistence needed to get into an apprenticeship.
- Among those not yet in an apprenticeship, two interviewees explained how difficult it is to hold on to part or even full-time employment and find time to go to the job sites to keep the network going with prospective subcontractors.
- Several interviewees noted that they would have liked to have more subcontractors come to the class and speak and to also attend the job fairs.
- Several interviewees explained that they had taken the initiative – often with help from PGWIN or their instructors – to identify and complete additional training after completing the CPAP program.
- All the interviewees who had been successful at securing union apprenticeships and most of the interviewees still looking for apprenticeship opportunities underscored that while the program and support provided during and after the training had prepared them and provided them with access to a network, it was ultimately up to them to use translate these resources into a life-changing career opportunity.
- Almost all interviewees felt that the instructors had been a source of inspiration and great support. They emphasized the importance of the instructors having experience in the union or working in the field. The site visits to construction sites were also mentioned as important to help completers fully understand the requirements of the work place and to meet people who could help them find work.





### Participant Case Study 6

*“You have to keep up physically,” advises Miguel, a roofing apprentice. “It helped that I had the MC3 and OSHA 10 certificates [from the CPAP program] when I applied to the union,” he added. “It is pretty tough. I work from 5 am till 1:30 pm.” Miguel makes \$21/hour and will receive benefits in three months.*

## Integration of Implementation and Outcomes Analyses and Lessons Learned

LBCC delivered the 17 training sessions proposed in SOW, but enrollment, retention, and employment outcomes at the time when the evaluation concluded had reached only about half of the targeted outcomes goals presented by LBCC in its proposal to the DOL.

The previous pages have pointed to several explanations why the CPAP did not achieve its outcomes goals. Most importantly, the reorientation from TAA 1.0 to TAA 2.0 meant that the TAA 2.0 team only had half the originally projected time to achieve very aggressive outcomes goals. Furthermore, the construction industry is very complex and includes a wide range of stakeholders representing many different trades. It took time and tremendous effort on the part of the TAA 2.0 team to develop all the important relationships and to slowly achieve the reputation for being credible and capable of delivering to unions and employers a reasonable number of apprenticeship- and job-ready candidates. PGWIN proved an essential partner in this process, contributing critical connections, resources, and expertise to support the implementation of all program components.

The training track’s most impressive achievement was its adaptability to input from all stakeholders, including the evaluation team. The sections above document how each key component was changed and adjusted continuously in response to feedback and how, toward the end, LBCC had in place a training track that: (a) focused recruitment and outreach on individuals who were able to make the required commitment; (b) offered a training program that reflected industry priorities; (c) and supported completers with long-term and comprehensive job placement services that reflected the cyclical and complicated nature of the construction industry. The instructional team piloted a combination of LBCC instructors and individuals from industry, including several union veterans and a construction contractor. This combination of talent and industry expertise played a vital role in developing a credible and effective curriculum. The one training component that still needs attention if the program is

continued is math, which could benefit from additional contextualization and less online delivery.

For participants who showed the motivation and determination that was required to translate the training and other resources provided into an apprenticeship, the CPAP was a life changer. For those who were not ready for the level of commitment required or not sufficiently motivated, the program was not a good match.

At the end of the grant period, the TAA 2.0 CPAP, in the words of LBCC's Director of Workforce Development, Melissa Infusino, "*Put LBCC on the map as a credible provider of pre-apprenticeship programs.*" The connections and credibility the CPAP Program began to develop can likely be leveraged by LBCC's for-credit welding program. At the same time, there may be opportunities to continue the training with new industry or other funding, a possibility that the TAA 2.0 team is currently exploring. Finally, elements of the MC3 curriculum and expertise provided by the instructional team could potentially be injected into an introduction to construction and the trades course. In summary, there are many opportunities to move forward and use what was built with the DOL's investment to create additional programs that connect motivated job seekers who have barriers to employment with the region's rapidly expanding construction industry.

## Evaluation of Heavy Duty/Alternative Fuels Track

### Introduction to the Industry

New environmentally-responsive emissions standards have resulted in a shift to alternative fuels in Southern California's heavy duty vehicle fleets. In addition, public transit systems in the Long Beach area have begun to run their fleets on Compressed Natural Gas, or Liquefied Natural Gas (CNG/LNG) fuels. The Port of Long Beach, the second busiest container port in the US, is a major local employer that has imposed clean air requirements for any truck entering the Port. The implication is a sharp regional increase in the use of CNG/LNG truck engines.

LBCC's TAA 2.0 proposal to the DOL took its point of departure in the impact that the shift toward lower-emissions fuels will have on jobs in the alternative fuel and heavy duty vehicle maintenance sectors. The College's Statement of Work (SOW, submitted to the DOL by LBCC in November 2015) cited labor market data from the California EDD projecting by 2022 in LBCC's surrounding region a 14% increase in jobs for truck mechanics and diesel engine specialists. The proposal also noted that median wages in these positions are just under \$25/hour.

At the time the SOW was submitted, LBCC had already begun to respond to these industry needs with not-for-credit offerings in alternative fuels. The TAA 2.0 Alternative Fuel/Preventative Maintenance (Heavy Duty) training track sought to leverage the College's existing industry partnerships in Heavy Duty and to create a short-term, industry-certificated training program whose completers would be poised to obtain jobs generated by the region's expanding, low-emissions transportation sector.

## Target Population and Recruitment Approach

The proposed training track was intended to provide individuals who were technicians with the additional skills required to advance to become mechanics and to prepare those who were newer to the industry with the introductory skills required to be hired as technicians. Those with more experience were expected to be prepared at the end of the program for the Compressed Natural Gas (CNG) Fuel System Inspector Certification.

The SOW envisioned that partner Republic Services, a national recycling and solid waste management company, and other employers would refer workers to the training. To make this opportunity even more attractive, LBCC planned to customize the training to address each employer partners' specific processes/procedures for preventative maintenance since these might differ.

## Implementation approach

In the SOW, LBCC proposed an 80-hour, three-week training program that included pre-existing curriculum for the alternative fuels and new preventative maintenance curriculum that TAA 2.0 faculty would develop in consultation with industry and employer partners.

While for the PAC, PGWIN contributed to provide extensive and prolonged job placement support to training completers, the Heavy Duty training did not include collaboration with PGWIN.

## Proposed outcomes

LBCC proposed to run 15 cohorts with an average enrollment of 25 participants per cohort for a total enrollment of 375 individuals,<sup>7</sup> with 90% of participants completing the training (338). Among these completers, the College proposed a 90% credential obtainment rate (303), and a job placement rate of 75% (253).

## Heavy Duty Implementation Analysis: Fidelity of Implementation

The RP Group's assessment of fidelity of implementation in the Heavy Duty track was guided by the following inquiries:

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<sup>7</sup> The SOW narrative proposed 15 cohorts with 25 participants each. However, the SOW's Quarterly Training/Placement Plan identified a target of 16 cohorts with an enrollment of 400. In this evaluation, we are assuming the intent was to recruit 375 individuals as stated in the narrative section of the proposal.

1. Did TAA 2.0 deliver the 15 Heavy Duty sessions?
2. Did the Heavy Duty track engage employers, community partners, and other stakeholders in the program?
3. Who participated in the Heavy Duty training?
4. What changes were made in the implementation approach over time?

#### 1) DID THE HEAVY DUTY TRACK DELIVER THE PROPOSED 16 TRAINING SESSIONS?

Heavy Duty delivered 16 different modules with an average enrollment of 9 participants. Enrollment began to increase starting in January 2017, reaching a high of 23 during the last month of DOL grant-funded delivery in August 2017.

#### 2) DID THE HEAVY DUTY TRACK ENGAGE EMPLOYERS, COMMUNITY PARTNERS, AND OTHER STAKEHOLDERS IN THE PROGRAM?

Heavy Duty was originally launched with the expectation that the large national waste management corporation, Republic Services, would be a major partner. The TAA 2.0 team spent more than a year engaging in conversations with this corporation at a time when Republic Services was undergoing many internal changes, including changes in staffing (RP Group Stakeholder Interview, Heavy Duty, 7/19/2017). According to LBCC's Director of Workforce Development, Melissa Infusino, in retrospect TAA 2.0 "probably showed too much patience waiting for Republic to engage." (RP Group exit interview with Melissa Infusino, 8/11/2017).

In regularly scheduled evaluation meetings with the RP Group, the TAA 2.0 team provided updates on efforts underway to develop new curriculum and engage additional Heavy Duty employers. These conversations started as early as in January 2016 and included discussions of TAA 2.0's plans to hire consultants to reach out to potential industry partners and to host a September 2016 employer orientation and an October 2016 open house for industry.

The Heavy Duty track launched as an 80-hour training program in March 2016, but the program management paused the program for 5 months in August 2016 to redesign the program in response to challenges recruiting participants. Heavy Duty was launched a second time in January 2017 in a new, modular format, leaving LBCC with only seven months left of implementation for this program. At that time, with new TAA 2.0 Program Manager, Brett Dickstein, in place and with CPAP well into its implementation phase, the TAA 2.0 team launched a major effort to engage additional Heavy Duty employers (Interview w. Dickstein, 8/8/17).

To support this employer outreach, Modern Times was assigned to serve as the business liaison in the Heavy Duty field. Modern Times had originally been hired by TAA 2.0 to help engage union leaders and employers from the construction industry, a sector in which the organization had many newly established contacts. In March 2017, TAA 2.0 redirected Modern Times to focus on Heavy Duty instead of CPAP (RP Group interview with Danielle Lew from TAA 2.0 Partner Modern Times, 7/31/2017).

Shortly thereafter, Modern Times began to plan a Heavy Duty career fair and invited representatives from the region's waste management, truck rental, and other Heavy Duty companies to the event.

Eight employers attended the first career fair (July 2017) which introduced Heavy Duty training completers from past and current TAA 2.0 cohorts to industry representatives. At a subsequent career day (August 2017), seven employers attended.

While PGWIN, TAA 2.0's original implementation partner, focused mostly on supporting CPAP participants, the organization also helped alert employers to TAA 2.0's Heavy Duty track, encouraging them to consider hiring completers and attend the career fairs (RP Group exit interview with Salvador Barajas, 8/28/2017). In this way, Modern Times and PGWIN both played a key role in increasing awareness among the region's employers about TAA 2.0's Heavy Duty training program. Moreover, at the career fairs, PGWIN introduced to participating employers opportunities for subsidized employment through programs such as On the Job Training (OJT) and Worker Experience (WEX). PGWIN and Heavy Duty also both provided career guidance and support to CPAP and Heavy Duty participants, which at one point led to some overlap and confusion among participants. As an example, an interviewee from Modern Times recalled how at one time PGWIN and Modern Times both held office hours for CPAP and Heavy Duty participants (7/31 interview with Ms. Lew).

The CC-Long Beach, one of the two CBOs that partnered with TAA 2.0 in the CPAP track was also a partner with Heavy Duty, a collaboration that was formalized when in April 2017, CC-Long Beach signed a contract with LBCC to deliver orientations and recruit CC-Long Beach members into the Heavy Duty program. This collaboration extended through the completion of TAA 2.0. In an interview with the RP Group (8/2/2017) Kedrin Hopkins, CC-Long Beach Director of Operations expressed enthusiasm about the training opportunity, commenting that he had personally driven 20 CC-Long Beach clients to LBCC to participate in a Heavy Duty module. The operation's manager also commented that LB-CC referrals who succeeded in completing the Heavy Duty module(s) attended the graduation wearing clothes LB-CC had helped them purchase.

In exit interviews (see Appendix 3), TAA 2.0 team members expressed some concern about difficulties they were experiencing with some of CC-Long Beach client referrals. The challenges were similar to those experienced by CPAP with unresolved differences between TAA 2.0 and CC-Long Beach about participant requirements in areas such as punctuality and class participation and engagement. As noted earlier, while the CBOs saw themselves first and foremost as advocates for the clients they referred, the Heavy Duty program needed

participants who were, if not fully job-ready, then at least very near reaching this level of preparation. In addition, according to the TAA 2.0 Heavy Duty team, the clients CC-Long Beach referred to the training had recently been employed at CC-Long Beach and the CBO may therefore have lacked a strong incentive to place them into other jobs.

### 3) WHO PARTICIPATED IN THE HEAVY DUTY TRAINING?

Table 16. Heavy Duty participants by Gender, Ethnicity, and Other Background Characteristics<sup>8</sup>

Characteristics	All		Non-ETP Participants		ETP Participants	
	Count	Percent	Count	Percent	Count	Percent
Female	6	4%	6	5%	0	0%
Veteran	11	7%	9	8%	2	4%
Ethnicity						
Latino	87	54%	55	48%	32	68%
Black/African American	33	21%	30	26%	3	6%
White	21	13%	18	16%	3	6%
Asian	5	3%	3	3%	2	4%
Multiethnic	2	1%	2	2%	0	0%
Other/Unknown	13	8%	6	5%	7	15%
Total	161	100%	114	100%	47	100%

Table 16 presents demographic and background information about the Heavy Duty participants. Latino and African-American participants combined to represent 75% of the 161 participants so the Heavy Duty program succeeded in enrolling and serving these two target

<sup>8</sup> LBCC and partner, Modern Times, shared responsibility for documenting and tracking Heavy Duty participation and outcomes, which differs from the method used in PAC where PGWIN used a well-established client management and tracking system to document participant progress, including after program completion.

groups. Latino participants represented more than half of the participants (54%), with African-American participants comprising 21%. The representation of female participants in this male-dominated sector was low (4%). Participation by gender, ethnicity and other background characteristics for each Heavy Duty module is depicted in Appendix B.

Just under 30% of the participants were incumbent workers whose participation was partially supported by the California Employment Training Panel (ETP), a California state program that uses financial incentives to encourage employers to upgrade the skills of their workforce. One reason for the large representation of Latinos overall was the fact that 68% of ETP participants were Latino. In contrast, African Americans had a very low participation rate among ETP participants (6%) compared to their overall representation in the training program.

As depicted in Table 17, over half (55% of 88) of the Heavy Duty participants were unemployed or underemployed when they entered the training. The remaining 45% (73) were employed.

Table 17. Heavy Duty participants' Employment Status and ETP Sponsorship Upon Entry

Employment status at program entry	All		Non-ETP Participants		ETP Participants	
	Count	Percent	Count	Percent of employed	Count	Percent of employed
Employed	73	45%	26	36%	47	64%
Unemployed or underemployed	88	55%	100% of these participants were employed upon program entry			
Total	161	100%				

As described in Table 18 below, while the age range was large, spanning from 18-59 years of age, most Heavy Duty participants were in their early- to mid-thirties. Overall, the average age for the 161 participants was 33. The Non-ETP participants were younger than ETP participants (31.7 average age for non-ETP compared to 37 average age for ETP participants).

Table 18. Heavy Duty Participants by Age and ETP Status

Characteristic	All		Non-ETP Participants		ETP Participants	
	Mean/Median	Range	Mean/Median	Range	Mean/Median	Range
Age	33/32	18 to 59	31.7/30	18 to 58	37.1/37	20 to 59

Additional information about the participants is suggested through the participant exit survey, although the response rate was only 28% (45 individuals). The survey respondents were highly diverse in terms of their employment situation, which included 10 individuals who were not

working, and six participants who identified “The Conservation Corps” as their occupation. The respondents also included incumbent workers in positions ranging from pickers and scrap metal separators to heavy duty mechanics, as well as employees from a range of other occupational areas such as food service and security.

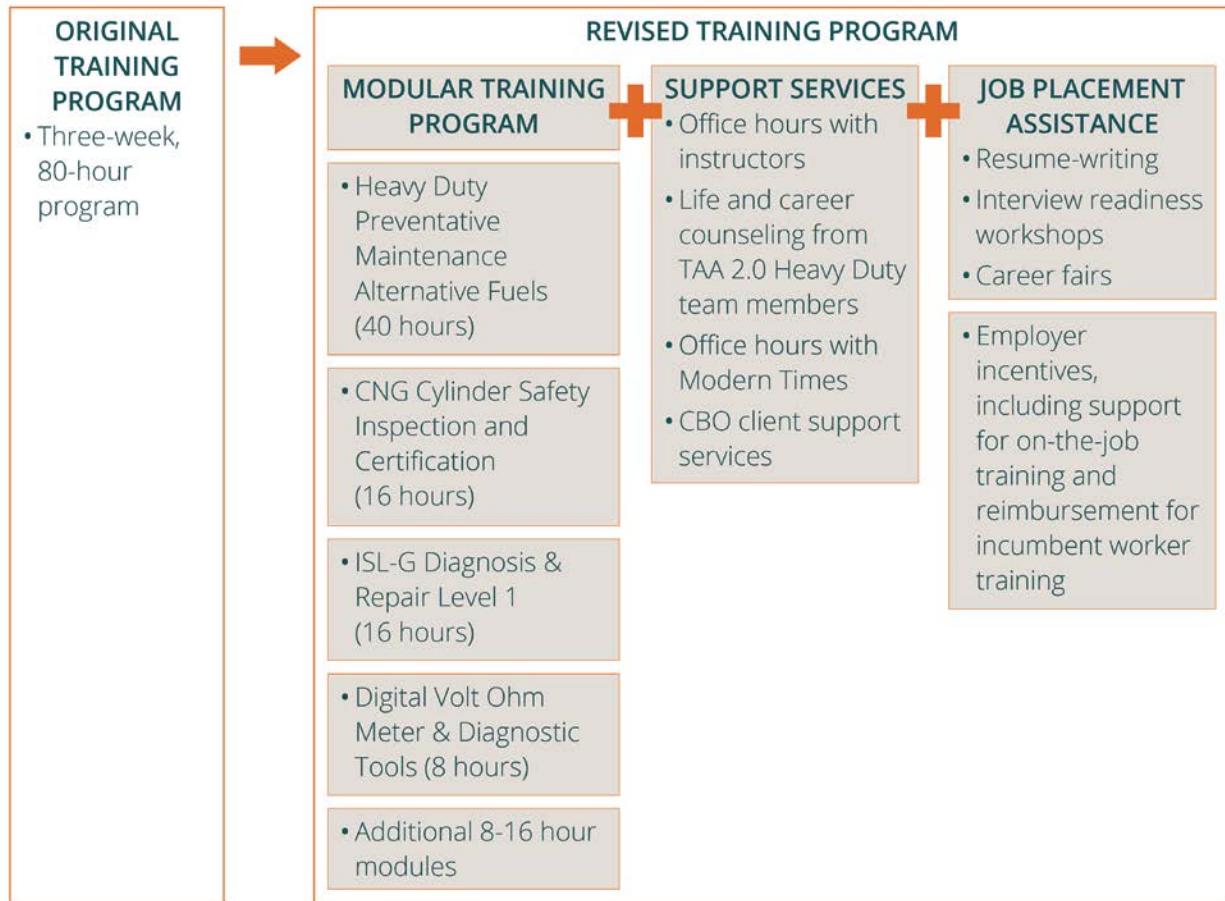
In terms of prior knowledge about Long Beach City College, more than half of the survey respondents (24 or 53%) indicated that they had not known before taking the Heavy Duty module that “LBCC offers training relevant to me.”

#### 4) WHAT CHANGES WERE MADE IN THE IMPLEMENTATION APPROACH OVER TIME?

As was the case with the CPAC, the TAA 2.0 team showed great flexibility and entrepreneurship in modifying the Heavy Duty track in response to input from employers, participants, Modern Times, PGWIN, and the external evaluator. The section below describes how each program component was improved and adjusted during the last seven months of grant implementation, when the training track replaced the original three-week 80-hour delivery for a new and modular format.



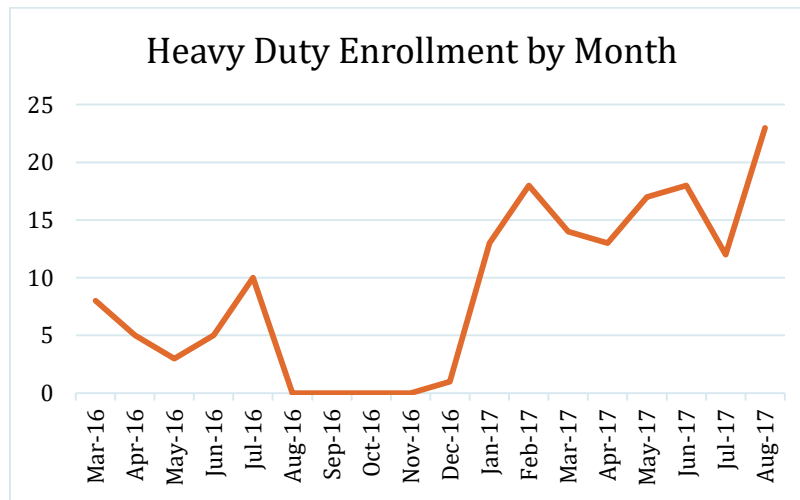
Figure 9. The Evolution of the Heavy Duty Program Design



These components were created and added as the program developed.

As Figure 10 below depicts, increases in enrollment began to occur almost immediately after the modular delivery replaced the original 80-hour course.

Figure 10. Heavy Duty Participant Enrollment by Month, March 16-August 17



### *Recruitment and Orientation*

In March 2016 in an evaluation meeting with the RP Group, the TAA 2.0 team explained their intent to engage community-based and veterans’ organizations in recruiting participants for Heavy Duty. Additional approaches to recruitment already in progress at that time included bus ads, social media, canvassing in churches, and flyers posted in laundromats. Six months later, in September 2016, the team engaged industry consultants who had worked in the Heavy Duty sector for decades to support recruitment of participants and engagement of industry partners. Subsequently, when the TAA 2.0 team was given the green light by the DOL to recruit and serve incumbent Heavy Duty workers, recruitment efforts focused on conveying to employers the value of the training and the fact that the modules were subsidized by a combination of DOL grant and California Employment Training Panel support. The TAA 2.0 team also sought to recruit to Heavy Duty participants in CC-Long Beach and engaged this CBO as a sub-contractor to the program. Several CC-Long Beach clients did enroll, although TAA 2.0 and the CC-Long Beach experienced challenges communicating effectively about recruitment requirements.

### *Training Program*

The training program was introduced as an 80-hour course to be delivered over three weeks. The RP Group and TAA’s employer partners noted that the delivery format would make it difficult for anybody who had to work to enroll. Additionally, a modular approach would make the track more appealing to employers interested in short-term training to upgrade the skills of their incumbent workers. The transition to modular delivery was made in January 2017 with a 40-hour core training called Heavy Duty Vehicle Preventative Maintenance delivered as five 8 hour classes and a continuously growing number of additional modules requiring 8-24 hours of instruction. TAA 2.0’s Dickstein explained that the training program “provided stackable credentials.” (written comment from Dickstein 9/26/2017) allowing completers of the 40-hour core training to take 1-2 day courses in Alternative Fuel Systems (e.g. CNG Cylinder Safety) and Electrical (e.g. DVOM) that earned them additional certificates and credentials.

The curriculum included repackaged and new content, all industry-guided. Instructor Mark Adair noted in an interview with the RP Group (6/29/17) that he typically spent 15-20 minutes lecturing about the skills participants would spend the rest of the day learning and practicing. “I want them to know what it is like to work a regular 8-hour day,” he explained.

### *Support Services*

Modern Times provided office hours and the participants could also attend office hours with the instructors. In addition, many participants came to rely on Workforce Development Training Coordinator, Maria Andrade-Hernandez for counseling and encouragement. One participant interviewed by the RP Group called Ms. Andrade-Hernandez, “my cheerleader.” Another participant interviewed commented that Ms. Andrade-Hernandez and the instructor played a pivotal role in helping her build up her confidence and feel ready to “go out there [to look for employment].”

### *Job Placement Support*

As it became apparent that Heavy Duty participants needed assistance getting ready for interviews and to find employment opportunities, several additional supports were added to Heavy Duty. These included an optional 3-hour resume writing and mock interview session offered to all Heavy Duty module completers by Modern Times and also provided by TAA 2.0’s own Workforce Development Training Coordinator, Maria Andrade-Hernandez. Modern Times also organized two Heavy Duty career job fairs that combined attracted approximately twenty employers. To connect past participants with the opportunity of the career job fairs, Modern Times tried to reach these individuals through emails, texting, and telephone calls. Modern Times Marketing & Communications Coordinator, Danielle Lew explained in an interview with the RP Group (RP Group interview, 7/31/2017) that it was almost impossible to get through to the past participants who did not know her. By contrast, Ms. Lew added, efforts carried out by members of the TAA 2.0 team, and especially Ms. Andrade-Hernandez were much more successful. “They have to see a name they trust and recognize [on the email]” she observed (RP Group interview, 7/31/2017). In a related point, PGWIN’s Sal Barajas commented that “it is essential to stay with the participants from the beginning to the very end if you want to have a real impact and have your advice count” (RP Group exit interview with Salvador Barajas, 8/28/2017).

The final type of job placement support was the opportunity of employer subsidies. Two types were offered. One was for incumbent workers who could be supported by an Employment Panel Training grant LBCC had entered with the State of California. The other type of subsidy was offered through PGWIN to employers hiring incoming job seekers who qualified for on-the-job subsidies. While the former subsidy probably helped increase participation of incumbent workers in Heavy Duty, companies such as Jiffy Lube and Universal Waste Systems signed up for the latter subsidy program.

## Heavy Duty Implementation Analysis: Training Participant Satisfaction with the Heavy Duty Training

Participant satisfaction was assessed through a participant survey conducted at the end of each training module (see Appendix 8 for a summary of Heavy Duty modules by enrollment and participant background and characteristics) and through a focus group conducted in July 2017. The following section presents findings from each of these evaluation activities.

### Methodology

The RP Group collaborated with the TAA 2.0 team and Heavy Duty instructors on the participant survey, which was designed to document participant satisfaction with the training. Over time, the survey was updated multiple times as additional training modules were added and new sessions scheduled.

Survey implementation launched March 2, 2017, and responses were collected through August 19, 2017. The number of surveys collected increased greatly each month, from 1 survey in March to 21 surveys in August. Overall, a total of 45 complete survey responses were received, which represents 28% of the 161 participants. However, it should be noted that some individuals may have taken the survey more than once as they completed different modules.

As was the case with the CPAP track, survey implementation was not consistent. While 27 surveys were completed by participants in the 40-hour Heavy Duty Preventative Maintenance Alternative Fuels core module, survey completion in the other modules was very limited. Two modules, SA Recycling (customized for the company called SA Recycling) and Compressed Natural Gas (CNG) Cylinder Safety Inspection and Certification, generated five survey responses each. Between one –and three surveys were collected from each of four other modules, while no surveys were collected from the remaining six modules.

### Participant Satisfaction: Survey Highlights

Survey respondents were extremely satisfied with their Heavy Duty training experience. All 45 respondents indicated they were “very likely” (82%) or “likely” (18%) to recommend the module they had attended to others. When asked why they would recommend the program to others, the participants’ responses included:

*I would recommend the training module because I learned a lot in a short period of time. I think the teaching system works really well. I came into that class with little to no knowledge and I now feel that I have a good grasp on DVOM's and great insight into the industries where that knowledge can be applied.*

*Where else can you get actual training from experts in their field before you interview for positions so that you can have an advantage over other entry level applicants AT NO COST.*

In response to an open-ended question about what participants liked best about the training, two themes emerged: 20 survey respondents (44%) pointed to the emphasis on hands-on learning, while nine survey respondents (20%) pointed to the quality of the instruction and/or to the dedication and vast knowledge the instructors brought into the classroom (20%). The respondents' comments included:

*The instructor Mark Adair explained all about the training [and] answered all our questions. Best of all the hands on training was very great.*

*The hands on training by the instructor providing great knowledge and safety rules.*

*[I liked best] the way the teacher taught us and went into depth and never had a problem explaining himself several times.*

*The instructor has a great knowledge and covered everything.*

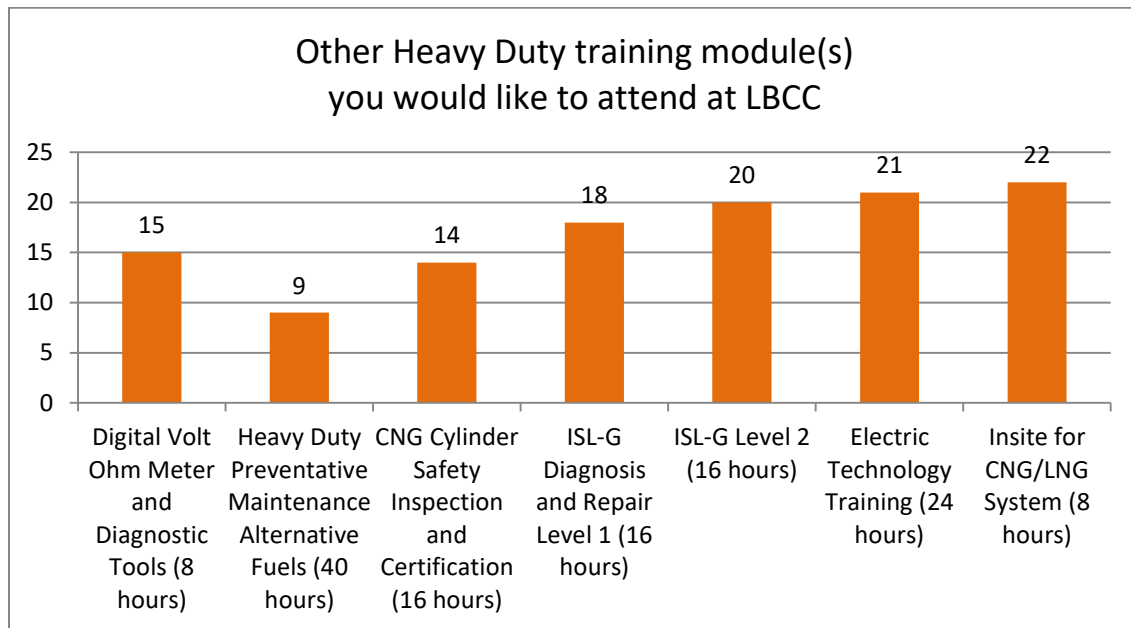
Responding to a question about their satisfaction with the instructors' approach to teaching, 87% (39) respondents indicated they were "very satisfied," while the remaining 13% (6) were "satisfied." Even more participants (91% of 41 respondents) were "very satisfied" with the instructors' knowledge of the subject, while the remaining 9% (4) were "satisfied." Overall, 78% (35) of the participants responding to the survey indicated they were "very satisfied" with the training; 18% (8) were "satisfied," and 4% (2) were "not sure."

Just over half of the respondents (51% or 23) indicated they enrolled in the training to "become more competitive as a job applicant," while just over one-fourth of participants (27% or 12) completed the training hoping to advance in their current job. Among the 18 workers (40% of respondents) who indicated they took the training because their employer asked and/or paid them to do so, half (50%) indicated they enrolled to advance in their current jobs, while one third (6) hoped to become more competitive as a job applicant.

Among the respondents, 13 heard about the training from their employers, nine learned about it from a flyer, and eight from the LBCC website. A total of six survey respondents were referred by PGWIN.

As depicted in Figure 11, survey respondents showed great interest in attending additional Heavy Duty sessions at LBCC. When asked to indicate which additional trainings they were interested in attending, more than 20 participants identified Insite for CNG/LNG System (22) and Electric Technology Training (21). The only module that was checked as an additional training option by fewer than 10 respondents was the Heavy Duty 40-hour core module, which most survey respondents had already completed (see Figure 11).

Figure 11. Heavy Duty Participant Survey Findings: More Training Wanted!



## Participant Satisfaction: Focus Group Highlights

In July 2017, the RP Group conducted a focus group with three Heavy Duty completers and three individuals currently enrolled in a Heavy Duty module. The focus group participants, like the survey respondents, expressed a high level of satisfaction with the training. In terms of suggestions for how to improve the training, focus group participants asked for more explicit guidance on what to do at the end of the training, and a more expansive range of job placement support services. Among these six focus group participants, two had received job offers, including one who had recently attended a career fair where she had met and spoken with several prospective employers.

## Outcomes Analysis Heavy Duty Track

Table 19 below juxtaposes for the Heavy Duty track the target participant outcomes to actual participant outcomes. In considering these outcomes, the reader should bear in mind that TAA 2.0 had about half the time to meet outcome goals proposed for TAA 1.0 that were intended to be accomplished over a three year period. Moreover, the initial implementation period for Heavy Duty (March 2016-December 2016) included a five month hiatus. When the modularized Heavy Duty track started up again in January 2017, only seven months remained in the grant period. Due in large part to these delays and to the changes in program delivery to a modular format, the outcomes outlined in the grant proposal were not fully achieved in terms of participant enrollment and completion. Furthermore, after only seven months of modularized training delivery, it is too early to meaningfully report on employment outcomes achieved by the first cohorts of training participants.

Table 19. Heavy Duty Participant Outcomes

Outcome	Target outcomes	Actual outcomes	% Target Achieved
Enrolled	375	161	43%
Completed	338	138	41%
Earned credentials	303	37	12%

Despite the delayed program implementation, 43% of the Heavy Duty enrollment goal, 41% of the completion goal, and 46% of the credential goal were achieved. These data, combined with the growing number of employers interested in hiring from and having incumbent workers trained by the program, suggest that the enrollment and completion goals could have been achieved had Heavy Duty launched in January 2016 as a modular program serving both incoming and incumbent workers.

## Outcomes in the Participants and Employers’ Own Perspectives and Voices

Participants in the modularized version of Heavy Duty had not had much time to find training-related employment by July 2017, when the RP Group conducted interviews with completers from both TAA 2.0 tracks. Two Heavy Duty program participants among the five contacted responded to the invitation to an interview. Both were women, a group underrepresented among the Heavy Duty participants. The RP Group supplemented the information collected in phone interviews with these two participants with additional phone interviews conducted with Heavy Duty employers. Both the program participants and the employers interviewed were identified by the TAA 2.0 team at the request of the external evaluation team.

### Program Participant Case Studies

The following section presents two case studies that are composites from interviews conducted with Heavy Duty module completers. It should be noted that these case studies are not meant to be representative of all Heavy Duty participants and completers. However, the case studies offer the opportunity for the reader to “meet” two sample participants in the program who both happen to be women. The participant names are pseudonyms used to protect the interviewee’s privacy.

#### Program Participant

Maria worked for several years in restaurants and at Home Depot. Her jobs did not pay much and she had no benefits. She went to PGWIN and they referred her to TAA 2.0. She interviewed with TAA 2.0 Workforce Development Training Coordinator, Maria Andrade-Hernandez, who according to Maria, *“Was very helpful and made it clear to me that there was an opportunity for me to get free training – but that it was up to me to make the best of this opportunity.”* Maria had always loved to *“mess around with my uncle’s cars”* and she decided to enroll in the Heavy Duty 40-hour core module. She liked it so much that she continued to take several additional modules and earned a Level One Digital Volt Ohm Meter certificate. *“I want to become a mechanical technician. That is my goal,”* she said. Maria got help from PGWIN to develop a new

resume. She brought her resume and “elevator speech about her career goals” to the Heavy Duty career fair and was offered a job by Penske. While she will not initially be using her technical skills in her new job ordering parts, she has vowed to learn all she can about all the parts and tools. She will start at \$18/hour and will qualify for benefits after 90 days. Maria said the modular delivery worked really well for her since the flexibility meant she could continue to work while taking classes. Maria summed up by saying, *“Everybody, the teacher and Maria told us that it was up to us to believe in ourselves and not give up. Some people in the classes did not take it as seriously as they should have.”*

#### Program Participant

Serena took the 40-hour Preventative Maintenance core module and two other shorter modules. *“The instructors are great and Maria [Andrade-Hernandez] is my cheerleader,”* she said. Serena worked on motorcycles and cars all her life and would love to work for the City of Long Beach. Serena is thinking she could become “a parts person” at first. *“I’m thinking of taking a welding class at LBCC, but I really want to get to work soon,”* she explained. Serena said she went to the Heavy Duty career fair. *“I was offered a job, but it didn’t pay enough,”* she said. Serena hopes to meet more employers at the next career fair.

#### Interviews with Heavy Duty Employers

In addition, interviews were conducted with five employers and a representative from a union-supported group that trains, tests, and facilitates the hiring of operating engineers (see Appendix 3 for a list of Heavy Duty stakeholder interviewees). Four employers were from private industry representing waste management, truck rentals, and shredding. The remaining employer was from the City of Long Beach. Below are quotes combined with key points from these telephone interviews:

*“We sent two people to the Heavy Duty training. We have another ten that I’d like to send to the 40-hour preventative maintenance course”* The employer added that the industry needs job seekers who can work with hydraulics and diagnostic tools. There is also a great demand in the industry for welding skills, the employer explained. The employer identified two major companies that he is certain need mechanics (Harbor Diesel and Equipment and Boeing), adding that *“lots of other companies [also] need mechanics.”* The employer pointed to the career path open to motivated job seekers. The starting point, he explained, is as a mechanic’s helper, a position that pays around \$23/hour. Then you advance to become a mechanic making \$34/hour. The employer explained that there are so many people in the industry that are retiring or working beyond retirement age. As a result, he noted, there will be lots of openings and opportunities for job seekers who are *“motivated, willing to learn, and not afraid to get their hands dirty.”*

-- Regional general manager from recycling company



*“The City of LA wants us to hire local talent and we are looking to set up an apprenticeship in Southern California. LBCC may be a good partner in this.”* The interviewee explained that the industry offers career opportunities for motivated and committed job seekers. He presented the steps on the career path as follows: workers start as technicians, then become senior technicians, and then a fleet manager. Entry level is about \$20/hour, the employer added.

--Representative from national waste management company

We have more openings than candidates, but there are not enough people with an interest in technical jobs. I went to the [TAA 2.0] career fair. It was very organized and I spoke with about half of the people from the program [the program completers]. They seemed very motivated.

The employer also noted that although his company operates its own training program, they like to see people coming in with some training in addition to a high school diploma. The employer explained that while some of the company's other community college partners offer more advanced classes, LBCC's modular approach helps incumbent workers brush up their skills. *“We are always trying to get our associates to take courses,”* the employer added, explaining that it is advantageous to have training participants take classes where they learn using the same equipment they use in the workplace. The employer suggested that: *“LBCC may want to talk with our area manager about getting a donation of industry resources.”*

--Representative from national truck rental company

We want to hire local talent and we are worried about our aging workforce. Finding mechanics is hard. We have about five openings coming up during the last months of this year.

This point was made by a representative from a local waste removal company who also explained that while the industry wants candidates to come with soft skills, the technical side is critical. He provided an example: *“If they [the workers] don't know how to do [the technical side of the job], they cannot pick up the trash. We test them out as part of our internal training to see if they can work under a trash truck.”* The employer stressed that his local company is more flexible than the larger, national waste removal companies. He observed that even though it may seem more attractive to institutions like LBCC to form partnerships with larger, national companies there are advantages to working with smaller, local companies. To underscore this point, he added that: *“We are better [than large, national companies] at working locally with government contracts that are contingent on local hiring.”*

--Representative from local waste removal company

A representative from the City of Long Beach Fleet Services noted that his division recently hired 15 entry-level mechanics and that they are still looking for welders. While many other employers are struggling to fill openings for these kind of jobs, the interviewee noted that *“the City of Long Beach has a long lists of applicants because everybody wants the security and benefits of working for the City. So while everybody else is scrambling [to find mechanics] ...that is not a problem for us”* The City of Long Beach representative explained that four of his employees are enrolled in a Heavy Duty module and that the plan is to send all incoming entry-level employees to the [TAA 2.0] 40-hour training. The employer added that the City of Long Beach’s Fleet Services *“...had input on the [TAA 2.0 Heavy Duty] curriculum.”* He added that he likes the Heavy Duty career fairs.

--City of Long Beach Fleet Service representative

## Integration of Heavy Duty Implementation and Outcomes Analysis

While the implementation started late in the course of the grant period and the proposed outcomes were not fully achieved, Heavy Duty’s final months of performance indicated that the track has potential to attract job seekers and generate interest from industry, which is especially the case because, as LBCC’s Workforce Development Training Manager, Dana Friez pointed out in an exit interview, *“The field of alternative fuels is robust.”* Ms. Friez also underscored that *“35% of the industry technicians could retire tomorrow and many are working past retirement,”* and noted that several high school programs that used to prepare students for careers as technicians and mechanics have closed down. (RP Group exit interview with Dana Friez, 8/8/2017)

The employers interviewed confirmed their interest in the training and two of the interviewees also expressed concern about the aging workforce and about the fact that *“young people are not interested in technician positions.”* (See Appendix 3 for a list of Heavy Duty employer interviewees)

LBCC’s not-for-credit program has offered incumbent worker training for Heavy Duty companies for several years and was well-established before TAA 2.0 was launched. The TAA 2.0 Heavy Duty modules can be integrated into this suite of offerings and presented to employers who either are looking to upgrade their existing workforce or hire new talent.

LBCC is one of very few community colleges in the region that offers short-term, not-for-credit training in heavy duty/alternative fuel. The placement of these offerings in the College’s not-for-credit division means that LBCC has the capacity to quickly respond to changing industry priorities. This flexibility is especially important at this time, Ms. Friez explained, because the alternative fuels sector continues to change with new innovations that drive the need for training (exit interview 8/8/2017).

In contrast, the for-credit technician training programs offered by most of the region's other colleges cannot deliver this kind of market responsiveness, as it can take years to change curriculum and for-credit programs do not have capacity to offer short-term training.

However, in considering what is required to sustain the momentum that was just starting to take off when the evaluation concluded, LBCC will have to find a way to support a position that can continue to develop and expand partnerships with the wide range of employers that are interested in hiring alternative fuels and preventative maintenance technicians and mechanics. The employers interviewed who had attended the job fairs hosted by LBCC for Heavy Duty spoke with enthusiasm about the opportunity to meet job candidates in one place at one time. This interest raises the question of whether these events can be continued or delivered in collaboration with partners who could share the cost of both planning and implementing the events. As a first step in this process, LBCC may consider assessing Heavy Duty employers' projected demand for entry-level workers and the number of mechanics and operating engineers they anticipate they will need to hire during the next two years. The RP Group is recommending such an assessment since it was unclear from the interviews we conducted, whether (a) there is a substantial need for entry-level workers; and (b) what kind of training major employers provide to entry-level workers.<sup>9</sup>

Finally, while the path from training to employment is shorter for most completers than the equivalent path for the CPAP completers, and less preparation is needed for entry-level jobs than what is required in most apprenticeships, the program needs to ensure that those who participate are ready and motivated to follow through once the training has been completed. Again, the challenge is similar to what the CPAP track confronted and to the lesson learned: It is important to invest resources in the orientations and interviews. Additionally, staff time must be invested to retain contact with program completers who need to be contacted on a regular basis and provided with job leads, job counseling and other resources that can support and intensify their search for training-related employment.

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<sup>9</sup> In reviewing this report, LBCC noted (9/26 written comment from TAA 2.0's Dickstein) that *"The majority of employers who attended the career fairs told LBCC that they needed entry level techs and they had their own training programs, both formal and on the job training. Most cared more about finding reliable talent that could learn on the job vs subsidies available to them."*

# Conclusion

## Context

It is important to remind the reader that the evaluation report presented in this document focused exclusively on the TAA 2.0 training tracks. Before TAA 2.0 was launched in January 2016, approximately 18 months of time and effort had been dedicated by LBCC to TAA 1.0, an initiative designed to provide TAA-eligible residents of Long Beach with opportunities to enroll in for-credit, career pathways preparing them for employment in engineering technology.

When TAA 1.0 was reoriented to TAA 2.0, only 15 months of implementation remained in the grant. The grant was subsequently extended by five months to a total of 20 months as TAA 2.0 was awarded a no-cost extension.

With this extension, TAA 2.0's implementation was scheduled to conclude in August 2017. The evaluation, originally scheduled to complete data collection in September 2016, was extended twice to mirror the extended TAA 2.0 implementation period and to capture as much data as possible from training tracks that had only recently been launched. In the end, and with new data generated by Heavy Duty in early August 2017, the evaluation concluded data collection for CPAP in July 2017, but included for consideration in the data analysis Heavy Duty enrollment and survey data from early August 2017.

The TAA 2.0 program's achievements and progress made toward the outcome goals should be considered in the light of the time period the program was active. Furthermore, the program outcome goals originally proposed for TAA 1.0 were carried over to TAA 2.0 even though the training and targeted industries were different and despite the fact that half of the grant period had passed before the DOL approved start-up of TAA 2.0. Finally, because of the late start-up and the fact that many participants only completed the training tracks in 2017, the employment impact presented in this report is only preliminary. This limitation is especially the case for Heavy Duty, which only launched the modular approach in January 2017.

With this context in mind, the conclusion begins with a brief recap of the implementation and outcomes analysis across the two tracks. This overview is followed by a discussion of lessons learned.

## Implementation Analysis

Both tracks showed great flexibility and responsiveness in continuously adapting the training track components in response to input from stakeholders. The speed of these changes were possible because the tracks were offered by the college's not-for-credit arm and because TAA 2.0 was guided by a culture of entrepreneurship.

43 survey respondents (38%) pointed to the hands-on activities. This response was followed by expressions of satisfaction with the instructors (17 respondents or 15%), specifically Exit surveys revealed that program participants were very satisfied with the training they received,

praising the course materials' real-world applications and the quality of the instruction. In responding to an open-ended question about what they liked most about the training, 38% of CPAP respondents pointed to the hands-on activities. This was followed by praise for the instructors, identified by 15% of respondents as their favorite part of the program. The Heavy Duty survey found an almost identical pattern. While 44% of survey respondents identified as their favorite course feature the heavy emphasis on hands-on instruction, the second most popular course feature (20% of survey respondents) was the dedication and vast knowledge the instructors brought into the classroom.

The partnerships with partners PGWIN and Modern Times played a key role in providing the job placement assistance and, in the case of PGWIN, long-term support to program completers. At times, the two subcontractor partners duplicated each other's efforts, but for the most part they were highly effective in supporting participants while at the same time reaching out to employers and union representatives. However, it is expensive to sub-contract with external partners to provide case management and job placement support and the approach raises the question about how these supports and services can be provided to future participants, should the training components be extended. One possibility, as the Director of Workforce Development, Melissa Infusino, suggested in an exit interview, is for LBCC to build the internal capacity to deliver more robust job placement services – which they will in fact be able to do with new California Strong Workforce funding. In contrast, Infusino suggested (exit interview 55), LBCC and other community colleges are not equipped to effectively provide case management support, a responsibility better handled by external partners.

CPAP made great progress in building credibility with union representatives. Work still needs to be done to fully engage the construction subcontractors who play such an important role in hiring. Heavy Duty spent too much time waiting for one major employer to engage. When the TAA 2.0 team finally decided to approach other employers, the result was encouraging. In interviews with the RP Group, a range of different types of heavy duty employers expressed strong interest in the training.

## Outcomes Analysis

As Table 20 below depicts, the SOW overall outcome targets were largely not met. However, the programs picked up pace in terms of recruitment and training in the second half of the implementation period. If TAA 2.0 had launched CPAP in June 2014 instead of in January 2016, and if the pace of recruitment and training in the second half of the implementation period had been maintained throughout, this training track would have been very close to hitting, and possibly even exceeding, its original targets. While it was too early to tell whether Heavy Duty would continue to sustain the surge in enrollment and partnerships that began in late spring 2017, the employer interviews suggested that local industry is very interested in the Heavy Duty modules.

Table 20. Grant Areas of Inquiry, Performance Targets, and Performance Outcomes

Grant Areas of Inquiry	SOW Target	CPAP Participants	Heavy Duty Participants	CPAP + Heavy Duty Participants	CPAP + Heavy Duty Participant as a % of SOW Target
Served	825	243 <sup>10</sup>	161 <sup>11</sup>	404 (including 26 in progress when data collection ended 7/31/2017 <sup>12</sup> )	49%
Completed training	743	187	138	325	44%
Earned credentials (MC3, OSHA, CPR, DVOM)	622	189	37	226	36%
Enrolled in additional training	38	14	this data was not collected	14	37%
Employed	558	137	76	213	38%
Retained jobs after three	390	Too early to tell due to limited time between program launch and grant completion			

<sup>10</sup> Cohort 17 (n=20) had not finished at the time of final data access. It is included in the final count of those served but not in the count of those completing the training or other reported outcomes.

<sup>11</sup> Six participants were still enrolled at the time the data was accessed for analysis (8/28/17). These participants are included in the final count of those served but not in the count of those completing the training or other reported outcomes.

<sup>12</sup> With 20 individuals from the CPAP Cohort 17 not finished and with 6 participants still enrolled in a Heavy Duty module at the time the data was collected the total number who had finished the two tracks was 404 and the total number who had finished the training was 378.

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quarters

Wage increase	100	72 <sup>13</sup>	3	75	75%
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Furthermore, interviews with program completers documented that both training tracks had the potential to change lives for highly-motivated and persistent individuals who used the many resources TAA 2.0 provided to land jobs that have built in career ladders, paid-for training and benefits.

## Next Steps

As LBCC moves forward to explore how the relationships and infrastructure developed for each track can most effectively be parlayed into additional training opportunities, there is in place a strong foundation upon which the next generation of TAA programs can be designed and implemented. The effort to leverage new funding for both training tracks is already well underway and the next section identifies the lessons that were learned and that the RP Group hopes LBCC—and other community colleges—will incorporate into the design and implementation of future workforce development programs.

## Lessons Learned

There is growing interest in short-term, industry-driven certificate programs that respond to regional workforce needs and priorities. Many community colleges see the opportunity to offer these kind of programs, but struggle with design and implementation. As the present report and LBCC’s experience demonstrates, it is challenging for an institution whose norm is to deliver semester-long courses that change little over time to turn around and develop a program that is driven by industry priorities and subject to continuous adjustments. The following section highlights some of the many lessons that LBCC and the TAA 2.0 team and its partners learned in the process:

*A tight labor market translates into more participants with serious barriers to employment.*

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<sup>13</sup> Includes those with reported pre-post wage data (n=21) as well as those who went from unemployed to employed (n=51).

LBCC's Director of Workforce Development, Melissa Infusino, noted in an exit interview with the RP Group that all the challenges associated with the implementation of TAA 2.0 were exacerbated by the current very low unemployment rate in the Long Beach region. Given this environment, the job seekers who are not working are in many cases facing high barriers to employment, which is the population that TAA 2.0 was recruiting from and serving. Over time, TAA 2.0 learned from experience that some potential participants came with employment barriers so significant that they would not benefit from enrolling. For example, not having a GED or access to transportation limited significantly participants' ability to successfully pursue an apprenticeship. Similarly, anyone who could not be on a job site day after day on time would not be a good candidate. These lessons were learned over time, but at the outset, the TAA 2.0 team members agreed too many individuals were enrolled who would have been better off preparing for a less demanding occupation, particularly in the Pre-Apprenticeship Construction track.

### *Flexibility is key*

Community colleges have to be nimble in order to successfully design and deliver short-term industry-guided training that responds to regional labor market needs and that delivers curriculum in ways that is convenient for program participants. Most colleges can probably only achieve the required agility and flexibility by offering these types of short-term trainings as not-for-credit programs. Programs such as CPAP need to respond to the demand for different kinds of trade apprenticeships according to the ebbs and flows of major public construction projects. Job demand associated with planned projects is not easy to accurately project due to issues such as weather, permits, accidents, and delays resulting from inspections. Community colleges need to consider whether they have or can develop the capacity to respond quickly to the job opportunities these occupations generate, scaling up and down as needed.

### *Employer relationships are labor-intensive, yet critical to success*

It takes time, resources, and expertise to develop and maintain employer relationships. Often, as is the case with TAA 2.0, the positions that are developing the industry partnerships are grant funded. The implication is that there is a high risk when the grant sunsets that there will no longer be funds in place to support the critical relationship development and maintenance. Fortunately, TAA 2.0 has in place two leaders working in workforce development who will continue to support the relationships that TAA 2.0 has developed. However, both individuals have many other responsibilities, and therefore, new grant requests should include funding for industry liaisons.

The Heavy Duty track's experience with employer relationships underscored the need for community colleges not to depend on one or even a few employer partners. Much time was spent by TAA 2.0 waiting for Republic Services, their one original partner, to engage. After additional partners were cultivated, the training track finally took off.



### *Community Colleges Must Understand How Different Industries Operate*

The Pre-Apprenticeship Construction track had a particularly high learning curve in building relationships with a long list of unions representing a wide range of trades. As pointed out in the narrative, the TAA 2.0 team learned that each trade has different apprenticeship requirements and schedules as well as different leaders who needed to be cultivated and consulted. Considerable progress was made in developing the trade-specific expertise required to engage with the leaders and convey accurate information to program participants. However, unless LBCC continues to cultivate and nurture these new relationships, the investment made in building them will quickly be lost.

### *Program Components Should Reflect Target Population's Readiness Level*

Workforce development programs targeting individuals with employment barriers need to offer more than industry-guided and certificated training. It is essential to have in place an outreach and recruitment component that reaches the target populations and accurately conveys to potential participants what is required to complete the training program as well as to parlay that training into a job opportunity. An array of academic, life management, and other support services are also required. Moreover, the depth and scope of these services need to be carefully considered in advance of program implementation and tuned to fit the specific needs of the target population: the greater the employment barriers, the more extensive the array of supports required. Furthermore, as TAA 2.0 demonstrated, post-program job placement support is critical, and these services need to be available for many months after program completion. Specifically, it is essential to have a tracking mechanism in place to maintain contact with program completers post training to be able to learn about the status of their job search. Such a tracking mechanism was established at the onset of CPAP but not with the Heavy Duty sister program.

The LBCC Workforce Development Director, Melissa Infusino, noted in her exit interview with the RP Group, that community colleges need to consider which workforce development program components they are best equipped to deliver. In the case of LBCC, they see their core competency as training and skill building however they are building capacity to offer job placement assistance. By contrast, Ms. Infusino noted, support or wrap-around services are probably more effectively delivered by CBOs and other partner agencies whose core competencies include case management (RP Group exit interview with Melissa Infusino, 8/11/2017).

### *CBOs May Bring to Partnerships with Community Colleges a Different Set of Priorities and Ways of Doing Things*

The TAA 2.0 experience demonstrated the challenges community colleges and community-based organizations (CBOs) often encounter when they collaborate. The difficulties are almost built-in. The CBOs see their clients struggle to meet the requirements of the community college training programs, including such fundamentals as arriving on time, following instructions in class, and putting in the effort to learn less popular subjects such as math. However, while programs like TAA 2.0 are committed to serve at-risk populations, they are also responsible for

making sure that grant objectives are met and that those participating in the training complete, get hired, and perform on the job in a way that will make employers want to hire more program participants.

### *Learning from TAA 1.0*

Finally, the RP Group wants to draw attention to lessons learned from the TAA 1.0 program that in January 2016 was reoriented to TAA 2.0. The RP Group's Interim Evaluation Report (submitted to the DOL in December 2015) identifies the major challenges that TAA 1.0 encountered. Overall, the TAA 1.0 experience underscores how important it is for grant seekers proposing complex and long-term initiatives to spend months before a proposal is submitted engaging all the key players in the design process including any major industry or CBO partners as well as college leaders and departments whose participation is essential for effective implementation. In addition, grant seekers would benefit from taking the time to conduct interviews with representatives from the group of individuals they propose to serve to test out the design on them. To make this kind of background research and planning possible, the funders of these programs should announce grant opportunities many months in advance and possibly offer additional points to grant seekers who can document step-by-step the planning process and wide participation that shaped their design. In the case of TAA 1.0, LBCC did not have enough time to take all the steps required to ensure that the proposal design was feasible and had the internal and external support required for effective implementation.

## Research Questions Raised

The following list identifies from among the many research questions raised by the TAA 2.0 experience, those questions that the external evaluation team felt were most important and had relevance for future community college workforce development initiatives and for those who partner with or invest in these programs:

- An increasing number of private and very expensive boot camps have emerged that provide short-term training to individuals who in many cases enter with considerable education capital but want to either enter a new occupation or accelerate their progress in an existing industry. What role can community colleges play in delivering a parallel kind of short-term and industry-tuned training for individuals who have limited education and work experience and who cannot afford to pay very much or at all for the opportunity?
- What are models for how community colleges around the US have used their not-for-credit "arm" to deliver short-term, continuously updated and industry certified instruction? What are models for how these not-for-credit trainings can be effectively connected to the sponsoring colleges' for-credit programs? Are there models for how community colleges have persuaded industry (rather than grant funding) to support these offerings?

- How can community colleges effectively work with employers? How are these relationships best developed, expanded and maintained? Can one individual at a college be the liaison to multiple industries? What happens when the liaison leaves the college? How important is it for industry to engage with college representatives with its needs, priorities, and local leaders? How can programs that have used grant support to forge industry-relationships effectively maintain and grow these relationships after the grant funding ends?
- How can community colleges make it easier and more attractive for industry professionals to teach part-time in workforce development programs?
- What are effective ways to market the training, jobs, and lifestyle of successful participants to potential recruits, especially older individuals or individuals who may have struggled academically in the past? The TAA 2.0 program offered free, industry-certified training that had the potential to help unemployed and underemployed individuals gain entry into occupations with living wage and advancement opportunities. Yet, both tracks struggled to present the message in a way that truly resonated with the target population. Overall, it would be useful to know what approaches other workforce development programs have used effectively to increase the appeal of training initiatives targeting the new blue collar occupations, including green technology and union jobs.
- What are effective models for how CBOs and community college workforce development programs can effectively collaborate? This evaluation revealed the presence of different cultures and the existence of priorities on each side that had to be reconciled in order for the partnership to work.
- What kind of background and experience should community colleges prioritize when they build a team responsible for designing and delivering industry-responsive training programs? In the case of the TAA 2.0, the highly effective team members all came with no community college experience which meant they had to quickly learn how the community college processes and systems work. However, each of the team members brought to the program the ability to jump in and do what needed to be done whether it was to learn very quickly how apprenticeships work or learn how to build credibility with stakeholders ranging from union leaders to individuals managing large recycling plants. It was this kind of entrepreneurial spirit that made the team successful in making considerable progress toward the program goals.

# Appendix A

## Long Beach City College Proposed Statement of Work (SOW)



*Board of Trustees*  
Irma Archuleta  
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Sunny Zia  
*Superintendent-President*  
Eloy O. Oakley

Long Beach City College • Long Beach Community College District  
4901 East Carson Street • Long Beach, California 90808

November 9, 2015

US Department of Labor  
Employment and Training Administration  
200 Constitution Avenue, N.W.  
Washington, D.C. 20210

**Grant Type:** Trade Adjustment Assistance Community College and Career  
Training Grants Program (TAACCCT)  
**Grant Number:** TC-25153-13-60-A-6

To Whom It Concerns,

Long Beach City College (LBCC) was awarded a Round 3 TAACCCT grant in 2013 to create alternative pathways in engineering careers. The original intent of the grant was to design and implement new pathways in our for-credit CTE departments which would include stacked and lattice credentials to provide multiple momentum points.

At the time of the grant proposal LBCC partnered with Boeing, one of the largest employers in Long Beach. The intent was for Boeing to not only provide internship and OJT opportunities, but also to hire the bulk of our participants to meet our placement metrics as outlined in our Outcome Measures Table.

Unfortunately, in the intervening time, LBCC has encountered significant challenges that have made it impossible for us to continue with our original intent outlined in our Statement of Work.

The first challenge that we encountered was the complexity of the pathways work we were attempting, which was unable to be successfully completed in the timeframe originally planned. Because these pathways included new certificates and classes, and also involved the packaging of classes from between two to four different subject areas, we encountered significant delays in deployment of the program.

Our second and most significant challenge was encountered by our major employer partner, Boeing, who began a series of massive layoffs in the Southern California region in 2014. Long Beach was heavily impacted, with Boeing drastically reducing its workforce when production ended on their C-17 planes. Between January 2014 and July 2015, Boeing's California workforce decreased by nearly 2,000 due to layoffs, most of them in Southern California and Long Beach.

During a Program Review conducted in April 2015 with our Federal Project Officer, it became apparent that LBCC would not be able to move forward and meet the performance metrics included in our grant award.

Proposed Statement of Work Change – TAACCCT Grant No. TC-25153-13-60-A-6

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Leadership at LBCC remained committed to achieving success with the TAACCCT grant and immediately began working to identify options for a new grant focus that would respond to industry needs, provide participants with significant employment opportunities, and allow us to serve both the needs of our community and the outcomes of the grant.

As part of this work, we consulted labor market and wage data, spoke with our local workforce investment board, and consulted with industry. Additionally, we considered very carefully the needs of our community.

The outcome of this work resulted in the identification of two specific industry sector trainings that we feel will allow us to meet all of our goals in the time period remaining for this grant. Our rationale and proposed plan for training follows.

### Construction Pre-Apprenticeship Track

On May 22, 2015, the City of Long Beach signed a Project Labor Agreement (PLA) with the AFL-CIO Building Trades. This PLA requires employers who win bids on City construction projects over the next few years to meet a 40% local hiring requirement. The City engaged Pacific-Gateway Workforce Investment Network (PGWIN) and Long Beach City College to help prepare local residents for the opportunity the PLA provides.

LBCC is working with the Union to deliver a pre-apprentice training program to prepare local residents to enter into Union apprenticeships, of which there are over a dozen in the building trades. The Union has shared its industry recognized curriculum, which consists of classroom/lecture content. LBCC faculty have decided to supplement this content with hands on training, resulting in a 140 hour training program which can be delivered over the course of 6 weeks. **Participants will also earn an industry recognized OSHA certification.**

At the completion of this training track, participants can apply to Union apprenticeships, for which they will be better prepared to enter into due to the training. The Union will move local resident LBCC program completers to the top of the review/consideration list to better increase their chances of entry into the apprenticeship.

However, Union apprenticeships aren't the only option for program completers, who may choose to go to non-union shops with their basic skills, or may decide to obtain more training through LBCC's for-credit construction trades program.

Even outside of the PLA, the occupational outlook for trades workers in the Los Angeles-Long Beach-Glendale Metropolitan region are significant. According to the State of California's Employment Development Department, 22% of the identified fastest growing occupations in 2012-2022 for the region are in the trades area:

SOC Code	Occupational Title	Median Hourly Wage
47-3015	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	\$14.31
47-3013	Helpers—Electricians	\$14.42
47-3012	Helpers—Carpenters	\$15.57
47-3011	Helpers--Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters	\$13.98
47-2141	Painters, Construction and Maintenance	\$22.67

47-2121	Glaziers	\$22.87
47-2082	Tapers	\$24.62
47-2081	Drywall and Ceiling Tile Installers	\$24.89
47-2051	Cement Masons and Concrete Finishers	\$24.79
47-2044	Tile and Marble Setters	\$16.01
47-2021	Brickmasons and Blockmasons	\$29.55
<b>Average Hourly Wage</b>		<b>\$20.33</b>

**Heavy Duty Preventative Maintenance and Alternative Fuels**

The second industry sector training we are proposing is as a result of Republic Services, a nationwide waste management company, approaching LBCC to help develop a program that will provide both short- and long-term responses to workforce pipeline issues for their heavy duty alternative fuels technicians and mechanics.

This pipeline issue is not unique to Republic Services. Labor market data from the State of California’s Employment Development Department shows that positions for Bus and Truck Mechanics and Diesel Engine Specialists (SOC 49-3031) are expected to increase by 14.2% by 2022 in the Los Angeles-Long Beach-Glendale Metropolitan area alone. Median wages for these positions in this local area are approximately \$24.85/hour.

Additionally, Southern California as a whole, and Long Beach in particular, has embraced alternative fuel use in heavy duty vehicles. Long Beach Transit, as well as nearly all other public transit systems in the region, run their fleets entirely on Compressed Natural Gas, or Liquefied Natural Gas (CNG/LNG) fuels. As well, the Port of Long Beach has clean air requirements for any trucks entering the Port, resulting in the regional increase in CNG/LNG truck engines.

LBCC’s proposed training track has two components based on input and guidance from Republic Services, as well as LBCC’s experience in the transit vehicle training sector:

1. **Preventative Maintenance (PM)** – PM is required of all heavy duty vehicles to insure safety, warranty adherence, compliance with state/federal regulations, and to increase longevity of vehicles. The basic PM component will train participants how to follow manufacturer guidelines on performing PM, as well as provide an overview on state/federal regulations pertaining to PM. For employers who engage us to train a cohort of participants for them—such as Republic Services will be doing—we will also train participants in the company’s PM specific processes/procedures if they differ to manufacturer/legal requirements by being more strict.
2. **Alternative Fuels** – This component will provide training to participants on CNG and LNG alternative fuels, specifically in heavy duty vehicles. They will learn how engine systems differ for these fuel types than for diesel, how to trouble shoot problems on the most common engine types and repair them (or not, based on warranty requirements), and be *prepared to take the Compressed Natural Gas (CNG) Fuel System Inspector Certification.*

The proposed training track is meant to target individuals with some basic mechanic/technician skills which can be enhanced to be better prepared for higher-paying jobs in the sector. Those with only the most basic

experience/skills can be steered towards technician positions where they can grow their skills and move upwards. Those with existing experience/skills can be steered directly to heavy duty mechanic positions, for which more experience is needed.

We will be using pre-existing curriculum for the alternative fuels portion of training, and our faculty has already begun working with our industry partner to create the preventative maintenance portion. Because this will all be not-for-credit training, we will not run into difficulties with lengthy curriculum/course approval processes.

### **Academic Rigor Comparison**

The original implementation plan for LBCC's TAACCCT grant included the creation of multidisciplinary engineering pathways that spanned four academic departments. These pathways were intended to also include stacked and latticed credentials that would make multiple entry/exit points available.

The proposed **Construction Pre-Apprenticeship track** will include the Building Trades Multi-Craft Core Curriculum, in and of itself recognized as an industry credential (and which also includes OSHA and CPR certification). While there are no further opportunities for participants to earn additional credentials through this proposed program, they can enter into a registered apprenticeship program in the building trades, or enroll into Long Beach City College's existing for-credit construction program. Such a pathway will allow for skill development paired with wage increases, and the potential to earn Journey person's papers or additional education.

The proposed **Heavy Duty Transportation Alternative Fuels track** includes 80 hours not-for-credit training, and some of the content aligns with credit options. Participants who wish to obtain further training can enroll into LBCC and take a credit by exam to receive credit for the CNG and LNG for credit courses that exist in LBCC's catalog. This track also includes industry recognized credentialing in the form of the CNG Fuel System Inspector Certification.

Overall, the two proposed tracks offer similar academic rigor to the original implementation plan but with far fewer pathways and momentum points—meaning it is far less extensive.

### **Certifications: Side by Side Comparison**

As mentioned, our new proposal includes fewer pathways and types of certificates/certifications. It should be noted that the simplified proposed training tracks will allow for more individuals to enter into the program and complete in the remaining grant time than the approved pathways would. For example, the shortest potential completion time, with potential for certification, in the approved pathways is a full semester. As well, some of the approved certifications require more than one credit class, taken sequentially, to complete, which stretches completion time into multiple semesters.

Our proposed tracks not only allow for faster training and certification, but they were selected because of the employment opportunities they can provide. Our community's short-term workforce needs are significant in these two occupational/industry sectors.

The original/approved program included the following Long Beach City College credit certificates, which are part of a larger AS degree:

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- Electrical Technology
- Engineering Technology
- Mechanical Maintenance

The original/approved program also included Specialty Certificates woven into the larger certificate programs above. These typically require more than one credit course to obtain. Approved Specialty Certificates were as follows:

- Remotely Operated Vehicles
- Manufacturing Technology
- CATIA and Solid Works Professional
- Autocad Professional

Our proposed training tracks include the follow certifications built in:

Construction Pre-Apprenticeship Track

- OSHA 10
- Multi-Core Curriculum Completion

Heavy Duty Preventative Maintenance and Alternative Fuels

- Compressed Natural Gas (CNG) Fuel Cylinder Safety Inspector

While there are fewer certifications/credentials built into our proposed training tracks, they are all third party industry recognized certificates/credentials that will increase employment opportunities and **can be obtained in six weeks** (construction pre-apprenticeship) **and three weeks** (heavy duty preventative maintenance and alternative fuels) of training.

**Wage Comparison**

To compare wage data we referenced the California Employment Development Department data for the Los Angeles-Long Beach-Glendale Metropolitan area. We used SOC codes aligned with the approved and proposed programming to compare hourly median wage data between programs. Based on the data, the wages for our proposed tracks are comparable, and potentially higher, than our approved programming.

	Original/Approved Pathways		Proposed Tracks	
	Engineering Tech Pathway	Advanced Manufacturing Pathway	Construction Track	Heavy Duty Alt Fuels Track
<b>SOC Codes</b>	17-3000 Drafters, Engineering Technicians, and Mapping Technicians	51-4000 Metal Workers and Plastic Workers	47-2000 Construction and Extraction Occupations	49-3031 Bus and Truck Mechanics and Diesel Engine Specialists
<b>Average Median Hourly Wage*</b>	<b>\$28.29</b>	<b>\$16.38</b>	<b>\$25.40</b>	<b>\$24.85</b>



*\* for top and mid level SOC codes, averages of the sub-level occupations were used*

**Additional Supporting Documentation**

To support our proposed change to our statement of work we have attached the following:

1. Proposed program implementation plan
2. Proposed quarterly training plan
3. Proposed budget and spend down plan
4. Proposed organizational chart
5. Side-by-Side comparison of approved and proposed project work plans
6. Supplemented outcome measures table
7. Existing/Approved budget for comparison
8. Letter of support from Pacific Gateway Workforce Investment Network
9. Letter of support from Republic Services
10. City of Long Beach Project Labor Agreement (separate email attachment)

Thank you and we look forward to obtaining approval for the proposed program modifications to meet the goals of the TAACCCT grant, and avail training programs that provide employment opportunities in our region.

Sincerely,

Sheneui Weber  
Executive Director

### Proposed Program Implementation Plan/Project Workplan

PROGRAM OF STUDY OR OTHER ACTIVITY			PROJECT IMPLEMENTATION			
		Implementers	Costs		Time	
Activity #1	Planning meetings with internal staff, local WIB, Union representatives, community-based partners, and employers	Project Manager, Department Director, CTE Dean, LBCC Faculty, Partners	Strategy Total: Equipment: Year 3: Year 4:		Start Date: End Date: Milestones:	Apr 16, 2015 Oct 2015 Obtain curriculum, draft timeline
Deliverable #1	Confirm project goals & outcomes, review curriculum, obtain partnership commitments, seek out LMI, identify instructors, decide on pre-apprenticeship trades of focus, begin recruitment for permanent full time program staff	Project Manager, Department Director, CTE Dean, LBCC Faculty, Partners	Strategy Total: Equipment: Year 3: Year 4:		Start Date: End Date: Milestones:	Apr 16, 2015 Dec 2015 Project implementation plan SOW change approval Hire program staff
Activity #2	Project roll out preparation, including train-the-trainer sessions, selecting assessments, identifying and securing training space both at LBCC and elsewhere, identifying and onboarding industry liaisons, drafting detailed training schedule, begin recruitment of participants	Project Manager, Department Director, CTE Dean, LBCC Faculty, Project Coordinators,	Strategy Total: Equipment: Year 3: Year 4:		Start Date: End Date: Milestones:	May 8, 2015 Oct 2015 Finalized implementation plan
Deliverable #2	Begin training first cohorts of 25 students, implement student support and data collection, permanent project staff on-boarded	Project Staff	Strategy Total: Equipment: Year 3: Year 4:		Start Date: End Date: Milestones:	Oct 2015 Dec 2015 First cohorts begin & completed, new staff in place
Activity #3	Implement program and training with new pre-apprenticeship & advanced transportation cohorts starting every 4-6 weeks and occurring at more than 1 location	Project Staff, Instructional Staff	Strategy Total: Equipment: Year 3: Year 4:		Start Date: End Date: Milestones:	Oct 2015 March 31, 2017
Deliverable #3	Collect, review and analyze project data, identify successful strategies, challenges and use feedback to adjust/modify programs	Project Staff, Instructional Staff, Community Partners, Employer Partners	Strategy Total: Equipment: Year 3:		Start Date: End Date: Milestones:	Oct 2015 March 31, 2017 Projected outcomes

	and trainings as necessary		Year 4:			achieved
Activity #4	Obtain software to better facilitate student-facing pathway tracking and student data tracking	Project Staff, Department Director	Strategy Total: Equipment: Year 3: Year 4:		Start Date: End Date: Milestones:	Oct 2015 Dec 2015 Vendors selected and purchase orders obtained
Deliverable #4	Implement new software solutions for programmatic tracking use	Project Staff	Strategy Total: Equipment: Year 3: Year 4:		Start Date: End Date: Milestones:	Jan 2016 Feb 2016
Activity #5	Work with construction & advanced transportation employer partners, and local WIB to identify program exit paths to include apprenticeship and placement opportunities as well as OJT opportunities	Project Staff	Strategy Total: Equipment: Year 3: Year 4:		Start Date: End Date: Milestones:	Jun 1, 2015 Dec 2015 Develop student program exit flow process
Deliverable #5	Active employer engagement by way of hiring students, participating in training events, use of OJT funds	Project Staff	Strategy Total: Equipment: Year 3: Year 4:		Start Date: End Date: Milestones:	Oct 2015 March 31, 2017 Placements and other employer participation
Activity #6	Ongoing monitoring and tracking	Project Staff, Instructional Staff	Strategy Total: Equipment: Year 3: Year 4:		Start Date: End Date: Milestones:	Oct 2015 March 31, 2017 Year 2, 3 and 4 data submitted
Deliverable #6	Identify successful strategies to replicate throughout program, identify and address challenges to program success regularly, stay on track with spending	Project Staff, Third-Party Evaluator	Strategy Total: Equipment: Year 3: Year 4:		Start Date: End Date: Milestones:	Oct 2015 March 31, 2017 Third party evaluation, APR data submitted, trainings adjusted for best practices
Activity #7	Final program evaluation, data analysis, and reporting	Project Staff, Third-Party Evaluator	Strategy Total: Equipment: Year 3: Year 4:		Start Date: End Date: Milestones:	April 1, 2017 Sept 30, 2017 Final grant report completed and submitted
Deliverable #7	Program participants data collected from monitoring	Project Staff, Third-	Strategy Total:		Start Date:	April 1, 2017

	and tracking, reports and recommendations submitted per grant requirements	Party Evaluator	Equipment: Year 3: Year 4:		End Date: Milestones:	Sept 30, 2017 Final grant report completed and submitted
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**Proposed Quarterly Training/Placement Plan**

***Pre-Apprenticeship Construction Training***

We plan to run 17 cohorts that start with 25 participants per cohort. The trainings will occur both at the LBCC campus, and at a secondary location at a partner (Long Beach Conservation Corps).

Planning assumes 90% completion rate, 70% credential attainment rate, and 75% placement rate.

***Heavy Duty/Alternative Fuels Training***

We plan to run 15 cohorts that start with 25 participants per cohort. The trainings will occur solely at LBCC campus.

Planning assumes 90% completion rate, 90% credential attainment rate, and 75% placement rate.

**Quarterly Training/Placement Plan: Pre-Apprenticeship Construction**

Quarter	# of Pre-App Cohorts Active	Pre-App Participants Starting	Prep-App Participants Completed	Pre-App Participants Still in Training	Credentials Attained	Placement
Y3 Q1	# Starting: 1 # Ending: 1	25	22	0	17	0
Y3 Q2	# Starting: 4 # Ending: 4	100	90	0	70	16
Y3 Q3	# Starting: 3 # Ending: 3	75	68	0	53	68
Y3 Q4	# Starting: 3 # Ending: 1	75	23	50	53	51
Y4 Q1	# Starting: 2 # Ending: 4	50	90	0	35	18
Y4 Q2	# Starting: 4 # Ending: 4	100	90	0	70	68
Y4 Q3	# Starting: 0 # Ending: 0	0	0	0	0	67
<b>TOTALS:</b>	<b>17 Cohorts</b>	<b>425</b>	<b>383</b>	<b>0</b>	<b>298</b>	<b>288</b>

**Quarterly Training/Placement Plan: Heavy Duty/Alternative Fuels**

Quarter	# of Adv Trans Cohorts Active	Adv Trans Starting	Adv Trans Participants Completed	Adv Trans Participants Still in Training	Credentials Attained	Placement
Y3 Q1	# Starting: 1 # Ending: 1	25	22	0	21	16
Y3 Q2	# Starting: 3 # Ending: 3	75	68	0	61	61
Y3 Q3	# Starting: 3 # Ending: 3	75	68	0	61	61
Y3 Q4	# Starting: 3 # Ending: 3	75	68	0	61	61
Y4 Q1	# Starting: 3 # Ending: 3	75	67	0	60	51
Y4 Q2	# Starting: 3 # Ending: 3	75	67	0	60	50
<b>TOTALS:</b>	<b>15 Cohorts</b>	<b>400</b>	<b>360</b>	<b>0</b>	<b>324</b>	<b>270</b>

**Proposed Budget/Spend Down**

BUDGET LINE ITEMS	Year 1	Year 2	Year 3	Year 4	TOTAL
<b>A. PERSONNEL</b>					
Project Managers - Two managers will be assigned to this project. One will be 100% effort and the other will be 25% effort. They will manage day-to-day project delivery and project team. (Assumes District Increases are Eamed)	\$ -	\$ -	\$ 107,000.00	\$ 112,360.00	\$ 219,360.00
Program Coordinator - This is a full-time 100% effort position responsible for coordinating project activities including performing outreach/recruitment, performing case management, monitoring data integrity, and coordinating training activities.	\$ -	\$ -	\$ 58,000.00	\$ 28,000.00	\$ 87,000.00
Fiscal/Finance Coordinator - This is a 25% effort position responsible for supporting budget management and fiscal reporting	\$ -	\$ -	\$ 14,700.00	\$ 14,700.00	\$ 28,400.00
Business Services Coordinator - This is a 50% effort position responsible for coordinating and processing HR paperwork for instructors and staff, entering reqs and POs and tracking contract timelines	\$ -	\$ -	\$ 32,000.00	\$ 16,000.00	\$ 48,000.00
Administrative Assistant - This is a 50% effort position responsible for coordinating administrative functions, such as semi-complex clerical work, scheduling of meetings and dissemination of meeting notes	\$ -	\$ -	\$ 21,000.00	\$ 10,500.00	\$ 31,500.00
Instruction - Faculty and Instructor pay for instructing students in both training tracks, occurring at a rate of \$60/hour	\$ -	\$ -	\$ 121,770.00	\$ 40,590.00	\$ 162,360.00
Instructional Support - Includes in-classroom support to manage instruction in a safe and secure and construction shops to ensure safety and support of learning objectives, occurring at \$25/hour	\$ -	\$ -	\$ 28,250.00	\$ 9,750.00	\$ 38,000.00
Student Assistants - LBCC departments hire students to support special projects and assist with data collection, materials preparation, and supporting general project activities. Students are paid \$9/hour. Budget assumes 3 students working 1040 hours each per year	\$ -	\$ -	\$ 28,080.00	\$ 14,040.00	\$ 42,120.00
<b>TOTALS</b>	\$ 156,434.40	\$ 170,968.70	\$ 411,800.00	\$ 246,930.00	\$ 986,133.10
<b>B. FRINGE BENEFITS</b>					
LBCC calculated at the institutional rate of 49% for full-time personnel	\$ -	\$ -	\$ 111,696.00	\$ 87,624.00	\$ 199,320.00
LBCC calculated at the institutional rate of 19% for part time academic personnel	\$ -	\$ -	\$ 19,483.20	\$ 6,494.40	\$ 25,977.60
LBCC calculated at the institutional rate of 11% for part time classified personnel	\$ -	\$ -	\$ 6,336.30	\$ 2,616.90	\$ 8,953.20
<b>TOTALS</b>	\$ 57,030.41	\$ 66,354.00	\$ 137,466.50	\$ 96,735.30	\$ 357,606.00
<b>C. TRAVEL</b>					
Local Travel - mileage and parking	\$ -	\$ -	\$ 3,000.00	\$ 1,500.00	\$ 4,500.00
Faculty Train-the-Trainer sessions to be certified to teach curriculum	\$ -	\$ -	\$ 8,900.00	\$ -	\$ 8,900.00
Project staff travel to TAACCCT convenings/trainings or other professional development	\$ -	\$ -	\$ 6,000.00	\$ -	\$ 6,000.00
<b>TOTALS</b>	\$ 2,689.42	\$ 21,867.91	\$ 17,900.00	\$ 1,500.00	\$ 43,956.00
<b>D. EQUIPMENT</b>					
No equipment purchases will be made.	\$ -	\$ -	\$ -	\$ -	\$ -
<b>TOTALS</b>	\$ -	\$ -	\$ -	\$ -	\$ -
<b>E. SUPPLIES</b>					
General Office Supplies	\$ -	\$ -	\$ 6,000.00	\$ 3,000.00	\$ 9,000.00
Duplicating/Printing of instructional course materials	\$ -	\$ -	\$ 20,000.00	\$ 10,000.00	\$ 30,000.00
Tablets for instructional manager and intake use	\$ -	\$ -	\$ 11,000.00	\$ -	\$ 11,000.00
Consumable instructional supplies for both tracks	\$ -	\$ -	\$ 75,750.00	\$ 25,250.00	\$ 101,000.00
<b>TOTALS</b>	\$ (148.24)	\$ 4,324.41	\$ 112,750.00	\$ 38,250.00	\$ 155,176.17
<b>F. CONTRACTUAL</b>					
PGWIN - Pacific Gateway Workforce Investment Network - Provide case management and placement services to construction pre-apprenticeship track participants, as well as additional OJT services	\$ -	\$ -	\$ 180,000.00	\$ 60,000.00	\$ 240,000.00
RP Group - Continued third-party evaluation services by contracted evaluator	\$ -	\$ -	\$ 70,000.00	\$ 70,000.00	\$ 140,000.00
Testing Service - to provide assessment testing prior to entering the construction pre-apprenticeship track	\$ -	\$ -	\$ 9,000.00	\$ 3,000.00	\$ 12,000.00
Participant Tracking Software - To collect and track data for grant reporting purposes	\$ -	\$ -	\$ 12,000.00	\$ 12,000.00	\$ 24,000.00
Industry Experts - To act as experts in the training track industries for the purposes of engaging employers to hire participants	\$ -	\$ -	\$ 37,429.91	\$ 19,367.00	\$ 56,796.91
Marketing Company/Consultant - Provide marketing plan for outreach and recruitment of participants and industry, as well as accompanying marketing materials, including web site and social networking	\$ -	\$ -	\$ 25,000.00	\$ 10,000.00	\$ 35,000.00
<b>TOTALS</b>	\$ 137,251.00	\$ 157,060.70	\$ 333,429.91	\$ 174,367.00	\$ 802,108.61
<b>G. CONSTRUCTION</b>					
	N/A	N/A	N/A	N/A	N/A
<b>H. OTHER</b>					
Event Fees - attendance at industry events to recruit both participants and employers	\$ -	\$ -	\$ 2,000.00	\$ 500.00	\$ 2,500.00
Use of Alternate Site for construction pre-apprenticeship training to increase training capacity to meet grant outcomes	\$ -	\$ -	\$ 75,000.00	\$ 45,000.00	\$ 120,000.00
Curriculum licensing fee for pre-apprenticeship construction track	\$ -	\$ -	\$ 24,000.00	\$ 8,000.00	\$ 32,000.00
<b>TOTALS</b>	\$ -	\$ -	\$ 101,000.00	\$ 53,500.00	\$ 154,500.00
<b>I. TOTAL DIRECT CHARGES (sum of A-H)</b>					
	\$ 353,265.99	\$ 421,196.30	\$ 1,114,266.41	\$ 611,282.30	\$ 2,500,000.00
<b>J. INDIRECT CHARGES</b>					
Long Beach City College calculated at the institutional regulated rate of 26.2% of all direct costs excluding capital expenditures and equipment. The indirect cost is summarily reduced to adhere to the ten percent cap in direct and indirect administrative costs.	\$ 35,326.60	\$ 42,119.63	\$ 111,426.54	\$ 61,128.23	\$ 250,000.00
<b>K. TOTALS (sum of I-J)</b>					
	\$ 388,592.59	\$ 463,315.93	\$ 1,225,692.95	\$ 672,410.53	\$ 2,750,000.00

Total Grant Award: \$2,750,000.00

A. PERSONNEL
<p>YR1 \$156434.40 / YR2 \$170968.70</p> <p><u>Project Administration Staff</u></p> <p><i>Note: Salary costs listed do not include fringe benefit rates (see Section B) published by District Fiscal Dept.</i></p> <ul style="list-style-type: none"><li>● <b>Project Managers</b> – Two managers will be assigned to this project. One will be 100% effort and the other will be 25% effort. They will be responsible for overseeing and managing day-to-day project delivery and project team. (Assumes District increased are earned) YR 3 \$107,000 / YR4 \$112,350</li></ul> <p><u>Service Delivery Staff</u> (*Classified staff salaries are determined by bargaining unit contract and pay schedules include annual step increases for all promotions)</p> <ul style="list-style-type: none"><li>● <b>Program Coordinator*</b> - This is a full-time 100% effort position responsible for coordinating project activities including performing outreach/recruitment, performing case management, monitoring data integrity, and coordinating training activities. YR3 \$58000 / YR4 \$29000</li><li>● <b>Fiscal/Finance Coordinator*</b> - This is a 25% effort position responsible for supporting budget management and fiscal reporting. YR3 \$14700 / YR4 \$14700</li><li>● <b>Business Services Coordinator*</b> - This is a 50% effort position responsible for coordinating business service functions, such as HR/payroll functions, purchasing supporting and contracts processing. YR3 \$32000 / YR4 \$16000</li><li>● <b>Administrative Assistant*</b> - This is a 50% effort position responsible for coordinating administrative functions, such semi-complex clerical work, scheduling/coordinating of project meetings and dissemination of meetings notes, and supporting the managers.</li></ul>



YR3 \$21000 / YR4 \$10500

- **Student Assistants** – LBCC departments hire students to support special projects and assist with data collection, materials preparation, and supporting general project activities. Students are paid \$9/hour. Budget assumes 3 students working 1040 hours each.  
YR3 \$28080 / YR4 \$14040

**Instructional Pay**

- **Faculty/Instructors** – Pre-Apprenticeship Instructional salary costs incurred will be at \$60/hour for 140 hours per cohort for 9 cohorts, with 14 hours of preparation time allowed per cohort. Heavy Duty Alternative Fuels instructional salary costs incurred will be at \$60/hour for 80 hours per cohort for 15 cohorts, with 8 hours of preparation time allowed per cohort.  
YR3 \$121770 / YR4 \$40590
- **Instructional Assistants** – Instructors will require instruction support due to large class sizes to insure safety of all participants. Support will be paid at \$25/hour for 140 hours per cohort for 9 cohorts for the construction pre-apprentice program, and \$25/hour for 20 hours per cohort for 15 cohorts for the heavy duty alternative fuels program.  
YR3 \$29250 / YR4 \$9750

**B. FRINGE BENEFITS**

YR1 \$57030.41 / YR2 \$66354.88

LBCC Fiscal Services calculate and publishes benefit rates annually applied to all budgets and grant projects for FY 2015-2016 the breakdowns are as follows:

**Part-Time Academic Positions 16%**

YR3 \$19483.20 / YR4 \$6494.40

**Full-Time Classified Positions 48%**

YR3 \$111696 / YR4 \$87624

**Part-Time Classified Positions 11%**

YR3 \$6306.30 / YR4 \$2616.90
<b>C. TRAVEL</b>
<p>YR1 \$2698.42 / YR2 \$21857.61</p> <p><b>Faculty/Instructors Train-the-Trainer</b> – Budget estimates 4 instructors at \$2200/ea for airfare, hotel, rental car, per diem meals, parking, registration, etc.</p> <p>YR3 \$8800</p> <p><b>TAACCCT Meetings/Trainings for Staff</b> – Budget estimates 2 TAACCCT Convening/Trainings each for the Project Manager and the Coordinator at \$1500/each.</p> <p>YR3 \$6000</p> <p><b>Local Mileage &amp; Parking</b> – Estimate for the staff to attend meetings and project related activities. Any local mileage is reimbursed at the annual IRS allowable mileage rate per District Policy.</p> <p>YR3 \$3000 / YR4 \$1500</p>
<b>D. EQUIPMENT</b>
None
<b>E. SUPPLIES</b>
<p>YR1 \$(148.24) / YR2 \$4324.41</p> <p><b>General Office Supplies</b> – For project operation. Paper, pens, post-it notes, file folders, etc.</p> <p>YR3 \$6000 / YR4 \$3000</p> <p><b>Duplicating and Printing</b> – This covers overages of copy/toner allowances, as well as specialized high volume printing by outside vendor for binders of classroom materials and marketing materials printing</p> <p>YR3 \$20000 / YR4 \$10000</p>

**Tablets for On-Site Registration/Intake & Instruction** – Budget estimates the purchase of 2 tablets to facilitate quick and immediate intake while performing outreach at partners and community, 2 tablets to facilitate instruction, and 2 tablets for staff use

YR3 \$11000

**Instructional Training Materials & Consumable Supplies** – Construction pre-apprenticeship: budget estimates \$9000 for consumable supplies for each of the 9 cohorts (\$81000 total), and dedicated reusable instructional supplies (one time cost of \$10000). Heavy duty alternative fuels: budget estimates \$500 for consumable supplies for each of the 15 cohorts (\$7500), and dedicated reusable instructional supplies (one time cost of \$2500)

YR3 \$75750 / YR4 \$25250

**F. CONTRACTUAL**

YR1 \$137251 / YR2 \$157680.70

**Third Party Evaluator (RP Group)** – Budget for continued evaluation services by contracted evaluator for years 3 and 4

YR3 \$70000 / YR4 \$70000

**Participant Tracking Software** – Specific brand to be determined; we are currently piloting a grant-funded software that we may implement.

YR3 \$12000 / YR4 \$12000

**Marketing Company/Consultant** – To provide integrated marketing plan for outreach and recruitment of program participants, including web site creation and maintenance, promotional material design and specialized printing, social media networking, and other relevant activities for engaging employers and participants recruitment. YR 4 costs reflects information dissemination and communications to employers where participants are placed in jobs.

YR3 \$25000 / YR 4 \$10000

**Testing Services** – Entrance testing to insure participants have required basic knowledge/skills to succeed in training program. Cost estimate based on research into the pe-license cost associated with 700+ anticipated participants

YR3 \$9000 / YR4 \$3000

**Industry Experts** – contractors who will act as industry connection points between project/program staff and industry/employers from both training tracks to facilitate employer engagement and

<p>placement.</p> <p>YR3 \$37429.91 / YR4 \$19367</p> <p><b>Local WIB (PGWIN)</b> – Pacific Gateway Workforce Investment Network will assist with recruitment, screening and placement of individuals in the construction pre-apprenticeship track, and will, where possible, allocate OJT funds and leverage their industry connections.</p> <p>YR3 \$180000 / YR4 \$60000</p>
<p><b>G. CONSTRUCTION</b></p> <p>None</p>
<p><b>H. OTHER</b></p> <p>YR1 \$0 / YR2 \$0</p> <p><b>Sponsorships/Event Fees</b> – Budget estimates industry event sponsorships which include speaking, booth allotment and/or ability to bring participants for networking.</p> <p>YR3 \$2000 / \$500</p> <p><b>Use of Alternate Site</b> – Use of a partner’s site for a second training location. \$2500/week x 6 weeks of training x 9 cohorts.</p> <p>YR3 \$75000 / YR4 \$45000</p> <p><b>Curriculum Licensing</b> – Licensing of the Multi Core Curriculum from the Building &amp; Trades Union for the construction pre-apprenticeship track: \$75/person.</p> <p>YR3 \$24000 / YR4 \$8000</p>
<p><b>I. DIRECT COSTS</b></p> <p>YR1 \$353265.99 / YR2 \$421186.30</p> <p>YR3 \$1114265.41 / YR4 \$611282.30</p>
<p><b>J. INDIRECT COSTS</b></p>

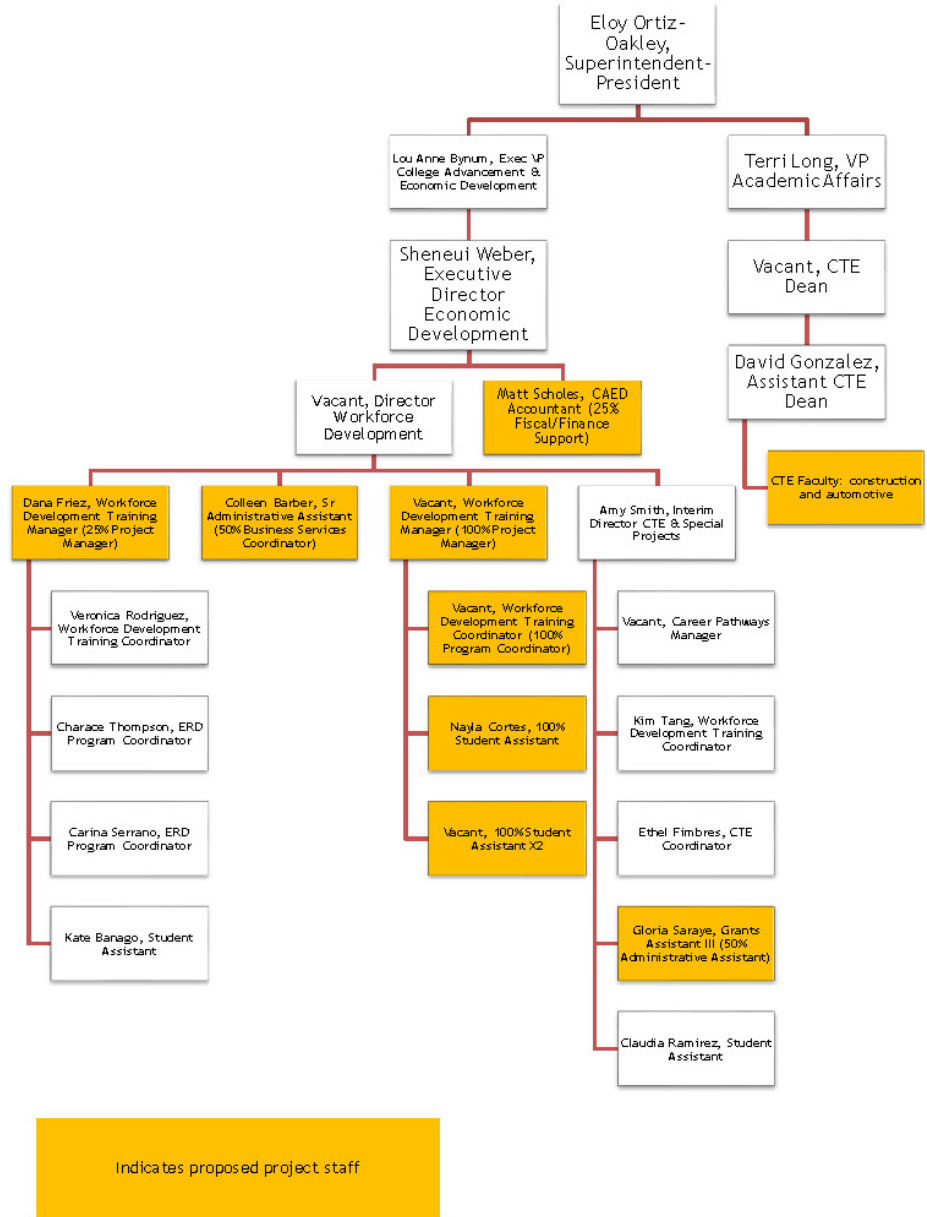
LBCC's indirect cost rate agreement with federal cognizant agency HHS is 26.2%. District reimbursed indirect cost rate is 10% for this project.

TOTAL \$250000

EXPENSED \$77445.23 (YR1 \$35326.60 / YR2 \$42118.63)

REMAINING: 172554.80 (YR3 \$111426.54 / YR 4 \$61128.23)

**Proposed Organizational Chart**



**Project Work Plan – Side by Side Comparison**

	<b>PROPOSED WORK PLAN</b>	<b>APPROVED WORK PLAN</b>
Activity #1	Planning meetings with internal staff, local WIB, Union representatives, community-based partners, and employers	Planning meetings with employers, faculty, vendors, partners, LBCC departments (Fiscal & HR).
Deliverable #1	Confirm project goals & outcomes, review curriculum, obtain partnership commitments, seek out LMI, identify instructors, decide on pre-apprenticeship trades of focus, begin recruitment for permanent full time program staff	Confirm project goals, outcomes, deliverables, external evaluation plan design, identify key milestones and timeline; initiate contracts and purchase orders; initiate budgets and hiring process.
Activity #2	Project roll out preparation, including train-the-trainer sessions, selecting assessments, identifying and securing training space both at LBCC and elsewhere, identifying and onboarding industry liaisons, drafting detailed training schedule, begin recruitment of participants	Core and specialty certificate curriculum review and development, including program completion length review with employers, SME, faculty, vendors, and instructional designer – align to job skills & competencies.
Deliverable #2	Begin training first cohorts of 25 students, implement student support and data collection, permanent project staff on-boarded	List of online modules to be implemented; new modules for development; credit by exam options, curriculum development milestones and timeline
Activity #3	Implement program and training with new pre-apprenticeship & advanced transportation cohorts starting every 4-6 weeks and occurring at more than 1 location	Design and implement student support and data collection strategies, systems, predictive analytics, measurements and outcomes
Deliverable #3	Collect, review and analyze project data, identify successful strategies, challenges and use feedback to adjust/modify programs and trainings as necessary	Student support process mapped; milestones for measurements; data collection points identified; intervention paths and options specified.
Activity #4	Obtain software to better facilitate student-facing pathway tracking and student data tracking	Work with employer partners to identify opportunities and paths for internships, OJT, work based learning for students and incumbent workers
Deliverable #4	Implement new software solutions for programmatic tracking use	Incorporate work experience opportunities into specific courses as incentives to student completion
Activity #5	Work with construction & advanced transportation employer partners, and local WIB to identify program exit paths to include apprenticeship and placement opportunities as well as OJT opportunities	Implement programs and training with new cohorts

Deliverable #5	Active employer engagement by way of hiring students, participating in training events, use of OJT funds	Collect, review and analyze project data, identify successful strategies, challenges, and use feedback to adjust/modify programs and trainings as necessary.
Activity #6	Ongoing monitoring and tracking	Ongoing monitoring and tracking.
Deliverable #6	Identify successful strategies to replicate throughout program, identify and address challenges to program success regularly, stay on track with spending	Specific strategies and approaches identified to replicate, lessons learned to inform continuous program improvements; quality control check points and procedures in place to utilize data for inform future program design & improvements.
Activity #7	Final program evaluation, data analysis, and reporting	Final program evaluation, data analysis, and reporting.
Deliverable #7	Program participants data collected from monitoring and tracking, reports and recommendations submitted per grant requirements	Program participants data collected from monitoring and tracking, find reports and recommendation submitted to funder per grant requirements.



Outcome Projections: OUTCOME MEASURES TABLE

1	Outcome Measure	Target for all Participants			
		Year 1 =		Total	
1	<b>Total Unique Participants Served</b> – Cumulative total number of individuals entering any of the grant-funded programs offered	Year 1 = 160	0	800	Our proposed plan will allow us to train 825 unique participants in years 3 and 4 of the grant, which will contribute to us <b>exceeding the original metric.</b>
		Year 2 = 320	0		
		Year 3 = 320	525	825	
		Year 4 = 0	300		
2	<b>Total Number of Participants Completing a TAACCT-Funded Program of Study</b> – Number of unique participants having earned all credit hours (formal award units) needed for award of a degree or certificate in any grant-funded program	Year 1 = 128	0	640	Our proposed plan aims for <b>more completions than the original</b> , given that the trainings we would focus on are short term and not-for-credit.
		Year 2 = 256	0		
		Year 3 = 256	429	743	
		Year 4 = 0	314		
3	<b>Total Number of Participants Still Retained in Program of Study or Other TAACCT-Funded Program</b> – Number of unique participants enrolled who did not complete and still enrolled in a grant-funded program of study	Year 1 = 152	0	744	Our new model does not include programs running past the ending training date of March 31, 2017. Therefore, all participants will have completed or withdrawn wholly by grant's end.
		Year 2 = 296	0		
		Year 3 = 296	0	0	
		Year 4 = 0	0		
4	<b>Total Number of Participants Completing Credit Hours</b> – Total number of students enrolled that have completed any number of credit hours to date	Year 1 = 144	0	720	In order to successfully move forward with this grant we believe the best choice is to change to a not-for-credit model that will allow us to move more people through at a faster rate and with more immediate employment options.
		Year 2 = 288	0		
		Year 3 = 288	0	0	
		Year 4 = 0	0		
5	<b>Total Number of Participants Earning Credentials</b> Total number of participants completing degrees and certificates in grant-funded programs of study	Year 1 = 128	0	640	Neither degrees nor institutionally awarded certificates are included in our proposed plan due to time constraints. However, both of the industry sector training plans we are proposing include <b>embedded industry recognized credentials.</b>
		Year 2 = 256	0		
		Year 3 = 256	397	622	
		Year 4 = 0	225		

6	<b>Total Number of Participants Enrolled in Further Education After TAACCCT-funded Program of Study Completion</b> – Total number of students who complete a grant-funded program of study and enter another program of study	Year 1 = 0	0	Total	Enrollment into a for-credit Long Beach City College program of study after training is a possibility under the new model for both training areas. We cannot know for sure how many will go this route, as immediate employment post-training is an option. A conservative <b>5% estimate</b> is used here to account for the potential of this route being taken.
		Year 2 = 12	0	108	
		Year 3 = 48	19	38	
		Year 4 = 48	19		
7	<b>Total Number of Participants Employed after TAACCCT-funded Program of Study Completion</b> – Total number of non-incumbent worker students who complete grant-funded program of study & enter employment in quarter after quarter of program exit	Year 1 = 0	0	Total	Our revised plan proposes an aggressive placement rate that <b>exceeds original performance outcome measures</b> .
		Year 2 = 52	0	468	
		Year 3 = 208	304	558	
		Year 4 = 208	254		
8	<b>Total Number of Participants Retained in Employment After Program of Study Completion</b> – Total number of non-incumbent worker students who complete a grant-funded program of study, enter employment in quarter after quarter of program exit, and who retain employment in second and third quarters after program exit	Year 1 = 0	0	Total	Based on a conservative 70% retention rate, we can potentially <b>exceed our original performance outcome measures in this area</b> .
		Year 2 = 0	0	332	
		Year 3 = 166	213	390	
		Year 4 = 166	177		
9	<b>Total Number of Those Participants Employed at Enrollment Who Received a Wage Increase Post-Enrollment</b> – Total number of incumbent worker students who enroll in grant-funded program of study and receive an increase in wages after enrollment	Year 1 = 0	0	Total	We will continue targeting unemployed individuals for the programs but will allow for entry into the training program by those who are already employed, especially in the Preventative Maintenance & Alternative Fuels track, per this outcome measure.
		Year 2 = 19	0	95	
		Year 3 = 38	50	100	
		Year 4 = 38	50		

# Appendix B

## Heavy Duty Enrollment and Participant Characteristics by Modules Offered

	DVOM	Engine	Inspection	Pneumatic	Hydraulic	Diagnostic 1	Diagnostic 2
<b>Characteristic</b>							
Female	0	4	4	4	4	2	0
Veteran	7	7	7	7	7	2	0
ETP		1	1	1	1	16	8
Incumbent		12	12	12	12	17	8
<b>Ethnicity</b>							
Latino	23	42	41	41	41	15	5
Black	4	26	26	22	22	2	0
White	5	11	11	11	11	3	0
Asian	2	3	3	3	3	0	0
Multiethnic	0	0	0	0	0	0	0
Other/Unknown	2	4	4	4	4	7	4
<b>Total</b>	<b>36</b>	<b>86</b>	<b>85</b>	<b>81</b>	<b>81</b>	<b>27</b>	<b>9</b>

	Insite for CNG	CNG Cylinder	Hybrid Safety	Ohm/Volt Meter	Electrical Principles	Electrical Schematics	Scan Tools
<b>Characteristic</b>							
Female	0	2	0	0	0	0	0
Veteran	1	6	0	7	0	0	0
ETP	16	10	1	9	9	6	6
Incumbent	16	19	1	17	9	6	6
<b>Ethnicity</b>							
Latino	10	25	1	24	6	3	3
Black	0	6	1	7	2	2	2
White	3	5	0	5	0	0	0
Asian	0	3	0	2	0	0	0
Multiethnic	0	0	0	0	0	0	0
Other/Unknown	3	4	0	2	1	1	1
<b>Total</b>	<b>16</b>	<b>44</b>	<b>2</b>	<b>40</b>	<b>9</b>	<b>6</b>	<b>6</b>

# Appendix 1

## Protocol CPAP and Heavy Duty participant interviews

### LBCC – TAA 2.0 INITIATIVE

#### Interview Protocol

#### Pre-Apprenticeship Construction Program

#### Post-Training / Completion

Emails will be sent to survey completers who agreed to be contacted by the RP Group after completing their PAC training. The first program completers to be contacted will be identified from Cohort 4 and Cohort 5 survey respondents. We will start with 2-3 interviewees and summarize the findings in a bullet-point format along with any quotes that may be useful to the TAA 2.0 team. After presenting the findings from the first interviews to the LBCC team, we will decide how to move forward with additional interviews.

The email invite will propose a list of possible times that the RP Group researcher is available for a 20-30 minute interview. We will also inform the participants that the interview will be recorded and that the information they contribute will not be presented back to LBCC or others in any way that makes it possible to identify them as an individual.

#### Introduction

- Thank the interviewee for their time.
- Remind them that the interview will require 20-30 minutes.
- Remind them of the purpose of the interview (to collect information from past participants that will help the program team understand how effectively the training has prepared participants for a training-related position and to find out what happened to participants after they completed the program, including ideas and input they have for how to strengthen the program).
- Ask them if we may record the interview and explain why this is necessary.
- Explain that RP Group is not part of the college, etc.

Explain that in our summaries of the interviews we will not use any information that can be traced directly back to them, but also explain that we may quote them and that the program team may decide to use these quotes in announcements and reports about the program.

## Questions

Date and means of contact: 1. \_\_\_\_\_

Date of interview:

Interviewee's Name: \_\_\_\_\_

**Note for interviewer: Ask the main question first and use the probes as needed**

1. Why did you originally sign up for the Construction/Pre-Apprenticeship Training at Long Beach City College?

- What was your employment situation at the time you signed up?
- What did you hope to achieve from completing the program?

ADDED Were you in the afternoon or evening program

2. Are you currently working?

3A. If the interviewee is working: Please tell me about your current/new job?

Probes:

- What kind of job/apprenticeship is it?
- What role did the PAC play in helping you prepare and train for this job?
- How did you get the job? Explore what help was received from TAA 2.0/PGWIN?
- How many hours/week are you working?
- How much are you making and do you get benefits?
- How does this job compare to jobs you have had in the past?
- What are your opportunities for advancement in this job?

3 B. If the interviewee is not working: In looking back at the Pre-Apprenticeship Program, what impact would you say the program has had on helping you get on a path that can lead to a good job?

Probes:

- What was your expectation when you enrolled in PAC?
- What was your employment situation like at the time?
- Since completing the program, what interaction have you had with PGWIN and/or the program team at LBCC?
- What have you done to find job openings? Get an interview? Continue to build your skills?
- What have you learned since you completed the program and started your job search?
- What interaction do you have at this time with other participants in the program?

4. In looking back at the PAC and knowing what you now know after being out there for a while looking for work/getting additional training/working – what feedback do you have for the program team in terms of what works well and in terms of what they can do to strengthen the program?

Probes:

- Which program components or experiences were more useful and why? (provide interviewee with the opportunity to answer the question w/o prompts first – then ask specifically about the following: math content/instructional approach, hands-on instruction, support from teachers, support from other participants, PGWIN support after the program concluded, other)
- Which program components or experiences could be improved and how? (provide interviewee with the opportunity to answer the question w/o prompts first – then ask specifically about the following: math content/instructional approach, hands-on instruction, support from teachers, support from other participants, PGWIN support after the program concluded, other)
- What is the feedback you have gotten from employers about the skills they most want to see?

5. At this time, would you recommend the PAC program to others? Why or why not?

# Appendix 2

## Protocol union and employer partner interviews

April 24, 2017

Dear XXX,

Eva Schiorring here. I'm a researcher working with the Research & Planning Group for CA Community Colleges (RP Group). The RP Group serves as external evaluator for the **Pre-Apprenticeship Construction Program presently in progress at Long Beach City College (LBCC).**

As the external evaluator, the RP Group is presently seeking **employer perspectives on the Pre-Apprenticeship Construction Program's past and potential contribution to developing a job-ready and diverse workforce to support the region's construction industry.** LBCC identified you as a INSERT [e.g., major local employer/leading union leader] who is familiar with the training program [could also customize this –e.g., who has hired program completers.....who is very knowledgeable about local industry hiring needs and requirements.....who advised the program on labor market needs, etc]. We are following up on this recommendation from LBCC by inviting you to participate in a 15-20 minute phone interview about the program.

Here are 20-minute interview time slots that work for our team:

Day, time period (provide 5 options)

TO BE INSERTED ONCE WE HAVE A LIST OF INTERVIEWEES AND INFORMATION WE CAN USE TO CUSTOMIZE THE LETTER

Thank you in advance for letting us know which time slots work for you and a good number to reach you. If none of the suggested time slots work for you, just provide us with a few alternatives.

With best regards and thank you in advance,



Eva Schiorring

Eva Schiorring, MPP

Senior Researcher

Research & Planning Group for California Community Colleges

[www.rpgroup.org](http://www.rpgroup.org)

510-524-4692

## Appendix 3

### List of interviews conducted in support of the evaluation

Interviewee	Position and Affiliation	Interview Date	Note
Adair Mark	LBCC TAA Heavy Duty Instructor	29-Jun-17	TAA 2.0 Instructor interview
Andrade-Hernandez	LBCC TAA 2.0 Workforce Development Training Coordinator	11-Aug-17	TAA 2.0 Partner exit interview
Aramburo Eduardo	Assistant Administrative Analyst I, Construction Management Division, Port of Long Beach	13-Jun-17	Stakeholder interview, CPAP
Barajas Salvador	Construction Pathway Manager, Pacific Gateway Workforce Investment Network (PGWIN)	28-Aug-17	TAA 2.0 Partner exit interview
Billup Ken	Senior Outreach Manager, Clark Construction Group	2-May-17	Stakeholder interview, CPAP
Catellanos Rene	Technicians Training Supervisor, Operating Engineers Training Trust	25-Jul-17	Stakeholder interview, Heavy Duty
Dickstein Brett	LBCC TAA 2.0 Workforce Development Training Manager through Jan 2017-September 30, 2017	8-Aug-17	LBCC TAA 2.0 Team exit interview
Flores Abel	General Field Superintendent, Morrow-Meadows Corporation	1-Jun-17	Stakeholder interview, CPAP
Friez Dana	LBCC Workforce Development Training Manager	8-Aug-17	LBCC TAA 2.0 Team exit interview
Grant Travon	UWS	19-Jul-17	Stakeholder interview, Heavy Duty
Hannan Chris	Council Representative	4-May-17	Stakeholder interview, CPAP



Hopkins Kedrin	Director of Operations, Conservation Corps-Long Beach	2-Aug-17	CBO Partner Interview
Ibanez Rasien	Senior labor relations expert & PLA administrator	9-May-17	Stakeholder interview, CPAP
Infusino Melissa	LBCC Director of Workforce Development	11-Aug-17	LBCC TAA 2.0 Team exit interview
Johnson, Jessica	Southwest Recruiter, Penske Truck Leasing	14-Jul-17	Stakeholder interview, Heavy Duty
Krieger Tom	Director of Research, North America's Building Trades Unions	14-Jul-17	Stakeholder interview, CPAP
Lew Danielle	Marketing & Communications Coordinator, Modern Times	31-Jul-17	TAA 2.0 Partner exit interview
Mike Zullo	Industry Expert & TAA 2.0 CPAP Instructor	22-Aug-17	TAA 2.0 Instructor interview
Oelschlager Mandy	Senior Labor Relations Specialist, Parson (taking over for Rasien)	9-Jun-17	Stakeholder interview, CPAP
Paraiso Marlowe	LBCC TAA 2.0 Workforce Development Training Manager through December 2016	6-Feb-17	LBCC TAA 2.0 Team exit interview
Quintana Jessica	Centro CHA, Executive Director	3/18/2017	CBO Partner interview
Robert Castillo	Centro CHA, Program Director	3-Aug-17	CBO Partner interview
Sanchez Felipe	Modern Times, Program Associate	2-Aug-17	TAA 2.0 Partner exit interview
Shomari David	Business Representative, International Brotherhood of Electrical Workers Local Union 11	9-Jun-17	Stakeholder interview, CPAP
Winterset Eric	Superintendent of Maintenance City of Long Beach Fleet Services	17-Jul-17	Stakeholder interview, Heavy Duty

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In addition, the RP Group conducted 13 interviews with program completers from CPAP and 2 interviews with completers from Heavy duty. Their names are withheld to maintain confidentiality. These interviews were conducted between May 18, 2017 and August 9, 2017

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# Appendix 4

## CPAP participant exit survey

Pre-Apprenticeship Survey July 2016- March 2017

Welcome to the survey!

Thank you for taking this survey. The information you share will contribute to inform and strengthen the Pre-Apprenticeship Construction Program. The survey is confidential and requires no more than 10-15 minutes of your time. Your participation is strictly voluntary and you may withdraw your participation at any time.

The survey findings will be compiled and analyzed by the Research and Planning Group for California Community Colleges (RP Group), a nonprofit research and evaluation group that serves as the program's external evaluator (<http://rpgroup.org/>). Only RP Group researchers will be able to review individual responses and the RP Group's summary of the survey findings will contain no information that can be linked back to individual respondents.

If you have questions about the survey, feel free to contact Eva Schiorring, Senior Researcher with the RP Group at [eschiorring@rpgroup.org](mailto:eschiorring@rpgroup.org)

\* I have reviewed the information above about confidentiality and agree to participate in this survey

- Yes
- No

\* 1. How did you hear about the Pre-Apprenticeship Construction program (please check all that apply)

- LBCC website
- Radio announcement
- Flyer
- Church
- Friends/Family
- Pacific Gateway Workforce Investment Network (PGWIN)
- Employment Development Department (EDD)
- Social Media (for example, Now Hiring Facebook page) Please indicate which one(s)
- Announcement on a bus
- Other (please specify)

\* 2. Which Pre-Apprenticeship Construction Program do you attend?

- Program that started June 20, 2016 and concludes July 28, 2016
- Program that started June 27, 2016 and concludes August 4, 2016
- Program that started August 8, 2016 and concluded September 9, 2016
- Program that started August 29, 2016 and concluded October 13, 2016
- Program that started September 26, 2016 and concluded November 9, 2016
- Program that started October 17, 2016 and concluded November 30, 2016
- Program that started January 9, 2017 and concluded March 6, 2017
- Program that started March 6, 2017 and concluded April 19, 2017
- Program that started March 13, 2017 and concluded June 12, 2017
- Program that started May 1, 2017 and concluded June 20, 2017
- Program that started June 19, 2017 and concluded August 10, 2017

\* 3. Does your program meet in the morning or in the afternoon?

- Morning session
- Afternoon session

\* 4. What kind of experience did you have in construction before you started the program?

- I am currently working in construction
- I have worked in construction in the past
- I have never worked in construction

\* 5. Have you ever had a union job?

- Yes
- No
- Unsure

\* 6. How many hours do you work in a typical week?

- Fewer than 10 hours a week
- 11-20 hours a week
- 21-30 hours a week
- 31-40 hours a week
- More than 40 hours a week

\* 7. Please indicate why you enrolled in Pre-Apprenticeship Construction program, rating each of the reasons listed below by using as a scale “very important,” “somewhat important,” “not important”

	Very important	Somewhat important	Not important
The program may help me get into an apprenticeship program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The program may help me find a construction job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The program is free	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The program may help me qualify for a job that pays better than my current/previous job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The program may help me qualify for a job with health benefits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The program may help me qualify for a job with retirement benefits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Construction seems like a good field with lots of jobs available	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The program is only six weeks long	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The program seemed like the best option compared to other training programs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The program includes free OSHA training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)			

\* 8. When did you last study math?

- Within the last year
- 1-2 years ago
- 3-5 years ago
- 6-10 years ago
- More than 10 years ago
- Unsure

\* 9. What is the highest level of math you completed in school?

- Basic mathematics
- Pre-algebra
- Elementary algebra (Algebra I)
- Intermediate algebra (Algebra II)
- College algebra/Advanced algebra
- Statistics
- Trigonometry/Pre-calculus
- Calculus
- Unsure

\* 10. What is your expectation in terms of the hourly salary you will earn in your first year after completing the program? Please respond with an amount, for example, \$20/hour or \$30/hour.

\* 11. Please select the level of difficulty you experienced in understanding or mastering the following materials and skills required while going through the program.

	Very difficult	Somewhat difficult	Somewhat easy	Very easy	Not covered in class
OSHA 10 Certification	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CPR/First Aid Training Certification	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Basic Math for Construction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Blueprint Reading	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Construction Health and Safety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Construction Industry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diversity in the Construction Industry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Financial Responsibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Green Construction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heritage of the American Worker	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tools and Materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Carpentry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cement Masonry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Green Technologies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
H.V.A.C.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plumbing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Surveying	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Weatherization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sexual Harassment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



\* 12. Please describe briefly for the skill area/subject(s) that you consider to be most difficult what makes the skill area/ subject(s) difficult. Identify the subject first and then tell us what makes it difficult. For example: "Math is difficult because it has been so long since I last studied math," or "Blueprint reading is difficult because I don't understand some of the math required." If you do not think any subject is difficult, please write N/A.

\* 13. Please tell us how the pace of instruction works for you for each of the skill areas:

	Pace of instruction is too fast	Pace of instruction is just right	Pace of instruction is too slow	Pace of instruction is inconsistent	Not applicable - subject has not been covered
OSHA 10 Certification	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CPR/First Aid Training Certification	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Basic Math for Construction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Blueprint Reading	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Construction Health and Safety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Construction Industry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diversity in the Construction Industry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Financial Responsibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Green Construction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heritage of the American Worker	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tools and Materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Carpentry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cement Masonry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Green Technologies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
H.V.A.C.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plumbing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Surveying	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Weatherization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sexual Harassment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* 14. How ready do you think you are to use the following skills on the job?

	Completely ready	Somewhat ready	Not ready	Unsure	Not applicable -- subject was not covered in class
OSHA 10 Certification	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CPR/First Aid Training Certification	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Basic Math for Construction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Blueprint Reading	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Construction Health and Safety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Construction Industry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diversity in the Construction Industry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Financial Responsibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Green Construction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heritage of the American Worker	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tools and Materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Carpentry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cement Masonry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Green Technologies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
H.V.A.C.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plumbing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Surveying	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Weatherization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sexual Harassment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* 15. If you have difficulty with the course material, what do you do? (please check all that apply)

- Ask a fellow participant for help
- Ask the instructor for help during class

- Ask the instructor for help before or after class
- Attend a math tutoring session
- Try to find the answer on the Internet
- Nothing – hope I will understand the next topic better
- I have not had any difficulty with the course material
- Other (please specify)

\* 16. Please indicate your level of agreement with the statements below

	Strongly agree	Agree	Disagree	Strongly disagree	No opinion/not applicable
When the program started, I was aware that I had to arrive on time every day	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The rules of conduct have been consistently enforced	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The class is covering all the subjects I had expected to study and practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important for the instructor to enforce the rules of conduct (like being on time)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The balance between classroom and hands-on instruction is right	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am learning skills and gaining experience that will help me find a good/better job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel the program's commitment to deliver at least 20 hours of hands-on instruction was met	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* 17. How likely are you to recommend the program to someone who is interested in construction or in improving their work situation?

- Very likely
- Somewhat likely
- Not at all likely
- Unsure

18. Please share why you would or would not recommend \* the program.

\* 19. What do you like the best about the program?

\* 20. What is one suggestion you have for improving the program?

\* 21. What is one thing we have not asked that you think is important to know about the program or what it is like to be a participant in the program?

Thank you so much for completing this survey. The RP Group would like to check in with you again in 6-12 months to find out if you have found a training-related job and how things are going for you.

If you are willing to connect with the RP Group again, please click “yes” in question 22 below and you will be taken to a new and separate survey where you will be asked for your contact information (name, phone number, and email address). We added this step to ensure that your responses to this survey can remain confidential.

\* 22. May the RP Group contact you in a few months to find out how you are doing?

- Yes
- No

[Please click here](#) to provide information about how the RP Group can reach you.

Thank you!

# Appendix 5

## CPAP sample focus group protocol

### April 2016 TAA 2.0 Site Visit and Focus Group Protocol

**Introduction:** The RP Group looks forward to the opportunity to meet representatives from the following groups during our 4/18/2016 site visit to Long Beach City College's TAA 2.0 program.

- TAA 2.0 LBCC Team
- Participants in the Pre-Apprenticeship Construction (PAC) track's second and third training cohorts
- Completers from the first PAC cohort
- Recent completers of the first Preventive Maintenance & Alternative Fuels (PM/AF) training track
- PAC and PM/AF Instructor(s)
  - Original PAC instructional team
  - New PAC instructors
  - PM/AF instructors
- PGWIN partner
  - Dawn Shawn (by phone)
  - PGWIN person working with completers from the first PAC Cohort
- Employer partners

The RP Group understands that some of the individuals on this list may not be available on the day of the site visit and we will work with TAA 2.0 to schedule alternative time slots for phone interviews.

This document identifies areas that the RP Group hopes to explore with each of these different stakeholder groups.

## **LBCC TAA 2.0 Team**

**Marlowe – We know there are many questions here for the team and hoping that we will be able to cover most of them during the site visit. If we don't get to all of them, we can revisit them at the next monthly meeting.**

1. Please provide a quick update on training and post-training activities in progress at this time in the PAC and PM/AF tracks?

### Focusing on PM/AF

2. Who participated in the pilot PM/AF? How many participants did you have originally? How many remain today?
3. How were the participants recruited and screened?
4. How many participants dropped out of the first PM/AF sessions? What do you think were the reasons they did not complete? What kind of interventions, if any, were attempted?
5. What were the main lessons learned from the first PM/AF training session? How were these lessons used to inform the second session?
6. How did employers support the first and now second PM/AF training sessions?
7. What records were and will be kept to track the progress of participants and completers in this track? How do you plan to follow-up with the completers to determine the wage and employment impact? Do you have any thoughts about following up with leavers?

### Focusing on PAC

8. Please describe the current PAC cohorts. What are some of the differences between the current participants and those enrolled in the pilot session (age, past work experience, expectations, approach to and interest in different parts of the training, need for support, etc.)? What have you learned about the needs of different participants from working with these two cohorts?
9. As you know, we were very impressed by the PAC participants we met in February. We were especially encouraged to see how students had bonded with each other to form a strong cohort. How are the participants in the two current PAC sessions engaging with each other?
10. The teachers for the pilot PAC served a role they described as “coaches.” What role do you see the teachers, including the new members of the instructional team, playing in the



current cohorts? What opportunities and time do the teachers have to meet with and learn from each other?

11. How many participants have dropped out of the current PAC sessions? What do you think were the reasons they did not complete? What kind of interventions, if any, were attempted?
12. What have your partners done to support the two cohorts? Is there anything else you would like for them to do? Other partners?
13. What kind of interaction have you had with employers, including the union's apprenticeship training programs?

#### Both Tracks

14. What has been the greatest success thus far with the program? What has been the greatest challenge?
15. What support are you receiving from the rest of the College?
16. How are you communicating your progress to the rest of the College?
17. What value do you think TAA 2.0 can add to the College over time and beyond the grant period?
18. What have we not asked that is relevant to your scaling of TAA 2.0 and hard work to support and guide both tracks?

#### Participant focus group questions (PAC)

1. How did you hear about the training?
2. What made you decide to sign up for the program?
3. What did you do before starting the program?
4. What are your expectations now for the kind of job and salary you might be able to get after you complete the program? What plans do you have for finding a job after the program is over?
5. What skills have you learned in this program?
6. The first group of participants we met talked about how they had gotten to know each other and sometimes helped each other out both in and out of class. This class is a much larger, so we are wondering if you are getting to know each other and whether you are able to help each other out?
7. What was it like for you to learn math on the computer where you pace yourself?
8. What kind of support services are available to participants in this program? Which support services have you used? How have these services helped you?
9. What do you like the best about the program?
10. What has been the most difficult thing for you about participating in this training?

11. What is one suggestion you have to improve the program?
12. What do you think the recruiters should tell students who are thinking of enrolling in this program to get students to actually enroll?
13. What do you think the recruiters should tell students who are thinking of enrolling in this program about what it takes to be successful in the program?
14. What have we not asked that is important about this program?

### **PAC completer interview questions (PAC)**

1. What has happened since we last saw you a few weeks before you completed the Pre-Apprenticeship Program?
2. What have you done so far to find a job? How is your job search going? What are the next two or three things you plan to do
3. What help is available to you at this time? What kind of help have you received? Who has provided this help?
4. What kind of connection do you have at this point with the other participants in the program?
5. What did you know about Long Beach City College before you participated in the Pre-Apprenticeship Program? What do you think of LBCC now?
6. From your current perspective, what was the most important thing you learned in the program?
7. From your current perspective, what is one thing that could be improved about the program?

### **PM/AF Completer Interviews**

1. How did you hear about the training?
2. What made you decide to sign up for the program?
3. What did you do before starting the program?
4. Are you currently working? If so, what do you do and how many hours a week do you work?
5. What expectations did you have when you started the training for what you would be able to do at the end of the program?
6. What was the training experience like? (what did you learn, what were the teachers like, did you work with the other participants on assignment)
7. What kind of interaction did you have with the other program participants
8. What impact do you think having completed the training will have on your ability to get a good/better job or a higher salary?
9. What skills did you learn in this program?

10. What kind of support services were available to participants in this program? Which support services did you use? How did these services help you?
11. What did you like the best about the program?
12. What is one suggestion you have to improve the program?
13. What do you think the recruiters should tell individuals who are thinking of enrolling in this program to get students to actually enroll?
14. What do you think the recruiters should tell individuals who are thinking of enrolling in this program about what it takes to be successful in the program?
15. What have we not asked that is important about this program?

## **Instructors**

### **Frank and Javier**

1. Which cohort(s) are you currently teaching?
2. How are the current participants different from the first cohort? How is this affecting how you teach and otherwise engage with the participants? How are they the same?
3. You described yourself as a “coach” for the first cohort. To what extent are you continuing or modifying this role with the new cohorts?
4. The first cohort had little difficulty with math and technology. How are the current cohorts dealing with these subjects?
5. What are some of the most important challenges current participants are experiencing? (For example, motivational obstacles/technology obstacles/math)? What, if anything, can you do to help them address these challenges?
6. In the first cohort, a number of participants did not complete, including some who were asked to leave. What is the situation like with the current cohorts in terms of motivation and perseverance? How many of those who signed up for the class have dropped out? What do you think is their main reason for not completing?
7. What do you do if a participant needs more help than you are able to provide in class, for example in math? Or if somebody doesn’t have money for transportation?
8. For the students who are persisting, how well do you think they will be prepared to compete for apprenticeship opportunities?
9. What would you suggest to guide the recruitment of additional participants for the next cohorts? What kind of screening would you recommend?
10. The pilot cohort really bonded inside and outside of the classroom. What are you seeing in terms of participants supporting each other with the new cohorts? Are you doing anything to encourage this kind of cohort development?
11. Overall, what has been the best part about teaching this class?
12. Overall, what has been most challenging about teaching this class?
13. What kind of opportunities have the current participants had to meet employers, visit job sites and otherwise experience the industry first hand?

14. Since they completed the training, what contact have you had with students from the pilot cohort?
15. What interaction do you have with the other/new PAC teachers? (training them, meeting to exchange updates/lessons learned)
16. At this stage, what is one idea you have for how to strengthen the program?
17. What have we not asked that is relevant to this conversation about teaching the PAC track?

### **New PAC instructors**

1. What made you interested in teaching the Pre-Apprenticeship Construction (PAC) and how did you hear about the program?
2. What kind of teaching have you done in the past and how is the PAC similar or different?
3. Other than completing the Multi-Craft Core Curriculum (MC3), how did you prepare to teach the PAC?
4. Which session(s) are you currently teaching? Are you teaching it with another instructor? If so, how do you divide the work and coordinate what you each do?
5. How do you think the program is working for participants?
6. Which part of the training is most challenging for them? How are they dealing with these challenges?
7. What kind of opportunities have the current participants had to meet employers, visit job sites and otherwise experience the industry first hand?
8. How many of those who signed up for the class have dropped out? What do you think is their main reason for not completing?
9. For the students who are persisting, how well do you think they will be prepared to compete for apprenticeship opportunities?
10. What would you suggest to guide the recruitment of additional participants for the next cohorts? What kind of screening would you recommend?
11. What do you do if a participant needs more help than you are able to provide in class, for example in math? Or if somebody doesn't have money for transportation?
12. Overall, what has been the best part about teaching this class?
13. What is most challenging about teaching this class?
14. What do you think are the most important qualities or experience an instructor can bring to this program?
15. What interaction do you have with the other PAC teachers? (meeting to exchange updates/lessons learned)
16. At this stage, what is one idea you have for how to improve the program?
17. What have we not asked that is relevant to this conversation about teaching the PAC track?

## **PM/AF Instructors**

1. What made you interested in teaching the Preventive Maintenance & Alternative Fuels Track (PM/AF)? Which session(s) are you currently teaching? Are you teaching it with another instructor? If so, how do you divide the work?
2. What did you do before teaching the PM/AF?
3. How did you prepare to teach the PM/AF?
4. How would you describe your role as an instructor in this program?
5. Do participants have opportunities to get to know each other through class assignments (for example team work)? What is the level of interaction among the participants inside as well as outside of class?
6. How many of those who signed up for the class completed and how many dropped out? What do you think was the main reason why participants dropped out?
7. What would you suggest to guide the recruitment of additional participants for the next cohorts? What kind of screening would you recommend?
8. What kind of industry involvement have you had in the class?
9. What skills are you teaching the participants and how are these skills valued in industry?
10. What was the main thing you learned from teaching the class?
11. Overall, what has been the best part about teaching this class?
12. What is most challenging about teaching this class?
13. More instructors are needed to teach PM/AF. What should LBCC look for as they recruit more instructors for the program?
14. What is one idea you have for how to strengthen the program?
15. What have we not asked that is relevant to this conversation about teaching the PM/AF track?

## **PGWIN**

### **Continued conversation about data sharing and collection with Dawn Swan:**

No Protocol

### **PGWIN Program Coordinator working with PAC Completers**

1. What are your role and responsibilities in relation to the Pre-Apprenticeship Construction (PAC) program?
2. What kind of interaction have you had with the first cohort of PAC participants since they completed the program?

3. The most attractive part of the PAC is that completers may be able to interview for and access apprenticeships. How many members of the first cohort have taken or may soon be taking the first step of having an apprenticeship interview?
4. Overall, and based on your experience, how job ready are the members of the first cohort?
5. The participants in the first cohort really bonded with each other, which helped them stay focused and motivated. What are you able to do to help them stay connected and engaged with each other after they leave the program?
6. In thinking about the members of the first PAC cohort, do you have any suggestions for those who recruit new participants to the program and to those who develop the curriculum and teach the program?
7. What is the most encouraging success story you can share with us from working with the first PAC cohort?
8. What interaction have you had thus far with the current two PAC cohorts and their instructors?
9. Once these two current cohorts complete, your case load will increase significantly. What is the plan for how to manage this expansion?
10. Is there anything else that is relevant to working with PAC completers that we have not discussed during this conversation?

### **Employer Interview(s)**

1. Which company do you represent and what do you do there?
2. What involvement do you and your company have with the Pre-Apprenticeship Construction (PAC) / Preventive Maintenance & Alternative Fuels (PM/AF) training programs at Long Beach City College?
3. How did you/your company first become involved in the program?
4. In the past, have you participated in other training and workforce development programs at the college? Other colleges?
5. What was your motivation for wanting to get involved in the PAC/PM/AF?
6. What do you hope will result from your involvement?
7. What has given you most satisfaction about your involvement in PAC/PM/AF?
8. Thinking into the future, how do you anticipate your company's involvement in the program will evolve?
9. Do you think there are other local companies in your industry that could support PAC or PM/AF?
10. What is the most powerful argument LBCC can make to increase employer support of the PAC or PM/AF?

# Appendix 6

## Heavy Duty participant exit survey

Participant Survey: Heavy Duty Preventative Maintenance and Alternative Fuels Training

Welcome to the survey!

Thank you for taking this survey. The information you share will contribute to inform and strengthen the Preventative Maintenance and Alternative Fuels Training program. The survey is confidential and requires no more than 8-10 minutes of your time. Your participation is strictly voluntary and you may withdraw your participation at any time.

The survey findings will be compiled and analyzed by the Research and Planning Group for California Community Colleges (RP Group), a nonprofit research and evaluation group that serves as the program's external evaluator (<http://rpgroup.org/>). Only RP Group researchers will be able to review individual responses and the RP Group's summary of the survey findings will contain no information that can be linked back to individual respondents.

If you have questions about the survey, feel free to contact Eva Schiorring, Senior Researcher with the RP Group at [eschiorring@rpgroup.org](mailto:eschiorring@rpgroup.org)

\* I have reviewed the information above about confidentiality and agree to participate in this survey

- Yes
- No

Please record today's date

Date  /  /

\* Please check the name of the training module you just completed. Use the date(s) to make sure you check the right one.

- Digital Volt Ohm Meter and Diagnostic Tools (8 hours)
- Heavy Duty Preventative Maintenance Alternative Fuels (40 hours)
- CNG Cylinder Safety Inspection and Certification (16 hours)
- ISL-G Diagnosis and Repair Level 1 (16 hours)
- SA Recycling (Class ending June 19, 2017)
- Cohort 13: Class ending June 20, 2017
- Cohort 14: July 5, 2017 - July 18, 2017
- Cohort 15: July 10, 2017 - July 24, 2017 (Long Beach Fleet Services)
- Cohort 16: Cylinder Safety Class (July 25- July 26, 2017)
- Cohort 17 : Heavy Duty Preventative Maintenance (August 1, 2017 - August 15, 2017)
- Cohort 18: Cylinder Safety (August 9, 2017-August 10, 2017)
- Cohort 19: Digital Volt Ohm Meter (August 12, 2017)
- Cohort 20: Digital Volt Ohm Meter (August 19, 2017)
- Cohort 21: Cylinder Safety (August 22, 2017-August 23, 2017)

\* Please check the name of other training module(s) you have completed in the past through the LBCC program.

- Digital Volt Ohm Meter and Diagnostic Tools (8 hours)
  - Heavy Duty Preventative Maintenance Alternative Fuels (40 hours)
  - CNG Cylinder Safety Inspection and Certification (16 hours)
  - ISL-G Diagnosis and Repair Level 1 (16 hours)
  - This is the first training module I have completed at LBCC
- Other (please specify)



\* Please check the name of other training module(s) you would like to attend through the LBCC Heavy Duty Program.

- Digital Volt Ohm Meter and Diagnostic Tools (8 hours)
  - Heavy Duty Preventative Maintenance Alternative Fuels (40 hours)
  - CNG Cylinder Safety Inspection and Certification (16 hours)
  - ISL-G Diagnosis and Repair Level 1 (16 hours)
  - ISL-G Level 2 (16 hours)
  - Electric Technology Training (24 hours)
  - Insite for CNG/LNG System (8 hours)
  - The training I just completed is the only module of interest to me at this time
- Other (please specify)

\* How did you hear about the Heavy Duty Training program? (please check all that apply)

- LBCC website
- My employer told me about the program
- Radio announcement
- Flyer
- Church
- Friends/Family
- Pacific Gateway Workforce Investment Network (PGWIN)
- Employment Development Department (EDD)
- Social Media(for example, Now Hiring Facebook page)
- Announcement on a bus
- Other (please specify)

\* Did your employer ask you to attend the training you just completed today?

- Yes, my employer asked me to attend the training and I was paid for my time
- Yes, my employer asked me to attend the training on my own time
- NO, I attended my on my own
- Other (please specify)

\* Prior to today's training, what did you know about Long Beach City College's training programs in your field?

- I knew Long Beach City College offered instruction and training that may be of interest to me
- I did not know that Long Beach City college offered instruction and training that would be of interest to me
- Other (please specify)

\* What is your current job title? (for example, "Mechanic"). If you are not currently working, please write "Not working at this time."

\* How many hours do you work on a typical week?

- Fewer than 10 hours a week
- 11-20 hours a week
- 21-30 hours a week
- 31-40 hours a week
- More than 40 hours a week

\* What was your main reason for taking the training module you just completed? Please check the one answer that best describes your motivation for taking the training module:

- I hope it will make me more competitive as a job applicant in the field
- I hope it can help me advance in my current job
- My employer asked me to take the training module
- I have my own business and wanted to build additional skills I can offer my clients
- I have a general interest in the material covered today
- Other (please specify)

\* Overall, how satisfied were you with the training module you just attended?

- Very satisfied
- Satisfied
- Not sure
- Dissatisfied
- Very dissatisfied
- Other (please specify)

\* How satisfied were you with the instructor's knowledge of the subject area?

- Very satisfied
- Satisfied
- Not sure
- Dissatisfied
- Very dissatisfied
- Other (please specify)

\* How satisfied were you with the instructor's approach to teaching (for example, the way they explained concepts, the way they used examples and referred to their own experience?)

- Very satisfied
- Satisfied
- Not sure
- Dissatisfied
- Very dissatisfied
- Other (please specify)

\* What was the most important skill, concept or "thing" you learned today?

\* Was there anything you had expected or hoped to learn that was not covered or that you did not fully learn? If so, please explain briefly. If not, please write "N/A" in the space below.

\* What did you like the best about the training module?

\* What is one suggestion you have for improving the training module?

\* How likely are you to recommend the training module you just took to others?

- Very likely
- Somewhat likely
- Not at all likely
- Unsure

\* Please share why you would or would not recommend the training module:

\* Is there anything we have not asked that you would like to share about the training module?

We want to continue to learn from your experience

Thank you so much for completing this survey. The RP Group would like to check in with you again in 6-12 months to find out if you have found a training-related job and how things are going for you.

If you are willing to connect with the RP Group again, [please click here](#) and you will be taken to a new and separate survey where you will be asked for your contact information (name, phone number, and email address). We added this additional step to ensure your responses to this survey can remain confidential.

Thank you!

# The Research and Planning Group for California Community Colleges

The RP Group strengthens the ability of California Community Colleges to discover and undertake high-quality research, planning, and assessments that improve evidence-based decision-making, institutional effectiveness, and success for all students.

## Project Team

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