

Oregon Department of Transportation

Report on the Use of Federal Funds to Increase Diversity and Prepare Those

Entering the Highway Construction Workforce (ORS 184.866)

INTRODUCTION

Oregon law (ORS 184.866) requires ODOT to expend one-half of one percent up to an amount of \$2,100,000 of the federal funds received each biennium by the Department of Transportation pursuant to 23 U.S.C. 140(b), to increase diversity in the highway construction workforce and prepare those interested in entering the highway construction workforce.

ORS 184.866 requires the department to submit a report to the Legislative Assembly by December 1 of each even-numbered year with an analysis of the results of the agency's efforts; the amount available to the department from federal funds for on-the-job training supportive services activities and the amount expended by the department for those activities; and the performance outcomes achieved from each activity, including the numbers of persons receiving services, training and employment.

BACKGROUND

ODOT's Highway Construction Workforce Development Program helps build a diverse, skilled construction workforce that will meet the needs of the Oregon heavy-highway construction industry now and in the future. The program provides support and services to individuals who are either preparing to enter or have entered a trade associated with highway construction. ODOT has partnered with the Oregon Bureau of Labor & Industries to provide services to expand diversity in employment, increase apprenticeship participation and increase training resources and opportunities for highway construction jobs throughout the State of Oregon.

Services broadly cover outreach and recruitment, pre-apprenticeship classes, and case management for individuals preparing to enter a trade, as well as transportation (fuel), travel-related expenses (per diem for lodging and meals when traveling more than 60 miles from home and incurring an overnight stay), job readiness supplies (work tools, work boots, rain gear, and personal protective equipment not provided by employers), child care subsidies (for apprentice parents without a family member at home to care for young children), and one-time hardship assistance for apprentices who are in a trade associated with highway construction with a goal of covering each of the supportive services described in ORS 184.866:

- (a) Pre-apprenticeship programs;
- (b) Pre-employment counseling;
- (c) Orientations on the highway construction industry;
- (d) Basic skills improvement classes;
- (e) Career counseling;
- (f) Remedial training;
- (g) Entry requirements for training programs;
- (h) Supportive services and assistance with transportation;
- (i) Child care and other special needs; and
- (j) Job site mentoring and retention services.

To implement the Program, the ten “activities” listed in the statute are grouped into a range of service types that fall along a continuum based on where individuals are in the process of being prepared to enter the highway construction workforce from first hearing about the industry and its construction trades to becoming a journey worker in one of those trades. The service types are directed toward providing (A) career exploration (including career education with youth and reaching adults in career transitions); (B) preparation of apprenticeship seekers (including technical assistance to Local Joint Committees on selection procedures and technical assistance to contractors {training agents} to develop career ladders); (C) preparation of apprenticeship applicants and pre-apprentice graduates; and (D) support for and retention of registered apprentices.

Portland State University recently evaluated the program using data about apprentices maintained by BOLI as the registration agency and data collected through phone surveys with completed and terminated apprentices who had received services to explore in greater detail what is working and not working in the services currently offered. (See Kelly, October 2022 and Kelly & Benitez, October 2022 in References). To measure the impact of services on completion rates, researchers focused on the cohorts who entered registered apprenticeship in the calendar years of 2014 and 2015, because they were expected to have completed by the end of 2021 when the research began.

The research found that the program has been effective at improving both the recruitment and retention of a diverse workforce over the past decade as well as since the last reporting period. Receiving both financial and non-financial services had the largest positive impact on completion, followed by childcare subsidies, non-financial services, and hardship funds; ready items and gas/travel did not have a positive impact on completion.

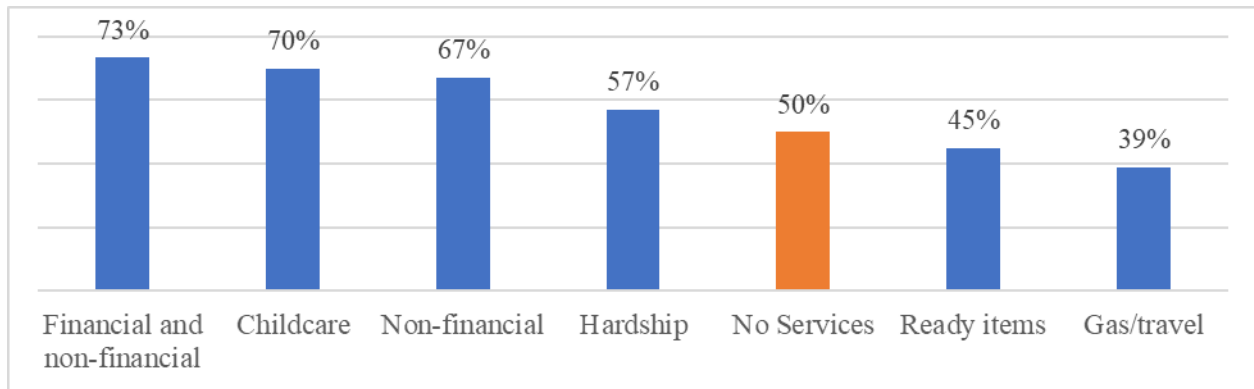


Figure 1 - Percent of highway trades apprentices in the 2014-2015 cohort completing, by service type (OAS)

1. **An analysis of the results** of the department's activities to:

- a) **increase diversity** (measure results by comparing the rate of remaining active and completing training based on sex and race/ethnicity) in the highway construction workforce;

Analysis of Improvements in Retention to Increase Diversity

Specific services that were found to improve retention and completion of registered apprentices in highway construction trades included a combination of financial and non-financial (social support) services. The nonfinancial services of social supports and career navigation had the largest net impact on completion rates for women and people of color, who were 33% more likely to complete with these services.

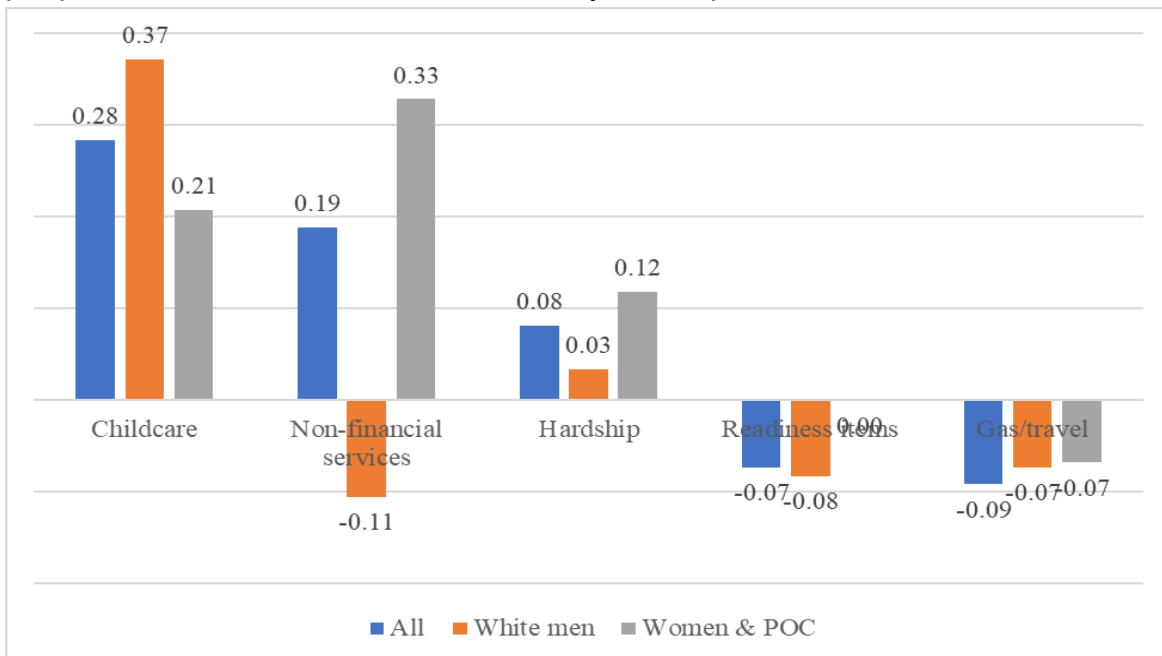
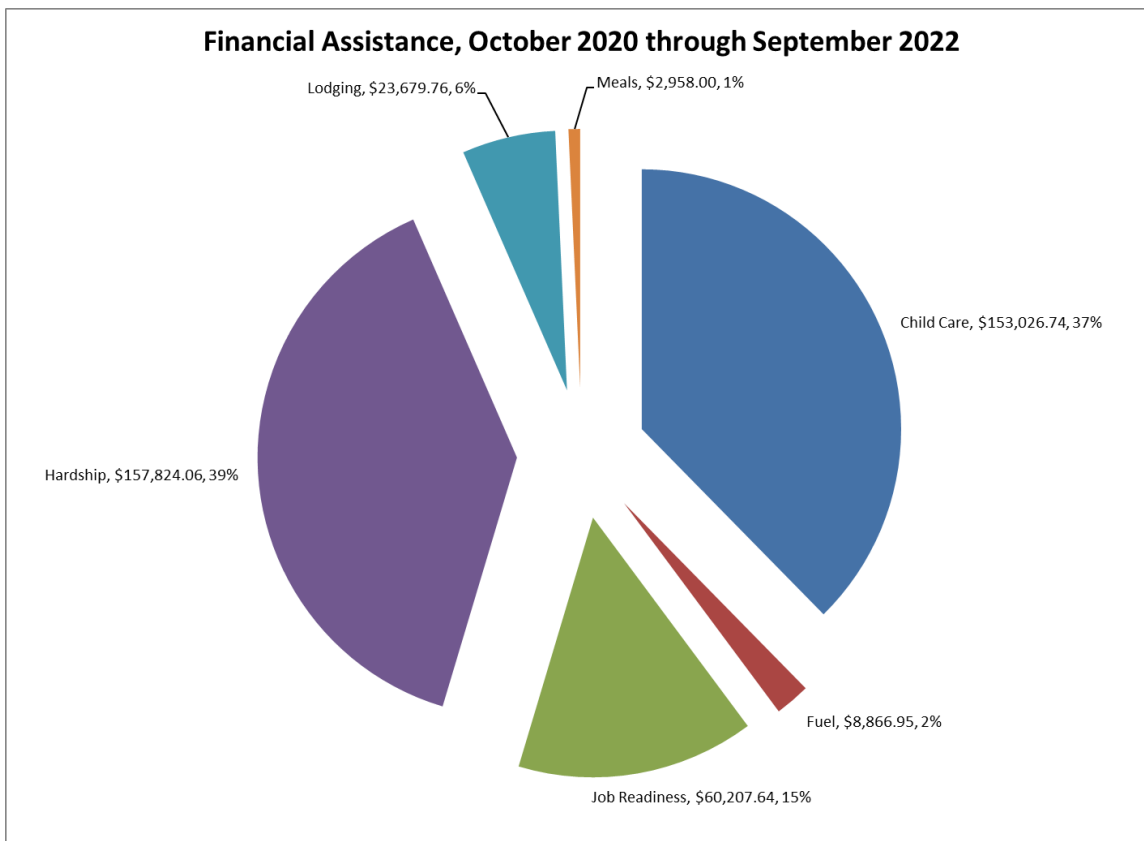


Figure 2 - Marginal effects of each service type, net of other service types, on completion rates of highway trades apprentices in the 2014-2015 cohort, by race and gender (OAS)

Among the financial services, childcare and hardship assistance are found to be particularly beneficial. They are also the services that were funded at the highest level during the 2-year period covered by this report, accounting for 76% of the assistance provided to registered apprenticeship.



Childcare Subsidies

The findings of 2022 Survey of Oregon Apprentices show that both mothers and fathers reported that consistent childcare as well as paying for the cost of childcare was a problem. The challenge of parenting has a larger impact on women: Fathers had a higher completion rate than men who are not fathers while mothers had a lower completion rate than women who are not mothers. In assessing the relationship between types of childcare used and completion, those who completed an apprenticeship were more likely to use unpaid childcare, relying on either a partner, children’s other parent, family, or friends.

Given these substantial challenges of parents (and the disproportionate impact on mothers), addressing childcare will be a critical tool for increasing retention. Survey findings show that providing childcare subsidies increases the likelihood of completion, women and people of color who receive childcare subsidies are 21% more likely to complete, and white men who received this support were 37% more likely to complete.

Notably, childcare subsidies have the largest positive impact on completion (second only to the combination of both financial and non-financial services). This type of service should be continued or expanded to keep childcare costs at no more than 7% of household income (see recommendations from the Joint Task Force on Access to Quality Affordable Child Care, December 2020). One specific strength of the approach to childcare subsidies taken by program is that friends and family are eligible childcare providers. This type of childcare arrangement is particularly likely to positively impact completion, as indicated by the findings that apprentices who complete are most likely to rely on family or friends.

Hardship Assistance

Hardship funds have increased the retention of apprentices, particularly women and people of color who were 12% more likely to complete when receiving this type of assistance.

In our 2022 survey of Oregon apprentices, we contacted all apprentices who completed or terminated in 2020 and 2021 who had received services from the Program. In total, 46 survey participants reported receiving any services, 7 people reported they received hardship funds. We asked these apprentices about the support they received and how it helped them

The seven survey respondents who received hardship funds reported that they were used for rent, replacing stolen tools, assistance with car repairs, and to support an apprentice during a divorce.

One participant reported receiving assistance with rent after being laid off during the pandemic:

“It was awesome. I applied for it since I was low on money to pay rent and they paid my next month's rent within days.”

Another apprentice reported:

“I got into a car accident and couldn't pay my rent, they help pay it... it really helped me after my car accident.”

Another apprentice noted that it helped because:

“I needed to get my stolen tools replaced.”

Of the seven apprentices who received hardship funds, six completed their apprenticeship and one person left their apprenticeship, reporting it was because they relocated.

Reaching Targeted Populations to Increase Diversity

The Highway Construction Workforce Development Program reaches a diverse group of apprentices, although the majority of program participants are white men. While race/ethnicity and gender are not criteria for receiving services, the program has been successful in reaching disadvantaged apprentices. Pre-apprenticeship programs have contributed to diversifying the highway construction workforce. For the 2014-2015 cohort, 27% of all women and 14% of Black men entered via pre-apprenticeship. Completing a pre-apprenticeship has a positive effect on completion of an apprenticeship among women only in the 2014-2015 cohort.

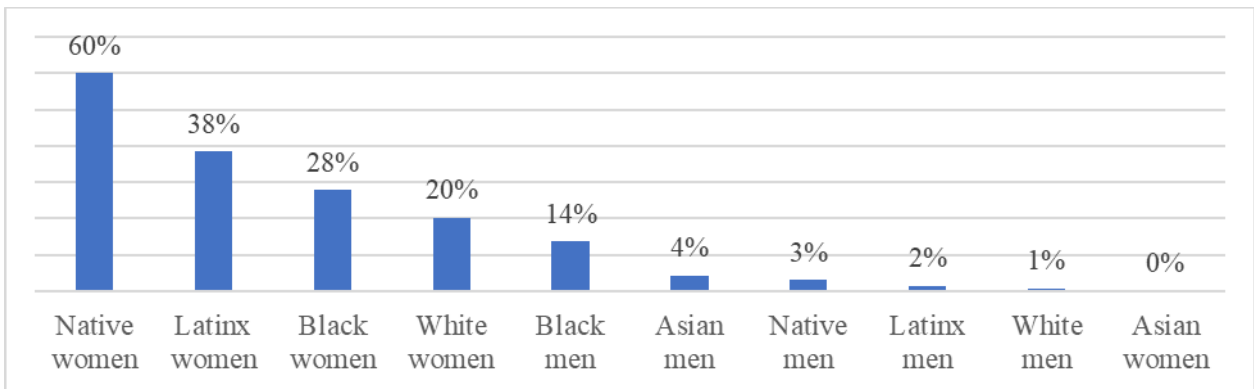


Figure 3 - Percent of highway trades apprentices in the 2014-2015 cohort who completed a pre-apprenticeship, by race and gender

Supportive Services Reaching Women and People of Color at Higher Rates

A total of 234 highway trades apprentices who started an apprenticeship in 2020-2021 received any services through the Program. As shown below, at least 16% of women in each racial group received services, with women of color the most likely to receive services. Although only 5% of white men received services, they still represent 38.5% (90 of 234) of the apprentices who received services, which are designed to reach women and people of color but are not limited based on race, ethnicity, sex, or gender.

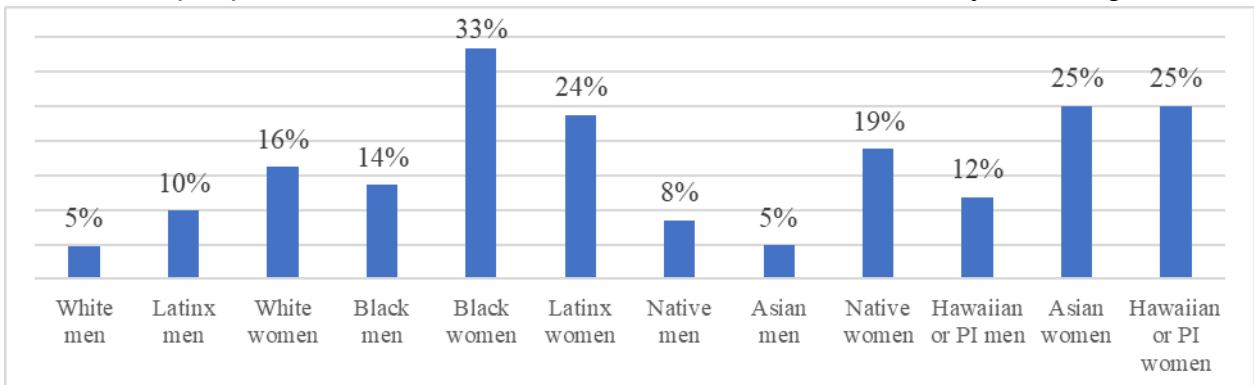


Figure 4 - Number of highway trades apprentices in the 2020-2021 cohort served by the Program, by race and gender (OAS)

Non-Financial Supportive Services Provided by the Program

As non-financial services have the biggest impact on completion, researchers asked more questions about how these are implemented by the program and experienced by apprentices who report receiving social supports and career navigation. In our 2022 survey of Oregon apprentices, we contacted all apprentices who completed or terminated in 2020 and 2021 who had received services from the Program. In total, 46 survey participants reported receiving any services, 35 people reported non-financial support from Penny Painter, who is the program manager at Cooper Zietz Engineers (dba Akana), a COBID firm that manages the supportive services by contract.

In the 2022 survey, apprentices who received any support from the Program were asked if they recalled calls, texts, or meetings with Penny Painter and, if so, how that had helped them. Apprentices equally reported financial and non-financial assistance as being most helpful. The way Penny Painter helps navigate apprentices through the apprenticeship program process, as well as her guidance on purchasing tools and equipment, were frequently cited.

It is important to note that many of the challenges apprentices face are outside the scope of issues that can be directly addressed through the Program. However, these may be issues on which the Program can provide support to other initiatives, such as the Safe from Hate coalition and public owner approaches to community workforce agreements. The box below shows suggestions for the industry from the 2022 Needs Assessment (Kelly and Benitez 2022). These recommendations are consistent with the recommendations from previous evaluations of the Program (Kelly and Wilkinson 2020, Wilkinson and Kelly 2018) as well as the recent Metro Market Study (Haines, et al, 2018) and the Regional Respectful Workplace Model Review Committee Recommendations (2020).

Structural changes to support retention

- Revise current processes for assigning work to ensure equal access to on-the-job hours for women and people of color.
- Promote respectful workplaces through employer policies and worker training.
- Create a system for reporting harassment and discrimination across job sites.
- Promote teaching and mentorship through employer policies and worker training.
- Provide opportunities for apprentices to rotate out of jobs where they are not learning the skills of the trade.
- Provide opportunities for apprentices to rotate out of jobs that require long hours, are far from home, not ideal schedules, or are otherwise not a good fit.
- Require employers to pay for apprentices' travel expenses for out-of-town work.

- b) **prepare individuals** (measure results by remaining active and completing an apprenticeship program) interested in entering the highway construction workforce *[by providing:*

- i) *Pre-apprenticeship programs;(preparation of apprenticeship seekers)*
 - ii) *Pre-employment counseling;(preparation of apprenticeship applicants and pre-apprentice graduates)*
 - iii) *Orientations on the highway construction industry;(career exploration)*
 - iv) *Basic skills improvement classes; (preparation of apprenticeship seekers)*
 - v) *Career counseling; (preparation of apprenticeship seekers)*
 - vi) *Remedial training; (preparation of apprenticeship seekers)*
 - vii) *Entry requirements for training programs; (preparation of apprenticeship seekers)*
 - viii) *Supportive services and assistance with transportation; (support for registered apprentices)*
 - ix) *Child care and other special needs; (support for registered apprentices) and*
 - x) *Job site mentoring and retention services (support for registered apprentices).*
- and,*

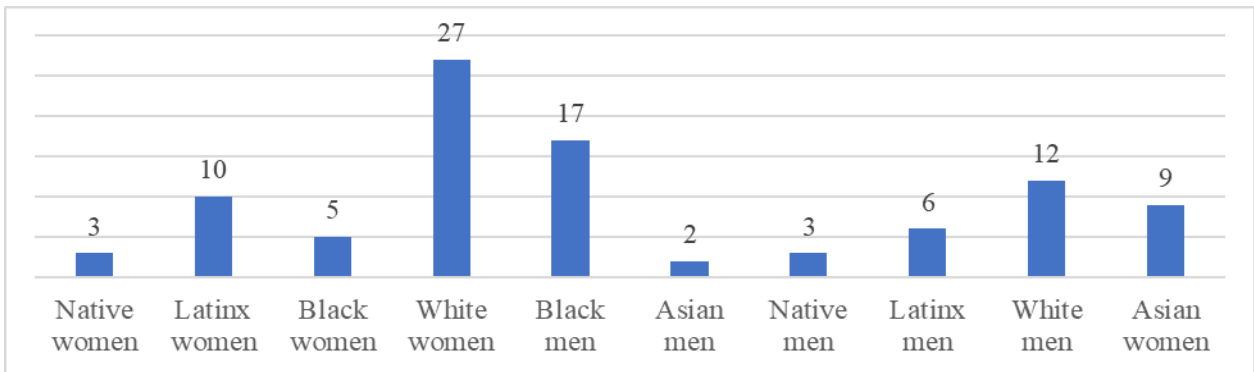
Analysis of Improvements in Recruitment and Preparing Individuals

Efforts to make the Oregon highway construction workforce more diverse, with increased integration of women and people of color in apprenticeships, stalled somewhat during the pandemic, as trade fairs and pre-apprenticeship classes were cancelled in 2020 and have been slow to return to some semblance of normal.

Oregon pre-apprenticeship programs have a variety of sources of funding, including the Program. Pre-apprenticeship programs supported by the Program in 2020-2021 include Oregon Tradeswomen, Constructing Hope, and Portland YouthBuilders as well as trades-specific pre-apprenticeships. In these analyses, we examine the 2014-2015 cohort of apprentices.

Recruitment through pre-apprenticeship

Pre-apprenticeship programs funded through the Highway Construction Workforce Development Program continued to account for a substantial percentage of women and BIPOC individuals entering registered apprenticeship in a highway construction trade. Pre-apprenticeship programs have contributed to the diversifying the highway construction trades workforce, particularly through recruiting women and Black men. We find that 27% of all women and 14% of Black men entered via pre-apprenticeship.



Additionally, pre-apprenticeship has a positive impact on completion rates for white women, Black women, and Latinx men (analysis not shown). It is unsurprising to see a lack of positive effect of pre-apprenticeship for other race/gender groups as pre-apprenticeship programs generally serve individuals with less experience in the trades and more challenges than individuals who enter directly into apprenticeship.

2. A description of:

- a) The **amount available** to the department from federal funds for the activities and the **amount expended** by the department for those activities;

Program Funding

Oregon law requires ODOT to expend one-half of one percent up to \$2.1 million of the federal funds ODOT receives under 23 U.S.C. 140(b) to increase diversity in the highway construction workforce and prepare individuals interested in entering the highway construction workforce.

2019-2021 Biennium:

Total Federal Funds Available for Activities: \$2,100,000

Total Amount Expended (July 1, 2019 – June 30, 2021): \$1,923,139.86

2021-2023 Biennium:

Total Federal Funds Available for Activities: \$2,100,000

Total Amount Expended July 1, 2021 through June 30, 2022: \$994,954.95*

and

- b) The **performance outcomes** achieved from each activity **including the numbers of persons receiving services, training and employment.**

*2021-2023 biennium expenditures represent only the first half of the biennium. ODOT is on track to spend most or all of the \$2.1 million allowed for this program per biennium by June 30, 2023.

- i) *Pre-apprenticeship programs;(preparation of apprenticeship seekers)*
Persons Receiving Service
 October 1, 2020 – September 30, 2021: 143
 October 1, 2021 – September 30, 2022: 186

- ii) *Pre-employment counseling;(preparation of apprenticeship applicants and pre-apprentice graduates)*
Persons Receiving Service
 October 1, 2020 – September 30, 2021: 143
 October 1, 2021 – September 30, 2022: 186

- iii) *Orientations on the highway construction industry;(career exploration)*
Persons Receiving Service
 October 1, 2020 – September 30, 2021: 143
 October 1, 2021 – September 30, 2022: 186

- iv) *Basic skills improvement classes; (preparation of apprenticeship seekers)*
Persons Receiving Service
 October 1, 2020 – September 30, 2021: 143
 October 1, 2021 – September 30, 2022: 186

- v) *Career counseling; (preparation of apprenticeship seekers)*
Persons Receiving Service
 October 1, 2020 – September 30, 2021: 143
 October 1, 2021 – September 30, 2022: 186

- vi) *Remedial training; (preparation of apprenticeship seekers)*
Persons Receiving Service
 October 1, 2020 – September 30, 2021: 143
 October 1, 2021 – September 30, 2022: 186

- vii) *Entry requirements for training programs; (preparation of apprenticeship seekers)*
Persons Receiving Service
 October 1, 2020 – September 30, 2021: 143
 October 1, 2021 – September 30, 2022: 186

- viii) *Supportive services and assistance with transportation; (support for registered apprentices)*
Persons Receiving Service
 October 1, 2020 – September 30, 2021: 30
 October 1, 2021 – September 30, 2022: 41

- ix) *Child care and other special needs; (support for registered apprentices) and*
Persons Receiving Service
 October 1, 2020 – September 30, 2021: 20
 October 1, 2021 – September 30, 2022: 25

x) *Job site mentoring and retention services (support for registered apprentices).]*

Persons Receiving Service

October 1, 2020 – September 30, 2021: 157

October 1, 2021 – September 30, 2022: 242

3. The “activities” are arranged into a range of *service types* that fall along a continuum based on where individuals are in the process of being prepared to enter the highway construction workforce as journey workers. The service types are directed toward providing (A) outreach, recruitment, and pre-apprenticeship training; and (B) apprentice retention.

Summary

The program continues to show progress in recruiting, training, and retaining diverse workers in highway construction trades as measured by the third-party evaluation of researchers at Portland State University. The program is in the process of enhancing services for childcare subsidies and hardship assistance to build on the successes identified in this report. The program is also initiating a pilot program for wraparound services to provide additional report to some apprentices who receive childcare subsidies to see if that improves the boost in completion rates for women and people of color. Finally, the program is engaged in work group with representatives of other agencies, the Governor’s office, and the National Governors Association to explore how additional investments from recent federal infrastructure initiatives can results generated by the program’s services.

Areas of concern include that financial support for ready items as well as gas/travel do not have a significant impact on completion in the most recent evaluation, which suggests that there may be benefit in limiting these services somewhat. However, a secondary function of these services is to connect apprentices with the program through which the benefits of the non-financial services of social support and career navigation are realized.

The Program is working to address these areas of concern by establishing new limits on financial supports for job readiness supplies and gas/travel that will realize cost savings without jeopardizing their role of connecting apprentices with social supports and career navigation. One option is to limit these services to apprentices who are working on ODOT jobs rather than providing these services broadly by trade. Another option is to coordinate with other public owners who have an interest in providing similar supports to apprentices to share some of these costs.

References

- Haines, Kelly, Jeana Wooley, Tiffany Thompson, Connie Ashbrook, and Maura Kelly, 2018. *Portland Metro Region Construction Workforce Market Study*
<https://www.oregonmetro.gov/sites/default/files/2018/07/02/C2P2-regional-construction-workforce-market-study-07022018.pdf>
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- Wilkinson, Lindsey and Maura Kelly, 2018. *Continuing to Build a More Diverse Workforce in the Highway Trades: 2018 Evaluation of the ODOT/BOLI Highway Construction Workforce Development Program*.