

Summary of Section 3 Qualitative Findings

Research methods

The study team conducted 16 interviews with apprenticeship coordinators representing 26 trades and one interview with pre-apprenticeship program staff between September and October 2017 (see Appendix for additional detail on interview participants). The study team also received written comments from one additional pre-apprenticeship program staff member.

The study team also conducted three focus groups with workers, with a total of 26 participants in September 2017. Pre-apprenticeship programs Oregon Tradeswomen and Constructing Hope recruited former graduates for the two apprentice focus groups. Participants for the foremen focus group were recruited from firms interviewed for section 2 of this study, with additional recruitment from the National Association of Minority Contractors-Oregon (NAMC-Oregon). Overall, 24% of focus group participants were foremen, supervisors, or vice-presidents; 64% were current apprentices; and 12% had completed pre-apprenticeship programs but had not yet entered an apprenticeship. 56% were female (and 4% had non-binary gender identities); 60% were people of color (see Appendix for additional detail on focus group participants).

The interviews and focus groups were audiotaped and fully transcribed. Transcripts were systematically analyzed for common themes using qualitative coding software.

In this section, we present a summary of the findings from workers and pre-apprenticeship and apprenticeship staff members who participated in the interviews and focus groups, followed by a summary table. Participants in the study were asked about 1) recruitment of apprentices and meeting market demands for workers; 2) challenges of apprentices; 3) challenges of journeyworkers; and 4) current supports and additional supports needed to promote diversity, equity, and inclusion in the construction workforce.

Key Recommendations

Drawing on stakeholders' description of current efforts as well as desired additional supports, the study team provided some key recommendations related to recruitment, retention, and diversity/equity policies and practices that emerged from the data collected for this section:

- Ensure steady funding stream to increase capacity of pre-apprenticeship programs
- Increase direct entry from pre-apprenticeship into apprenticeship programs
- Promote recruitment of diverse workers through referrals
- Engage in collective effort to ensure K-12 students are provided information about careers in construction.
- Address construction job site culture through respectful workplaces trainings with proven results
- Increase monitoring of on the job training of apprentices by well-trained experts
- Formalize mentorship resources for diverse workers
- Increase ongoing supportive services for apprentices
- Enforce contract goals, with consequences for non-compliance

Summary of key findings

Recruitment of apprentices and meeting market demands for workers

- Apprenticeship coordinators reported currently using a variety of approaches to recruiting participants, including: referrals and word of mouth, pre-apprenticeship programs, career fairs, outreach to high schools, community agencies, and media. Despite these many approaches, most apprenticeship coordinators noted that it was largely referrals and word of mouth that resulted in the successful entry into an apprenticeship program (up to 90%, by some participants' estimates).
- Some apprenticeship coordinators reported they were able to meet employers' requests for women and racial/ethnic minorities; others reported they did not currently have enough diverse workers to meet demand.
- According to apprenticeship coordinators, thus far the most successful ways to recruit diverse apprentices have been through pre-apprenticeship programs and referrals for diverse apprentices from current tradespeople (e.g. a white man who refers his sister).
- Pre-apprenticeship programs Oregon Tradeswomen and Constructing Hope could increase their training capacity and produce qualified diverse candidates for apprenticeships, if they receive additional funding. Additionally, the pre-apprenticeship program operated through PCC articulated they could probably better outreach and recruit women and people of color.
- Apprenticeship coordinators reported that the number of apprentices they train depends on the market demand. Apprenticeship coordinators reported they have increased their training capacity based on recent market demand and would likely continue to do so in future.
- Apprenticeship coordinators noted it was most challenging to meet market demands for journeyworkers, as journeyworkers only become available after the successful completion of a 3-5-year apprenticeship (or if they are recruited from other states).

Challenges of apprentices

- When apprentice coordinators were asked about the biggest challenges facing apprentices, many noted the difficult nature of work in the trades: physical demands of the job, the "dirtiness" of the job, early and/or irregular work hours, and unpleasant weather conditions. Among our participants, it was widely acknowledged that the trades are not for all people and a certain amount of attrition for these reasons was expected and unavoidable.
- The nature of construction culture, specifically, the persistent racist and sexist attitudes and behavior, pose significant challenges for apprentices, particularly for diverse workers. Apprentices noted the need to "prove themselves," which was particularly difficult for diverse workers. Apprentices also reported experiencing harassment and isolation on the job site.
- Negative attitudes towards diverse apprentices impact their ability to access necessary on-the-job training. Apprentices reported that they were not taught to learn the skills of their trade, while other apprentices had more opportunities to learn.
- Among participants in our study, there were examples of overt discrimination in hiring and firing related to gender and racial/ethnic identities.
- Our participants also described financial challenges of apprentices, including making ends meet (particularly in the early stages of apprenticeship) and being out of work (although this was not described as currently a major issue as the construction industry is currently booming).
- Several participants noted the unique challenges in the construction industry of meeting commitments to work and to family, specifically, the cyclical nature of the work, the unpredictable schedules, and the work hours (early mornings, nights, weekends). This is an issue that faces all workers with caregiving responsibilities; however, several female

participants noted that companies were particularly unwilling to provide women with time off (even when male workers were allowed to take time off).

- When participants were asked about challenges specific to racial/ethnic minorities, many mentioned the negative culture that still exists on the jobsite for minorities and how this needs to change. Additionally, some participants noted language barriers.

“You're expected to go above and beyond, always. And if you do, [it is assumed it is because] you're exceptional for a woman. And if you don't, it's [assumed it is] because you're a woman.” (Apprentice)

“It's hard to be a woman on the job site because they don't want women there” (Apprentice)

“They always have me doing the bitch work. I'm like, you know, I can do more than that... You've got to fight for your place.” (Apprentice)

“[When women leave the industry] it's child care hours, the need, or push, or pressure to work overtime when they have children at home, the construction culture at times, not being given opportunities to grow in the industry. (Apprenticeship coordinator)

Challenges of journeyworkers and foremen

- Some participants noted that the challenges in transitioning from apprentice to journeyworker included gaining the necessary skills and confidence (including the skills and confidence to be a good mentor to apprentices) as well as attaining recognition and respect. Some participants noted that apprentices sometimes leave the trades after completing an apprenticeship rather than going on to work as a journeyworker because of a lack of work or a preference for another career (this was not perceived as a common or significant issue).
- Established journeyworkers and foremen experienced challenges that included:
 - Being out of work
 - Challenges with finding work through networks
 - Construction culture.
- Some participants noted long term challenges of being a journeyworker include the physical toll on the body and keeping up with technology. Diverse journeyworkers and foremen experience issues related to the nature of construction culture, specifically, the persistent racist and sexist attitudes and behaviors.

“[A challenge of being a journeyworker is] respect, just lack of respect. A lot of it is just because you have your card, it really doesn't mean anything until you've been years into it.” (Foreman)

“As a minority, particularly being a minority in a lead role, I know some of the things that I deal with. I like to put it like this: [I'm] being [perceived as] incompetent and [I have] to prove I'm competent. (Foreman)

“I think any time that when you take a look around you and you don't see, you know, people that look like you, I think it's always a challenge.” (Apprenticeship coordinator)

“So I think in this industry, people need to know that your reputation, your name and your network is what's going to keep you employed a lot, sometimes even more so than your skill set.” (Apprenticeship coordinator)

Current supports and additional supports needed to promote diversity, equity, and inclusion in the construction workforce

- Participants noted that additional efforts are needed to recruit diverse workers. Participants recommended providing a more consistent funding stream for pre-apprenticeship and some participants supported direct entry from pre-apprenticeship into apprenticeship.
- Participants gave examples of how diverse workers have been recruited into apprenticeship through referrals.
- Participants also recommended continuing to invest in outreach to the broader community (e.g. through advertising) and outreach to youth in schools. Additionally, having diverse staff engaging in recruitment efforts may be an important strategy for increasing awareness of careers in construction for diverse workers.
- Most participants believed much more should be done to address construction culture to provide all workers with respectful workplaces. Participants noted some current efforts to address construction site culture (including harassment, isolation, discrimination, and a lack of access to on the job training). Apprenticeship coordinators and foremen reported occasionally intervening when they saw or heard about aggression on job sites. A few participants mentioned existing trainings and programs aimed at reducing job site aggression. Some participants emphasized training individual workers to be resilient to deal with the construction culture.
- Participants also noted that unequal access to on-the-job training suggests that additional monitoring of apprentices is needed.
- Both staff and workers noted that diverse workers need additional support though mentoring programs and other non-financial support services. Participants noted that a key source of non-financial support currently in place was personal relationships between apprentices and staff (including pre-apprenticeship program staff, apprenticeship program staff, and union staff).
- Participants noted that there are some financial supports in place for apprentices, such as: BOLI/ODOT support services, WorkSource, Impact NW, and Labor's Community Service Agency. Individual apprenticeship programs also provide some financial support. A specific support was the need for tools and clothing that fit smaller bodies. Improper fitting equipment can negatively impact safety and productivity.
- All participants largely supported contract goals to support continuous employment for diverse workers. However, most felt strongly that if those contract goals that are not monitored and enforced they were ineffective and frustrating, and some felt race and gender goals unintentionally exacerbated existing racist and sexist attitudes on the jobsite among co-workers. One participant group was opposed to contract goals, feeling that it squashed individual business freedom. Several participants reflected on opportunities to promote diversity in the trades through local hiring.

Table 1: Overview of findings from section three interviews and focus groups

	Apprenticeship programs	Workers
Recruitment of apprentices and meeting market demands for workers	<ul style="list-style-type: none"> ▪ Apprentices primarily recruited through referrals and word of mouth ▪ Other recruitment methods include: pre-apprenticeship programs, career fairs, schools, media ▪ Barrier to recruitment of diverse apprentices: Reaching diverse workers through current recruitment approaches ▪ Barrier to increasing overall training capacity: demand for apprentices 	<ul style="list-style-type: none"> ▪ Diverse workers in this study primarily entered apprenticeships via pre-apprenticeship programs ▪ Barrier to recruitment of diverse apprentices: Information about apprenticeship not widely known
Challenges of apprentices	<ul style="list-style-type: none"> ▪ The nature of the job and working hard ▪ Construction culture: proving yourself, harassment and isolation, lack of training, overt discrimination ▪ Financial challenges ▪ Work/family conflict ▪ Language 	<ul style="list-style-type: none"> ▪ Construction culture: proving yourself, harassment and isolation, lack of training, overt discrimination ▪ Financial challenges ▪ Work/family conflict ▪ Language
Challenges of journeyworkers	<ul style="list-style-type: none"> ▪ Challenges transitioning to journeyworker: skills and confidence, recognition and respect ▪ Leaving the trades after apprenticeship: lack of work, preference for another career ▪ Construction culture ▪ Being out of work, challenges finding work through networks ▪ Long term challenges: toll on the body, keeping up with technology 	<ul style="list-style-type: none"> ▪ Challenges transitioning to journeyworker: skills and confidence, recognition and respect ▪ Construction culture ▪ Being out of work, challenges finding work through networks
Current and additional supports needed to promote diversity, equity, and inclusion in the construction workforce	<ul style="list-style-type: none"> ▪ Ensure steady funding stream to increase capacity of pre-apprenticeship programs ▪ Increase direct entry from pre-apprenticeship into apprenticeship programs ▪ Promote recruitment of diverse workers through referrals ▪ Engage in collective effort to ensure K-12 students are provided information about careers in construction. ▪ Address construction job site culture through respectful workplaces trainings with proven results ▪ Increase monitoring of on the job training of apprentices by well-trained experts ▪ Formalize mentorship resources for diverse workers ▪ Increase ongoing supportive services for apprentices ▪ Enforce contract goals, with consequences for non-compliance 	<ul style="list-style-type: none"> ▪ Ensure steady funding stream to increase capacity of pre-apprenticeship programs ▪ Promote recruitment of diverse workers through referrals ▪ Engage in collective effort to ensure K-12 students are provided information about careers in construction. ▪ Address construction job site culture through respectful workplaces trainings with proven results ▪ Increase monitoring of on the job training of apprentices by well-trained experts ▪ Formalize mentorship resources for diverse workers ▪ Increase ongoing supportive services for apprentices ▪ Enforce contract goals, with consequences for non-compliance

Detailed findings

Recruitment of apprentices and meeting market demands for workers

In this section, we present findings regarding current approaches for the recruitment of apprentices and meeting market demand for workers. First, we describe how all apprentices are currently recruited by apprenticeship programs, noting specific efforts to recruit diverse workers. Then we report on the industry's capacity for meeting market demand for workers (pre-apprenticeship program graduates, apprentices, and journeyworkers). Finally, we discuss findings regarding meeting market demand specifically for diverse workers.

How apprentices are recruited

Apprenticeship coordinators reported a variety of approaches to recruiting participants, including:

- Referrals and word of mouth (from contractors and from current tradespeople)
- Pre-apprenticeship programs; specifically mentioned: Oregon Tradeswomen, (Constructing Hope (CH), Portland Youth Builders (PYB))
- Career fairs; specifically mentioned: Oregon Tradeswomen's Career Fair
- High schools
- Community agencies; specifically mentioned: WorkSystems Inc, Work Source, Clark County Skills Center, Job Corps
- Traditional media (radio, newspaper, TV)
- Social media (Facebook)
- Websites (BOLI, individual apprenticeship programs)

Most apprenticeship coordinators also noted that it was largely referrals and word of mouth that resulted in the successful entry into an apprenticeship program. Representative examples to the question about how apprentices are recruited include:

Mostly through word of mouth. We do post on BOLI's website. And I had BOLI do outreach to the programs that are out there. As well as I reached out to OTI, Constructing Hope, Southeast Works. We've had a few applicants from each one of those. But mostly it's word of mouth. (Apprenticeship coordinator)

I know that this industry in itself, probably ninety percent of all the apprentice we get are through word of mouth. So we have a very large number, regardless of the money we spend on advertising or outreach, it makes no difference. Still, the majority are through word of mouth. (Apprenticeship coordinator)

The primary means, historically, have been career fairs. We work with registered pre-apprenticeship programs, like Portland Youth Builders, Constructing Hope, Cascadia Technical Academy. I'm leaving somebody out. Oregon Tradeswomen. We open our campus to tours, three times a year to all high schools. But it tends to be those with craft programs that are taking advantage or alternative high schools. And in 2017, we started using TV advertising and social media. All of that said, eighty to ninety percent of our applicants, it's word of mouth. It's all referral. (Apprenticeship coordinator)

Most apprenticeship coordinators reported that their organization made an effort to recruit diverse

workers, most commonly, participants reported recruiting from OTI and CH pre-apprenticeship programs and Oregon Tradeswomen's career fair.

Apprenticeship coordinators particularly emphasized the role of pre-apprenticeship for recruiting women, citing examples of successful apprentices who had learned key skills through their pre-apprenticeship programs that prepared them for the trades. Some participants reported referring potential apprentices to pre-apprenticeship programs to help them gain entry into their apprenticeship programs. As one participant noted:

The gal that's in [our program] this year that's just gone indentured, she applied last year and didn't get in. But she took to heart what we said about this pre-apprentice program. And she went and took their class. And then she did much better. Interview-wise and the application score-wise. And she was able to get into the program. (Apprenticeship coordinator)

Previous research has noted that pre-apprenticeship graduates make up a significant portion of current female apprentices: in Oregon in 2014-2015, 21.7% of white female apprentices and 31.5% of minority female apprentices were pre-apprenticeship graduates (most from Oregon Tradeswomen Inc). Additionally, 2.1% of minority male and less than 1% of white male apprentices were pre-apprenticeship graduates (Kelly and Wilkinson 2017).

One participant noted that they intentionally had women in staff positions to help with recruitment of women. They stated:

I think that most importantly we work really, really hard here internally with our staff. And you know, the goal is, is that the staff that we have here at [our organization] is a representation of what's happening in the community. So we have three pretty much full-time females that work for us as instructors and get involved in recruitment and outreach. And I think that really, really helps us attract and also retain women into the field. (Apprenticeship coordinator)

A conversation between participants in one of the apprentices focus groups echoed this point:

Apprentice 1: They [companies] need to have more women in their offices.

Apprentice 2: Yeah. Or even just like all the union reps. Do you know any woman rep in any of the unions? I don't. I don't know one [female] union rep.

The strategy of having diverse workers in staff positions to help with recruitment is related to the commonly stated view of our participants that efforts to promote diversity in the trades should incorporate initiatives to have more visibility of diverse workers across all positions in the industry.

Meeting market demand for workers

In this section, we discuss issues of training capacity and meeting market demand for pre-apprenticeship program graduates, apprentices, and journeyworkers separately, as there are different issues at each stage of the workforce pipeline.

Pre-apprenticeship program graduates. The Oregon Bureau of Labor and Industries (BOLI) recognizes a number of pre-apprenticeship programs that provide training to prepare individuals to enter into

apprenticeships.¹ Pre-apprenticeship programs have different training capacities. For example, in 2018, Portland Community College (PCC)² will offer 3 classes capped at 16 students each; Oregon Tradeswomen Inc (OTI)³ will offer 3 classes capped at 30 each⁴ and Constructing Hope (CH)⁵ will offer 4 classes capped at 25 each.

Pre-apprenticeship program staff report that they consistently have a wait list for each class. PCC has limited ability to increase capacity, given space and instructors constraints. OTI and CH could increase training capacity with increased funding. Currently, graduates of pre-apprenticeship programs are in high demand, as apprenticeship coordinators recognize that recruiting from pre-apprenticeship programs is one of the most effective ways of recruiting diverse, skilled and qualified workers into apprenticeship.

Apprentices. Apprenticeship coordinators reported that the number of apprentices that they train directly depends on the market demand. Because the majority of training for apprentices occur on the jobsite, organizations need to ensure that that “classroom” is going to be available to their apprentices over the 3-5year period when deciding to increase their enrollments. As two participants described:

We can forecast based on industry needs, speaking to our contractors and what the outlook looks like based on past experience. So it’s pretty much demand. We’re looking at numbers. How many people are off work, not working? How many people are available to go to work on the out of work list? We generally like to have a percentage with probably fifteen percent or so people in the pool, ready to go to work. (Apprenticeship coordinator)

They want to expand training, and that will include more classroom space so that we could have larger classes as well as number of classes per year. We typically only have one. But this year we had two. If we had to, we could have three classes. The biggest thing is you don't want to train them and then not have a job for them. (Apprenticeship coordinator)

Most apprenticeship coordinators noted that they had increased training capacity in the last year to meet the current demand for apprentices and would continue to increase as additional apprentices are needed. This is consistent with BOLI apprenticeship enrollment data (included in Section 1 data), which clearly show a significant apprenticeship decrease during the recent recession, and an exponential uptick in line with the market demand increasing over the last two years.

While market demand is the primary mechanism for increasing (or decreasing) training capacity, some programs noted a few additional barriers. Some programs noted that they had space or instructor constraints that would pose barriers to significantly increasing their training capacity (although most noted they could overcome these barriers if needed). Some apprenticeship coordinators noted that they did not have a sufficient number of qualified applicants to increase capacity; however, most apprenticeship coordinators noted there were more applicants than available spaces in their programs. Others noted that having enough journeymen available to train apprentices was another barrier to increasing training capacity of apprentices.

¹ BOLI registered pre-apprenticeship programs http://www.oregon.gov/BOLI/ATD/pages/a_ag_partners.aspx

² Portland Community College <https://www.pcc.edu/programs/apprenticeship/pre-trades.html>

³ Oregon Tradeswomen Inc <http://www.tradeswomen.net/pathways-to-success/>

⁴ Oregon Tradeswomen typically offers four classes per year.

⁵ Constructing Hope <http://www.constructinghope.org/classes/>

Journeyworkers. Apprenticeship coordinators noted it was most challenging to meet market demands for journeyworkers, as journeyworkers only become available after a 3-5-year apprenticeship (or if they are recruited from other states). The current shortage of journeyworkers is due to the current boom in the industry, the number of experienced workers facing retirement, as well as the aftereffects of people leaving the industry and of not being able to train apprentices during the recent recession. As one participant reported:

Between now [September] and October we could face a shortage of apprentices because we only have one spare. Unless someone gets laid off. And then we just recycle them back out. But in terms of new people I don't have a ton. And then journeymen we've been shorthanded since the end of June. Normally that isn't until beginning of August we feel like we're shorthanded. And we have about a month to six or eight weeks where we're kind of strapped for people. But as soon as it starts raining then things will even out again and we'll have people available to send out. So, this year's been very busy. (Apprenticeship coordinator)

The consensus among apprenticeship coordinators was that there is no viable way increase the supply of journeyworkers to meet current demand, other than to continue to move apprentices through their programs.

Meeting market demands for diverse workers

Some apprenticeship coordinators reported they were able to meet employers' requests for women and racial/ethnic minorities; others reported they did not currently have enough diverse workers to meet demand.

Interestingly, one participant noted that requests for a diverse workforce were not always based on the need to meet contract goals:

Just about the majority of the people that are requesting folks, even public or private, will write on their form that they're requesting women or female and minority, or an under-represented population, whether they're under a diversity requirement for workforce development or not. And it's interesting where I'd always assumed it was because of public works, but it's not. People are trying to recruit across the industry. And I think the committees are all doing their part. The State is doing their part. And they're encouraging women and minorities to be hired in the trades. So you're seeing it across everybody. (Apprenticeship coordinator)

Apprenticeship coordinators noted that the barrier to meeting the demand for diverse workers was challenges in recruiting diverse apprentices using current recruitment methods. Some also noted that making the trades a viable choice for diverse workers would require overcoming the history of exclusion of women and people of color from construction and the perception that these workers would not be welcome in the industry. As participants noted:

The biggest barrier is getting people to come through the front door. You know, I can foresee still a lot more hiring going on here in the next year or so. But getting them to come through the front door to apply for the program. (Apprenticeship coordinator)

There's a lack of awareness among women and people of color. So there's that barrier. And then also there's an educational disparity as far as maybe not necessarily women, but people of color who come from...If they do come from a lower income area or school system where

they don't have the mathematical skills needed to make it into our program. So that is, that's a frustrating thing. I'd say largely lack of awareness, lack of role models in the industry. (Apprenticeship coordinator)

Retention and leadership development are critical in providing role models for new workers, in particular women, who continue to experience isolation on jobsites. When more women are available to serve in leadership roles and as role models, their unions/employers/apprenticeship programs should utilize them to serve in those capacities to attract more women to the industry. (Pre-apprenticeship staff)

As noted above, many apprenticeship coordinators noted that their programs had some specific initiatives for recruiting diverse apprentices. However, as noted above, most apprentices (up to 90%, based on some participants' estimates) who successfully enter into programs are recruited through referrals or word of mouth.

Challenges of apprentices

In this section, we review the perceptions of apprenticeship coordinators as well as current workers about the major challenges facing apprentices. These include: the nature of the work and work ethic, construction culture, financial challenges, work/family conflict, and language barriers. We conclude this section with some notes on how these challenges impact retention of apprentices.

Box 1. Challenges faced by apprentices

- Nature of the work and work ethic
- Construction culture
 - Proving yourself
 - Harassment and isolation
 - Lack of access to training
 - Lack of access to appropriate restroom facilities
 - Overt discrimination
- Financial challenges
 - Income and expenses
 - Being out of work
- Work/family conflict
- Language barriers

The nature of the work

When apprentice coordinators were asked about the biggest challenges facing apprentices, many noted the difficult nature of work in the trades: physical demands of the job, the "dirtiness" of the job, early and/or irregular work hours, and unpleasant weather conditions (i.e. working outdoors in the rain, cold, and heat). As one participant noted:

I would say probably the one that's probably the most hardest for all of them, is to just, to get used to, right out of the gate, the physical-ness of the work, and the demands and the structure of the work. You know, most of our projects start at seven o'clock in the morning. (Apprenticeship coordinator)

In discussions about retention, apprentice coordinators noted that many apprentices who leave early on cite the nature of the work as the reason that they did not want to pursue a career in the trades. Among our participants, it was widely acknowledged that the trades are not for all people and a certain amount of attrition for these reasons was expected and unavoidable.

Another common challenge (and explanation for leaving or being terminated from an apprenticeship program) was the need to “work hard.” In conceptualizing “working hard,” participants included being on time for work, staying busy and productive on the job site, and trying your best to learn the skills and complete assigned tasks. As noted in the following quotes from apprenticeship coordinators, many in the industry perceive that the primary explanation for success is to work hard:

If they work hard, if anybody works hard it really is that. If you work hard and you come to work there's not a problem. (Apprenticeship coordinator)

If you work hard and you come to work every day and you're to work early. Not working early, but you're there early. And you're not the first one to sit down from break and you're the last one to get up from break, and you're one of the last guys to leave, you know, you make sure everything's locked up and you just work hard. You don't have to be the best. The guys will like you, and people will take you, they will take you under their wing and they'll help you through the trade. But if they don't like you, you know, they're not...It's just not going to go well for you. Because people have to invest in you. And if they like you they're going to teach you more. They're going to be less likely to tell the boss how terrible you are. [Chuckles] They're going to stand up for you, you know, in the office when the apprentice isn't there. (Apprenticeship coordinator)

Conversely, many participants believed that apprentices' failures were largely due to not working hard or a lack of a work ethic. While it certainly is true that hard work is essential for success in the trades, previous research on the trades in Oregon has argued that widely held belief in the trades makes invisible all of the other challenges that apprentices face and the ways enough that “working hard” may not actually be enough to be successful, particular for women and people of color (Kelly et al 2015). As noted in the end of the second quote, the ability to access personal relationships that form professional networks within the trades (“if they like you they're going to teach you more”) is also essential to being successful. As the experiences of diverse apprentices in our study suggest, workers with sexist and racist attitudes are not likely to “invest” in diverse apprentices, no matter how hard those apprentices work.

Participants in the focus groups also noted that the work was physically difficult and sometimes unpleasant. They also noted that it was essential to be viewed as a hard worker by showing up on time, being willing to learn, and so on. However, as these were current apprentices who had chosen to pursue a career in the trades, they did not frame these as barriers or challenges, but rather just part of the nature of the work.

Construction culture

Proving yourself. Our participants noted that all apprentices have to “prove themselves” to earn the respect of senior workers and to solidify their place on their crew. However diverse workers, and particularly women with smaller bodies, report more challenges in proving themselves and being accepted on work sites. As participants noted:

You're expected to go above and beyond, always. And if you do, [it is assumed it is because] you're exceptional for a woman. And if you don't, it's [assumed it is] because you're a woman (Apprentice)

In the last three months I've been to like ten different job sites. And it's so hard because every new job site you have to prove yourself again. You know, men are horrible. They won't talk to you. (Apprentice)

The industry is still, pretty much a man's world out there. So for women, it's a lot tougher. People still have to work and prove themselves on a continuous basis. It's getting better. I mean, it's certainly better than when I started. But it's still tough. You know, those...Whether it's discrimination or not, I think the attitudes and the culture are still not as welcoming as they could be. I think it's going to take education and increasing the number of women out there to make a real change in the culture. (Apprenticeship coordinator)

In one of the apprentices focus groups, female participants discussed how they had to challenge assumptions about their physical abilities to prove that they deserved a place on the job site. As these apprentices stated:

Apprentice 1: We're taking the tamper off the truck. And he's like, what are you doing? Are you crazy? It's like, I'm going to lift this up. And we're going to get it on the ground. And I just had to fight him to say, stop trying to baby me. I'm here to do a job. I'm not here to just stand around, you know? So I mean, I have to seriously...You've got to fight for it. I'm not here just to do nothing.

Apprentice 2: It's also a fine line though to where you're not like trying to prove yourself so much that you're working unsafe, you know what I mean?

As shown in this exchange, when apprentices feel the pressure to push their bodies to the limit, they may engage in unsafe behaviors.

While some male workers may believe they are helping female apprentices by offering to do tasks for them, they are actually inhibiting that apprentices' ability to gain the necessary skills for their trade. As one apprenticeship coordinator said: "You know, it could be a man just trying to be a gentleman and, you know, maybe taking over tasks for a woman because he thinks that that's the right thing to do. Which leads to a decrease in learning opportunity for that woman."

Harassment and isolation. Workers, particularly apprentices and diverse workers, experience a wide variety of harassing behaviors, such as; hazing, bullying, name calling, being yelled at, racial and gender jokes and slurs, being told they should not be on the job site, being told they are not capable of doing the work, and unwelcome sexual comments. On the flip side, some workers experience isolation, where co-workers will not talk or engage with them at all. Both types of experiences make for very challenging work conditions and decrease job site productivity.

These negative aspect of construction culture was widely recognized among participants (although a minority of participants reported they had not seen any problems for diverse workers). As many participants stated:

I know that there's a culture on the job site that is not always conducive to female. I think that's probably more of an issue than the minority, even though minority could be an issue. I

just know that I hear more about the female. Being the only one. And, but it just depends how you deal with it. I mean, some are able to. And then others just have a hard time. So, it really depends on the personality of the woman as to how they're doing. But they feel isolated. (Apprenticeship coordinator)

I think workplace culture [is a challenge for apprentices], although it has improved, I think there's still bullying, harassment that happens on the job sites that can lead to just a decrease in morale and kind of make people question whether or not they want to work in that kind of environment for the next thirty years. So, retention-wise I think that that's probably one of the biggest factors. [For women and minorities the challenges are] largely, you know, the bullying and harassment component, the mentality that women or people of color don't belong on the jobsite or can't do the work. And some of it may be ill intentioned directly, or some of it may be indirectly. (Apprenticeship coordinator)

And so to me, that's the biggest challenge is we've kind of operated under a certain kind of culture for many, many years. And now, you know, thankfully that culture is changing. (Apprenticeship coordinator)

But I try to tell people, I mean, when people start to do the stuff in front of me I just have to walk away. When they start to say...make racist comments and stuff, I just, sorry man, I don't want to. I want to get as far away from you as I possibly can. (Apprenticeship coordinator)

In the apprentice focus groups, participants talked about both experiences of harassment and isolation as common:

My first job, back in my twenties, the guys didn't talk to me for literally three months, except to just grunt and point. And I am the first woman in the thirty years history of the contractor to work for that company. But, again [like other women have said], I worked three times as hard as the guy next to me. And I garnered their respect. (Apprentice)

In one of the focus groups, apprentices questioned why there was so much harassment on job sites:

Apprentice 1: Well, I mean, you know, you should always confront that person...first. And I mean, if it doesn't seem to fix the problem, then you go higher. And that's the way it's supposed to be. I mean, you should be able to just go over to this guy and say, hey, you know, could you calm down on everything, you know? And you should be able to say, oh yeah, it's all cool, you know? We're brothers and sisters in this. And we're supposed to treat each other...I mean, yeah, sibling rival. [Chuckles] But this is a workplace. This is a job. I've seen people walk off jobs because of being name called or, you know, gender, race, whatever. And it's like, you know what? It shouldn't be like that. That's my thought.

Apprentice 2: I'm just trying to understand why it is. It's like you go to work. You're at work. I don't understand why all the other BS has to be attached to this industry. I just don't get it.

Interestingly, a significant amount of emphasis was placed on "cursing" and "rough language" by male participants. Some men noted that they tried to "tone down" their cursing when women were on the job site. In contrast, female participants did not note this a problem at all, in fact, tradeswomen told us they cursed quite a bit on the job (and we observed them cursing in the focus groups).

Lack of access to training. Negative attitudes towards diverse workers (and to some degree, white male apprentices) that result in harassment and isolation are significant problems on job sites. However, arguably a larger problem is the ways in which these negative attitudes result in unequal opportunities for apprentices to receive training on the job sites, as this directly impacts their ability to learn the skills of their trade. Participants reported that they were often not given the opportunity to learn new skills, rather, they had to do low skill repetitive work, like cleaning or flagging (sometimes referred to as “bitch work”) As apprentices noted:

But I'll tell you what, it's hard to be a woman on the job site because they don't want women there. They always have me doing the bitch work. I'm like, you know, I can do more than that. It's like they lighten the load. Or if there's another guy it's like, oh, I got this. I'm like, you know what? Back off. Otherwise, they're going to replace me. Plain and simple. If I can't do it...And you always see a guy picking up your shit for you. It's like, get the hell out of my way. Just, you don't need to pick it up. I'm here for a reason. You've got to fight for your place. (Apprentice)

And in the beginning my job everyday was going around and picking up garbage. And, I felt really belittled. I felt a lot of things. But then I realized, you know what? I'm gonna prove to them that I'm gonna be more than just picking up garbage. And so I started going and asking everybody, “hey, do you need me to go get you bolts?” “Alright. What size?” “Do you even know what size that is?” I'm like, “yes, I do.” And I said, “and I'll figure it out in the shed.” So I go and I did that. But it was everyday. Everyday I'm gonna have to prove myself. (Apprentice)

I have a problem now where I'm like part way through my apprenticeship so I just want to try things on my own. And I can totally do that, no problem. But instead of putting me with the journeymen now, I keep getting told, “oh, you're good. This one you'll do this. Just go do that [task] forever and ever and ever. And we're not gonna train you up.” (Apprentice)

I work on my own now. All the work has been forty hours a week, by myself, whether I know how to do the job or not. And I don't get any help anymore. I don't get any more instruction. I get Google and I get phone call. If someone picks up on the other end it's lucky. (Apprentice)

Other participants noted that apprentices are sometimes asked to do tasks without receiving proper instructions, which can sometimes create safety concerns. As one participant recalled:

I see a lot of guys that are on the job site when they're first fresh. And they just throw them into a project that they have no frickin' clue about, nothing. Like, I saw one of the kids yesterday. They gave him a worm drive. And those are powerful tools. He's on the ground, on his knee pads...and nowhere to go. And it's like right here. And I'm like, where do you think it's going to go if it jumps back? You know, like I help to make a little platform and to work off of it. And they were just asking to make shins. And I'm like, what are these guys thinking to like put you [in this position] You know, [what if] if you get hurt, you know? Like, you'll never live that down. So it's like they just throw guys [into situations]. And it's almost like it's humorous to them or something. I don't know. (Apprentice)

In the foremen focus group, two participants pointed to structural issues that made it challenging to provide appropriate training to apprentices: budget constraints that limit time to teach and mentor apprentices and the lack of journeymen in the industry available to train apprentices. As two foreman noted:

Well, I think on the apprenticeship programs, I think it's harder and harder for any apprentice, because the jobs that we do now, for the big construction industry are bid so tight it doesn't allow you to have a journeyman working with an apprentice. And that is a huge failure. But it's just a fact of life, the way that everybody wants it done faster, cheaper...faster. (Foreman)

That's the hardest thing I see with the route. Is we had that big lull in construction. So we've lost a generation of skilled workers. So you either have the guys that are moving into the office or getting ready to retire. Or you have guys that, themselves have only been journeymen for five to six years to train the next generation of people. And they haven't been around that long yet. So that's been the hard part is actually finding the seasoned worker to train the new people. (Foreman)

Lack of access to appropriate restroom facilities. Several participants noted that access to restrooms can be an issue on job sites, particularly for women. As one pre-apprenticeship program staff member noted "Often safety for women is not addressed despite specific issues for women being real challenges. These include, for example, not having access to clean, locked or available toilet facilities which can cause severe urinary tract infections and other health problems."

Overt Discrimination. While some of the experiences on job sites described above could fall under definitions of workplace discrimination, we would like to highlight a few unambiguous examples of gender and race/ethnicity based discrimination reported by participants.

In one of the apprentices focus groups, participants perceived that women were discriminated against in the interview stage of applying to apprenticeship programs. One participant recalled some specific examples of gender based discrimination:

Apprentice: I went through some other like the nonunion places. And I would go to interviews. You had a great interview. They loved my paperwork, what I had to offer on my past. But I had trouble getting in the door because of my size, I guess. And so I didn't get into [a trade] because I felt like they were judging me not based on...And they said it was a great interview. They really enjoyed you. And then they never called. It happened twice. They have a girl already, you know. And I was just like, what does that have to do with anything? So I felt like that was, before getting in the door, a barrier. So I just went onto [another trade]. They took me.

Interviewer: They said "we have a girl already?"

Apprentice: Yeah. They're pretty stuck in their ways.

In another example, an apprenticeship coordinator recalled an example of a minority male apprentice who experienced discrimination that resulted in an attempted firing. The apprentice coordinator recalled: "We have a colored [sic] apprentice that had some issues. The company tried to get rid of them. We gave him a second chance. And he's doing great at his second chance. But the first chance, he worked with the wrong people and had difficulty."

Neither of these examples resulted in formal reports or legal action. This is constant with a general trend towards dealing with issues informally in the construction trades.

Financial challenges

Income and expenses. When asked about the challenges facing apprentices, several apprenticeship coordinators discussed apprentices' financial challenges, specifically, earning enough money to pay for housing and transportation, particularly at the beginning of the apprenticeship. As participants noted:

Another thing that I think is difficult for them in making that transition [into apprenticeship] is that it's...it takes awhile for you to establish yourself. And it's very, very expensive to live nowadays. And, you know, although they get paid a good wage right out of the gate, they do that, for example, just a car and insurance now is I think a lot. It feels a lot more expensive now than it did maybe twenty years ago, in terms of the percentage of your wage. So you got cars and insurance. You've got rents that are escalating. And a lot of times it's difficult just for our young men and women just to make that transition to be able to afford those types of things. (Apprenticeship coordinator)

I think some apprentices come in with maybe not a very solid support system as far as a reliable place to live, reliable vehicle. Some of them sometimes have to be working a second job when they're first starting out to try to make ends meet. In addition to that they have a lot of time they need to put into studying. And a second job often will get in the way of that, of their studies. So I see that as a big challenge. So there's the financial stability aspect of it first starting out when you're making the lower wages. (Apprenticeship coordinator)

One apprenticeship coordinator emphasized that having a social support system was critical for success:

And I try to stress, if you can have some kind of support system, whether it's mom, dad, brother, uncle, cousin, grandma, somebody to help you out, you've got so much better chance to make it through the program. Because, like I said, you know, if you have kids, you know, and you're starting at one o'clock at the morning, there's not a daycare that opens at one o'clock in the morning. So you need to be able to have Grandma be able to take the kids to daycare and pick them up at five o'clock because you're still driving back from Medford. Or if you've been laid off for two weeks and now they say, now you're going to Medford and you don't have any gas money. You need a support system, someone that you can lean on that can give you eighty bucks for gas so you can get to...get to work for a week. And then I always tell them, and then pay them back. They helped you out, pay them back. But if you don't, you know, if you don't have a support system it's really tough to make it through the program. (Apprenticeship coordinator)

While this participant suggested that it was apprentices' responsibility to find a support system outside of the trades, some of the needed financial supports are currently available, such as the BOLI/ODOT supportive services, which provides fuel and child care assistance, as well as support to purchase tools, among other resources for early term apprentices.

Being out of work. At the time of the study in 2017, the construction industry was booming and most tradespeople people were currently working. However, participants noted that the industry was cyclical and that in the past and in the future, there would be a shortage of jobs and many tradespeople out of work. As participants said:

I would say [the main challenge that apprentices face is] the periods of layoff between work. Because we get slow in the winter. (Apprenticeship coordinator)

[Being out of work is the biggest challenge], just because this last winter some of our apprentices were out six to nine months. (Apprenticeship coordinator)

Right now [being out of work] isn't a problem. I mean, if you're out of work there's something wrong with you, right now. But when we return to normal, you know, our average apprentice probably, you know, works probably fifteen hundred hours a year with two thousand being a regular year. (Apprenticeship coordinator)

Similarly, in the worker apprentice groups, participants noted that everyone was working right now and being out of work was not a challenge.

Previous research conducted during a time when construction was slow found that being out of work was the biggest challenge for apprentices (Kelly et al 2015). This research also found that white men were more consistently employed than women and people of color.

Work/family conflict

Several participants noted the unique challenges in the construction industry of meeting commitments to work and to family, specifically, the cyclical nature of the work, the unpredictable schedules, and the work hours (early mornings, nights, weekends). These challenges are particularly pronounced for workers with caregiving responsibilities. When participants talked about these issues, they mostly focused on women, although many men in construction have caregiving responsibilities as well. As participants stated:

[There are challenges] especially if you have a single parent that is trying to juggle daycare along with job. And then they're starting out classes. It's kind of a delicate balance to juggle all of that personal life and work and school all together anyways. But a lot of times apprentices don't necessarily realize how much time they're going to spend studying. And, you know, what resources are available for them, I guess... And then also specifically for single parents, there's a spot they can mark for unemployment if they're in a registered apprenticeship program. But the services like food stamps or daycare and those sorts of things don't continue for the single parent when they're not actually in the apprenticeship. Like if they're laid off. And so that can be difficult. Then you have to pay a week in advance to get back in front of it, or you lose your daycare spot if you're not using it. So those are some additional barriers that single parents can have. Actually, even if you're not a single parent, parents in general can have. (Apprenticeship coordinator)

Women face the issue of childcare, home life. They still have to do what the typical wife has to do everyday and then go out and do this. And so it's difficult. And being in production environments, for them to schedule a doctor's appointment for a kid or have a sick kid. (Apprenticeship coordinator)

As one participant recalled being laid off after missing three days of work when her child was in the hospital:

God forbid if you have children. Or you have to take the day off. Actually, that's what I got laid off for. I had to take three days off because my kid, something happened, and she was in

the hospital. And I told my boss, like “look, I will be there when I can be there. But right now this is my priority.” And then he was like, “okay.” And then I text him when I was ready to come back to work and I didn't hear from him for like a day and a half. And then he was like, “I'm sorry, we're gonna let you go.” Like, really? Like that's how it goes? I mean, I could fight something like that if I really wanted to, because union they'll protect you in anything. [But] you can get work. I just put myself on the out of work list. (Apprentice)

In one apprentice focus group, participants discussed how men taking time off from work for family commitments was perceived differently. One female participant reported overhearing men asking a superintendent for time off:

I asked for half of a day off. And they told me “absolutely not. We gave you that one day. That's all we can do for you.” But I'm watching these other guys get weeks and weeks off. You know, to go do like Christmas time, hunting, whatever. I heard what they're [men] talking about to the superintendent. And their reasoning is their children. Their reasoning is their wife. Their reasoning is family time. A birthday. And it was no problem. “Yeah, sure, no problem.” It is very different for women. And, I almost think that they don't say it, but in the back of their mind they're thinking is that we're [women] saying that we need this time off for our child for some kind of medical situation, or whatever it is, but what we're really using it for is because we can't hack the job. You know what I mean? We can't handle it. They don't want to give us any slack, because if they give us slack then they're letting us be the weak women that they see us as. And none of that is true. Like, I know what I signed up for. (Apprentice)

Language

When participants were asked about challenges specific to racial/ethnic minorities, some noted language barriers. As one apprenticeship coordinator noted “Depending on the ethnicity, if it's Asian or Hispanic, it's the language. It's the language barrier. And they're not part of any ethnic group, but Ukrainians and Russians are huge with the language [issue].”

Impacts of apprentices' challenges on retention

Apprenticeship coordinators noted that the challenges that apprentices faced impacted their retention in their programs. For example:

I would say [our retention rate is] too low. I mean, I don't think we necessarily have a glaring problem with it. But I do know that, you know, when women leave our industry, a large part of it is the inability to balance work and home and family. So whether it's child care hours, the need, or push, or pressure to work overtime when they have children at home, the construction culture at times, not being given opportunities to grow in the industry. (Apprenticeship coordinator)

Overall, apprenticeship coordinators said their current retention levels for apprentices were about right or too low. Apprenticeship coordinators noted that they lose a number of apprentices early on, which they generally framed as not problematic, as it was better to lose people who are not interested or do not have an aptitude for the work early on. Apprenticeship coordinators expressed disappointment when they lost later term apprentices, particularly since each apprentice represents a fairly significant financial investment. However, several apprenticeship coordinators noted that keeping high standards for journeyworkers required terminating lower performing workers. As one

apprenticeship coordinator noted: "I would rather journey out, you know, twelve apprentices a year versus twenty and have eight of them not be journeyman level."

Challenges of journeyworkers and foremen

In this section, we report on participants' perceptions of challenges specific to journeyworkers and foremen. First, we provide findings about challenges in transitioning from apprentice to journeyworkers. Then we address participants' perceptions about reasons why apprentices who journey out may not go on to work as journeyworkers. We go on to address challenges with construction culture, financial challenges (i.e. staying employed using professional networks), and long term challenges (i.e. toll on the body, keeping up with technology)

Box 2 Challenges facing journey workers

- Challenges in transitioning from apprentice to journeyworker
 - Having sufficient skills and confidence
 - Earning respect and recognition
- Leaving the trade after apprenticeship
- Construction culture
- Financial challenges
- Long term challenges
 - Toll on the body
 - Keeping up with technological advances

Challenges in transitioning from apprentice to journeyworker

Having sufficient skills and confidence. Participants noted that the transition from apprentice to journeyworker can be challenging as new journeyworkers often do not have all the skills of their trade and have challenges competing with more experienced journeyworkers who have been in the industry longer. Another challenge is having the confidence necessary to be successful. As participants noted:

I guess one of the biggest things is depending on contractors they're working for. It's hard for some apprentices to make that step. They're going from, you know, knowing they're a student to being a journey level worker, and trying to compete around the people that they're working around. You know, I think that's one of the biggest challenges. They don't have the...because we really don't say that the journey, once they journey out, they're not going to have the journeymen skills probably for another two to three years where they're going to hit their stride and actually start being real productive. And that, that gap is sometimes hard for a lot of apprentices. (Apprenticeship coordinator)

I think the biggest thing that some of the apprentices have [when they transition to journeyworkers], it's still being unsure of themselves... Yeah, I have this title of being a journeyman. But god, please don't tell me tomorrow that I'm going to be in charge of something. (Apprenticeship coordinator)

One participant noted that in the transition, new journeyworkers do not always have the skill to train apprentices. As one participant stated:

If we're exposed to really strong role models that are really good teachers, and mentors and coaches [it is easier]. And if you don't have that skill set, and all the sudden you're put with a brand-new apprentice and tasked with, okay, go teach this individual now and pass on all your knowledge, that that is something that I know a lot of our younger journeymen struggle with too. (Apprenticeship coordinator)

Earning respect and recognition. Gaining respect and recognition is a challenge for journeyworkers, foremen, and other workers in leadership positions. As two participants in the foremen focus group noted:

Respect, just lack of respect. A lot of it is just because you have your card, it really doesn't mean anything until you've been years into it. (Foreman)

Your reputation is everything in construction. (Foreman)

Being in a leadership position can be particularly challenging for diverse workers, as noted by the following Latino foreman:

As a minority, particularly being a minority in a lead role, I know some of the things that I deal with. I like to put it like this: [I'm] being [perceived as] incompetent and [I have] to prove I'm competent. And so, they see me in a role. Especially being younger too, I'm young in my position. They don't respect me on that level until they hear me talk. I can articulate a certain way. They see the respect my crew gives me. Okay. Then it's some of the things that I do, performing jobs saying, okay, Dude, I know what I'm doing. It's not my first rodeo. And so, I face that probably almost every project. So it's always this battle with the respect... You know, we just don't see people of color doing some of the things that we have done. And so I think it's kind of...I think it's always a struggle at first. You know, they might not say it, but you could tell. Do you ask the same questions to everybody, you know? So that's something that I personally have seen. (Foreman)

As a pre-apprenticeship staff member noted: "Leadership development opportunities, both formal and informal, are key to supporting diversity and retention."

Leaving the trades after apprenticeship

While this was not widely perceived as a major issue, some apprenticeship coordinators noted that sometimes workers do not go on to become journeyworkers after completing an apprenticeship. They noted that some choose a different career path within the construction industry, while others decide to enter into a different type of occupation altogether. Some noted that it can be challenging to find work as a journeyworker, particularly for marginalized workers (see more on this in the following section). The following are some responses to the question about why apprentices who complete their programs may not go on to work as a journeyworker. As two participants reported:

If someone hasn't found a home [employer] by the time they journey out of an apprenticeship program, it's very difficult for them, to land that job where they're going to be...where they're going to fit in. And it's a lot more competitive. I think, still out there in the industry, you're a woman. And you show up on a project that's, you know... The culture is still there to like, yeah, you know, you're not going to do as good a job as a man. (Apprenticeship coordinator)

If the industry slows down and [there isn't work]. Most of the time they finish the program and they stay with us. But there are occasions where they leave. I mean, we've had people that have graduated from the program and maybe life's changed for them. Or they start a family, or you know, something like that. Because when you're in construction you never know when you're, you might have to stay late. Those kinds of things. I mean, in terms of leaving the industry, having work slow down, and maybe making a personal choice to do something different. Those are the only thing I can think of. (Apprenticeship coordinator)

Construction culture

Challenges with harassment, isolation, and discrimination are experienced by journeyworkers and foremen as well as apprentices. When participants were asked about the challenges journeyworkers face, some participants reported that they did not believe diverse journeyworkers had any additional challenges compared to white male journeyworkers. However, others responded that challenges related to harassment and discrimination on construction culture were experienced by journeyworkers in ways similar to apprentices. The following are representative examples:

I think any time that when you take a look around you and you don't see, you know, people that look like you, I think it's always a challenge. (Apprenticeship coordinator)

Just this old stigma that they don't belong in the trade. And that's more company-specific. I have companies that they seem to fit in well within companies that they struggled more in. (Apprenticeship coordinator)

It's just been so not female oriented. Until that part changes and the apprenticeships get more females in, and then they journey out, we're going to have the same outlooks. But, I think that's slowly coming around. Even though there's a lot of work left to do on that. Not so much on the minority side, but the female side, definitely. (Apprenticeship coordinator)

In an interview with an apprenticeship coordinator, the interviewer asked if journeyworkers are turned away by employers because of their race or gender. The apprenticeship coordinator responded "Yes, occasionally. Female specifically. Because they might think they're not as qualified, that sort of thing. Not as much with the minority men. Yeah. Sometimes it's physical limitations they're worried about. Certain jobs require strength."

Financial challenges

As noted above, workers are currently in high demand and there is a shortage of journeyworkers in many trades. Thus, being out of work is not currently an issue for most people in the trades. However, when the construction industry is slower, being out of work can be a significant issue for journeyworkers, particularly because journeyworkers are generally expected to solicit their own work through their personal and professional networks. As participants noted:

I think it used to be based just on a fear, right? Because when they're in an apprenticeship, it's kind of regulated they're going to work a certain amount of hours. And we're going to take care of them getting a job. We're going to dispatch them. They do get the same...Like when they journey out, they're now considered an A List member, right? They go directly to the A List journey worker list. And they can solicit their own work. But I think it's just a fear. Hey, now I'm out here competing with other journey workers that have a ton more experience, right? So I think a lot of it has to do with fear. But I think more and more we're

emphasizing that the apprenticeship is the time to build that network. And so that when you get out, you already have that network there that you can call upon to stay employed. (Apprenticeship coordinator)

So A Listers are usually people that already have a home. And they have that network. They made a name for themselves. So they can kind of advocate and make a phone call and have a group of friends that will, you know, be looking out for them. While someone who is...doesn't have that network, it's a lot more difficult. So I think in this industry, people need to know that your reputation, your name and your network is what's going to keep you employed a lot, sometimes even more so than your skill set. (Apprenticeship coordinator)

Several participants noted that it was challenging for new journeyworkers to compete for jobs with established journeyworkers. As one apprenticeship coordinator said "When times get slow and you're a new turned out apprentice, how do you compete with the guy that's been doing it with twenty-five years' experience? You don't. You know, you might be the [newer] guy that goes home."

Long term challenges

Toll on the body. Several apprenticeship coordinators noted that over the long term, working in the trades takes a toll on the body. As one participant noted:

You know, as a first-year journeyman, you're gung-ho. You're ready to rock-n-roll. And by the time you pit twenty years, this trade beats you up. Every day, all day long, repetitive motion. We use our hands every day. And a lot of people either get arthritis or carpal tunnel. Sore backs, sore knees' definitely do a lot of work on our knees. (Apprenticeship coordinator)

Keeping up with technological advances. Several apprenticeship coordinators noted that some journeyworkers were challenged by keeping up with advances in technology, either because it required additional training (and unpaid time away from work) or lack of interest. As one participant noted:

I mean, the equipment is changed and become more technologically advanced. And, the more that they're willing to upgrade their skills. But if they're not, then we have, you know, we have members that they're old school. And they are getting close to retirement. And they just don't want to learn new stuff. And so then you're challenged with trying to find them placement when maybe you don't get as much of that kind of work anymore. So, I mean, those would be real. And they get frustrated, because they've been a member forever. And they think they should be working. But yet they don't want to stay up with the times. (Apprenticeship coordinator)

Current supports and additional supports needed to promote diversity, equity, and inclusion in the construction workforce

In this section, we describe the supports currently in place as well as suggestions for additional supports needed to promote a diverse workforce related to recruitment, retention, and policies and processes. A summary is shown in Box 3.

Box 3. Suggestions from apprenticeship program staff and workers for supports needed to promote diversity, equity, and inclusion in the construction workforce
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- Ensure steady funding stream to increase capacity of pre-apprenticeship programs
- Increase direct entry from pre-apprenticeship into apprenticeship programs
- Promote recruitment of diverse workers through referrals
- Engage in collective effort to ensure K-12 students are provided information about careers in construction.
- Address construction job site culture through respectful workplaces trainings with proven results
- Increase monitoring of on the job training of apprentices by well-trained experts
- Formalize mentorship resources for diverse workers
- Increase ongoing supportive services for apprentices
- Enforce contract goals, with consequences for non-compliance

Apprenticeship coordinators rarely reported having specific retention efforts for diverse workers, although some noted the availability of gender specific supports, such as supports available through Oregon Tradeswomen Inc. However, throughout their discussion of current retention efforts, they sometimes highlighted ways that current or proposed supports could specifically benefit women and people of color.

Ensure steady funding stream to increase capacity of pre-apprenticeship programs

Many participants believed that pre-apprenticeship programs were an important way of recruiting women and people of color into the trades and supported expansion of pre-apprenticeship. As several participants noted:

Definitely a huge believer in pre-apprenticeship and registered apprenticeship. I think they go hand in hand. (Apprenticeship coordinator)

The outreach part of the minorities and females is one of the largest struggles I've encountered as a director of an apprenticeship program. Because the pool is small, right? The pool is small with just females. And then female minorities, and it seems like you're taking one tenth of one percent of one percent. And then to find one that's actually qualified. Now you've got fifteen other construction trades fighting over that small group. And finding one that is best interest in your trade that meets the qualifications of your trade. So, that's the struggle, is finding that group. OTI, we found the group. OTI is our saving grace. And out of that group there's twenty of them. Only one will want to be [in our trade]. And finding that one, to make sure they meet the minimum qualifications to even get into the apprenticeship. So you're taking a percent of a half a percent of a half a percent to try to get the one. And then you talk about retention. So, I mean, the pool is small. And I think minorities are kind of that way too. But I think they're a little broader. There's more of them that wouldn't mind doing construction. It's just getting those to qualify as well. Constructing Hope, James over there, he's done a phenomenal job. He's trying so hard to get individuals from his program and using our minimum requirements, but he still struggles. We have yet to have had one. But he's striving for that. At least he's listening to what we're saying. (Apprenticeship coordinator)

In this industry, it's who you know. It's quite hard. You know, we do have to go through programs like OTI [to get into an apprenticeship]. Whereas the men don't have to go through anything. They just walk in, and they interview, and most likely they get it. Which is super

sad. But, you know, the more programs we can get all over the U.S., the more women we can get in the trades. (Apprentice)

Increase direct entry from pre-apprenticeship into apprenticeship programs

Some participants viewed direct entry from pre-apprenticeship into apprentice as ideal. As one apprenticeship coordinator noted: “We have a direct entry for [pre-apprenticeship graduates]... Yeah, they don’t even have to get on the pool. As soon as we get them a job they are in. if it’s a pre-apprenticeship approved by BOLI. They get direct entry.”

Other participants did not view this as beneficial to their trade. As one participant noted:

Because my committee doesn't feel that it's [direct entry] right. They wanted to draw the line on direct entry into the program, because it's not fair to the other guys on the list. They go where, so I talked to my committee about that. Well, how about we have a direct entry for women from Women in Trades [Oregon Tradeswomen Inc]. Or you know, how about we do something like that? And they're like well, where do you stop? So, you know then, you know, then you have a million exceptions in there. What about the poor kids that have been trying for? Some of my guys try for four years to be an apprentice. (Apprenticeship coordinator)

Promote recruitment of diverse workers through referrals

As noted above, apprentices are primarily recruited through referrals. While recruiting apprentices in this way will largely reproduce the demographics of the current apprentice population (primarily white men); referrals can also be used to promote gender and racial/ethnic diversity. As one participant noted:

As far as for women, my best success has been actually sisters of guys that have gone through my program. So far that's been the best. I've had two people recently they got their sister into the program. Their sisters are tough. They also have a brother that are helping them. They seem to go to work for the same company. And they have a brother there. And the brother's able to actually, you know, kind of foster everything working properly with their sister. It basically, you know, “if you treat my sister wrong I'll kick your ass.” (Apprenticeship coordinator)

Engage in collective effort to ensure K-12 students are provided information about careers in construction.

As noted above, apprenticeship programs use a wide variety of tools to recruit apprentices; however, the vast majority of new apprentices are the result of referrals and word of mouth. Several participants noted that a broad advertising campaign could reach the larger community and this might be a collaborative project:

Just like advertising dollars. Getting the word out. Being able to do a huge advertising campaign focused on the union building trades for women and people of color would be great. Because a lot of times, those campaigns are pretty cost prohibitive to do something like that. (Apprenticeship coordinator)

Well, obviously marketing is definitely getting the word out there. You know, I've approached our business manager about that. Maybe the building trades getting a collaborative and getting the market out, you know. A lot of other industries are doing that as a building trades whole, instead of just individuals doing their advertising wherever they choose to. (Apprenticeship coordinator)

Organizations such as Oregon Tradeswomen can also provide marketing resources and examples of targeted advertising to women to help increase the "you can't be it if you can't see it" motto and bring more attention to opportunities in the industry for women. (Pre-apprenticeship program staff)

Many participants reflected on the importance of raising awareness of the trades among youth, particularly in K-12 settings:

I think dealing with the youth a little bit more. I think going to some of these more predominantly cultural high schools, you know maybe so they can kind of see [what the trades is about]. I've got to stop being so busy. But I've been asked multiple times to come in and do...or talk to some of the younger, especially African American kids, some of the high schools. I've got friends that's coaching and doing other things that's kind of dealing with the young...the youth. So I think that's important, just so you can kind of see...I did one last year. And you could see people were amazed because they've never seen something like that before. And so I think that's important. Something like that. Some outreach where we're actually going to these high schools and sitting down and telling these kids, this is an opportunity. (Foreman)

Portland school system has brought back their career counselors in high schools, which is great. Now comes the education piece. Those career counselors are the ones who identify individuals that have an interest in particular trades and are educated enough to know the direction to send them. And I think that's where we're lacking. The struggle right now is we had a perfect model, or a near. We had a good model. I don't know if it was perfect or not. Thirty years ago we let it slide. We lost it. Now we're trying to regain back something we once had. And it's being informative to those high schools, to the public sector in schools. I think schools is where it has to happen. The counselors and the teachers have to be educated to know the options available and what it takes to get into those programs. Then they can identify those individuals and direct them accordingly based off their interests. (Apprenticeship coordinator)

Participants noted that more should be done to specifically outreach to people of color. As participants noted:

I feel just an avenue of understanding that doors are open. How to build their skill set and opportunity is out there. That advertising is done heavily through other [ways]: fathers, generation after generation. But minorities don't always see those advertisements that this Local is hiring or this opportunity for pre-apprenticeship is here. That advertisement isn't being circulated to some degree. (Foreman)

But you said to what can the trades do to help minorities? Well, I don't know if they have anything. But I think reaching out to people just coming out of incarceration. So I don't know if they have programs like that. But I know, you know, minorities are incarcerated at a very high rate. And so I think that if they have like an outreach program, maybe where they went

in and like...I don't know, helped...talked to people who are like about to be released or something, I think that would be a good idea. (Apprentice)

As noted above, having diverse workers engaging in recruitment efforts may be important strategy for increasing awareness of careers in construction for diverse workers. One participant noted:

We are actively trying to recruit more women, in my current place. And I'm the only one. And I think part of it is that, historically, there's always been like one woman on the crew. And so now we're trying to get more. But it's been hard. I think part of it is that all of the leaders of the organization are White men. And so anyone that looks any different has a hard time moving up. And if you're not being reflected in the leadership, it's hard to feel like you're going to move up anywhere. (Apprentice)

Address construction job site culture through respectful workplaces trainings with proven results

Discussions of current approaches to addressing construction culture primarily focused on how to handle individual situations, with limited discussion of how apprenticeship programs, unions, and contractors are currently addressing these issues at an organizational level.

Apprenticeship coordinators noted that they tried to help apprentices deal with hostile workplaces, as indicated in these two examples:

I tell them, look, I'm your advocate. You know, if you're having problems don't try and do this on your own. Call me first. Get some advice. Don't just walk off the job or call somebody bad names. Because I don't want to hear that. That doesn't need to happen. Your reputation is everything. And man, before you go off on somebody, especially an owner or a general contractor, call me up and ask me. I'll answer, man. If you feel like you're not getting a fair deal and your owner's not treating you right, call me first. You know, let's get a plan going. Don't just go off on people or quit. (Apprenticeship coordinator)

We do a lot of sensitivity training with our instructors, you know, on watching in the classroom and listening if there's anything going on the jobs that we maybe need to do. Get a hold of the contractor and say, "hey, we've kind of heard this language, this talk, this something." You know, tell the teachers. I mean, you don't say "you look good. You smell good." You don't touch anybody. You know, don't put yourself in the environment that you're alone with somebody. So we do a lot of diversified training with them to be aware. If somebody appears to be struggling, let us know. (Apprenticeship coordinator)

As indicated in the second example, in some cases, apprenticeship coordinators will contact a contractor and intervene on the part of an apprentice who is experiencing harassment or discrimination on the job site.

In the foremen focus group, participants noted their personal experiences in intervening when they observed aggression on job sites. The following are two examples of how foremen described dealing with aggression on a job site:

I definitely tell them [the person being aggressive] that's unnecessary. I don't go for that. And then I usually spend time with that, you know, whoever it is [experiencing aggression]. I spend time kind of straightening them on how construction works, how to deal with people when they call you, how to pay attention and not pay attention to certain situations. So I get

to know your name, instead of you're just your face. And then once I get to know your name, then they know they're a little more bit more important... So, yeah. I spend my time, personally, to work through many situations. And my acute aspect is safety. So I spend a lot of time just coaching them on how to be safe. (Foreman)

Well, yeah. I mean, you've got to keep the peace, you know. You don't want everybody going to each other's throat. I mean I've...When you see pretty much anybody being harassed, but more so the women and stuff, you just take them to the side. You say, listen, he's a grouchy old man. He's going to yell. You're going to hear it. You're going to hear yelling. Just step up your game. Give a hundred and ten percent. And then you'll know in your head, that while they're yelling, you're doing the best you can possibly do at it. So, yeah. I mean, I tend...I'll take them aside. I don't necessarily say anything to the individual because...depending on what it is. I mean, if it's inappropriate, of course. But you know, just for razzing and yelling, he's that cranky old fart, you know. You're going...You just like, hey, let it go. (Foreman)

Another foreman reported that a female worker experienced aggression on a job site and the owner called a meeting of the full staff of the small construction company to address the issue:

Something happened. I don't know the details there. I know the next day, he had everybody, the whole company, at the office at like 6:00 am. And that was like the topic of conversation before work even started. Because I mean, we just zero tolerate when it comes to stuff like that. But, yeah. So that's an example of something that we do. I mean, it's in our policies and everything else. So I mean he literally shut the thing down. The guy ended up getting fired. He did get fired. (Foreman)

Participants noted informal efforts as well as formal training programs (such as the Green Dot bystander intervention program, which is currently being piloted in Portland) to promote respectful workplaces. As one participant noted, the implementation of training will be effective if used in conjunction with other recruitment and retention efforts:

Jobsite training to support equitable worksites, and respectful workplaces must occur in tandem with increased placement and recruitment of diverse workers on the jobsites, otherwise attrition will continue at high rates for women and people of color... [It is] very important for employers and apprenticeship programs to support the idea of core crews with high density of women to decrease isolation. Also, implementation of women's committees and mentoring to help increase skill-building and support for women are so important. (Pre-apprenticeship staff member)

Given the challenges with harassment and isolation that many diverse workers experience, many participants reported that they felt that addressing construction job site culture would be an important piece of increasing diversity in the trades and that significant additional efforts are needed. As one participant argued:

[In order for women and minorities to be successful the most important thing is] Feeling comfortable. Comfortability. I mean, anything you do you want to be comfortable. And especially, you want to be comfortable in your own setting. And so I think it's a fine line with that sometimes. So I think that's extremely important. You know, if I'm comfortable with who I am, this is who I am, and everybody accepted me for who I am, with everything that comes with that, then I perform, you know, and I'm just as good as the next man. Then I think that's very important. People are going to want the steady work. (Foreman)

When asked whose responsibility it was to ensure that everyone was comfortable on the job site, one participant suggested:

Yeah, your lead guys on your crews. [Others agreeing] It's kind of everybody, a team effort. [Others agreeing] I mean, out in the field, it's mainly the foreman and your crew. And you know, your lead guys they might not necessarily be a foreman. But they're, you know, on their way to be one, you know. (Foreman)

Another participant echoed the point about needed a commitment to respectful workplaces to be throughout an organization.

But one of the things that occurs to me is sometimes the jobsite might be a variable in all of this. And that's not the same thing as the contractor. And the reason I make that distinction, we became aware of a bullying or hostile work environment that was not the culture of the contractor. But it was the culture on the job site. And I just wonder, when it comes to women and minorities and tension, you know, it's one thing for the suits in a room to say this is...You know, we're committed, etcetera. And it's a whole other for the job site foreman to subscribe to those same standards. And so, what needs to be added to the list? It might be getting all the way down the food chain. Is it the superintendent? Is that the lowest? Superintendent, foreman, what's the lowest [level of supervision that needs to be addressed]? Foreman training, foreman education on diversity. (Pre-apprenticeship staff)

Several participants commented on the need for formal training around respectful workplaces and diversity. A pre-apprenticeship program staff member noted that it is important to use high quality training programs: "Training is now required by the DOL but perhaps the State Apprenticeship office can also designate 'approved' trainers or curriculum for respectful worksites and sexual harassment prevention to ensure high standards and appropriate content."

As noted above, some participants emphasized training individual workers to be resilient to help deal with the construction culture. As one participant noted:

I think some individuals are more confident. And they really take off. I mean, they go out there and they build their network. And they don't have any issues staying employed. And then I think some people are less assertive. And it's probably a tool that we could help build...or focus more on the importance of it, I think. So we probably could do a better job there, I think. And we used to do an assertiveness training that I thought helped a lot. And I've just recently talked to a couple of women that said that they could use it because it helps them, even on the first day, knowing what to say. Because it's probably not something that comes up in normal conversation or in an interview or in a class, right? It has to be talked about. It has to be brought up. Hey, you're going to face people that are not friendly, people that may have different views, different attitudes, come from a different culture. How do you respond to someone who's in your face or says something racial or you think it might be crossing the line? How do you tell? What do you do? What's a correct response? (Apprenticeship coordinator)

One foreman reflected that the industry has to address the issue of respectful workplaces:

You know, in fact, I don't think you're going to survive as a company, as a contractor, if you're not making that conscious effort to reach out and to, you know, to be inclusive and to create

a culture that feels comfortable and safe, you know? I mean, it's the only reason I went to my company, the only reason. I knew the second I walked through the door. Not because there was a bunch of Hispanics in the building or, you know, any of that. But because I felt it. And because I was made to feel comfortable and I was, you know...And I was drawn to that, you're needed. And so it's like...you pay it forward. You pay it forward. You have to recognize what's valuable, Man, and what you've been through and what, you know...That it's necessary to give back, you know, because it's valuable too. You appreciate it. You know you're fortunate. And you're blessed. That's just the way it is. (Foreman)

Increase monitoring of on the job training of apprentices by well-trained experts

As noted above, many participants noted that diverse apprentices, particularly women, did not have the same opportunities for training on the job. One female apprentice noted that she would like the same experiences as male apprentices in her trade:

I think them treating me the same as they do with an apprentice, as far as sharing that information the way that they answer the questions that I have, on whatever it is that they give task for me to do. If the guy next to me is asking ten questions, they're giving him way more information to go off and get the job done properly where I've got to fumble around. I just want to be treated the same. Treat us the same. And, information sharing and those teachable moments. Supporting another person in the trade. (Apprentice)

As one participant argued:

It is critical for apprenticeship staff to know throughout an apprentices' career how they are doing, are they making skills progressions, what are obstacles to success? We can't just wait until they don't complete to ask (or not ask) what happened... [it is] very important for apprenticeship staff to be aware of on-the-job-training experiences and rotation for apprentices [and] employers need to know that it is their responsibility to ensure appropriate OJT. (Pre-apprenticeship staff member)

Formalize mentorship resources for diverse workers

Participants noted that a key support currently in place was personal relationships between apprentices and staff (including pre-apprenticeship program, apprenticeship program, and union staff).

When asked about their organization's approach to retention of apprentices, several apprenticeship coordinators noted that they tried to form personal relationships with apprentices to help retain them in their programs. As these three apprenticeship coordinators noted:

Well, I mean, obviously I'm an advocate. You know, I let all apprentices know the resources out there that they can get a hold of, if they're having issues. We let all apprentices know when they have their first class, if they're having problems with this or that, where they can get a hold of us, and the support system. Is there work to do in a program? Sure, there is. You know, the mentorship part, I mean, that could be huge. It's really, hasn't started here... As far as having that direct line of communication, I mean, I let all apprentices know that, you know, hey, call me any time. My phone's always on. But, I mean, there's definitely work to do as far as the retention part. (Apprenticeship coordinator)

We have our coordinators, obviously, that are a big part of helping that, that young man or woman navigate through their apprenticeship programs. So they know, and they get coached from a very, very early start when they come into the program, that we've got people in place to help them if they need it. So we have our coordinators as a first line. (Apprenticeship coordinator)

I build a personal relationship with them. And that's not something every coordinator can do. But I try to build a personal relationship with them. And I pull them aside every once in a while during the year, several times, and just have a talk. This is what I think you're doing. This is what looks good. This is what don't look so good. You know, what are we going to do about this. How do you want to fix this? Do you think this is important? Why did you think this person said this about you? All that interrelational stuff that really is important. (Apprenticeship coordinator)

One apprentice recalled a time when she had an incident at work and went to her apprenticeship coordinator, intending to quit the program. As she recalled her apprenticeship coordinator was very supportive:

[He said] "But what happened to you is an accident, number one. And it shouldn't have happened the way that things, you know, went on. And as far as the support from those other journeymen that are in positions of authority on that job site, that shouldn't have been happening. So because I'm your coordinator and your part of this union there's going to be some phone calls made." And sure enough, he made phone calls. He followed through. And the next day when I went to work they apologized to me. (Apprentice)

In the apprentice focus groups, when asked how they deal with job site issues, two apprentices named union staff as one support available to them:

You can talk to a steward, depending on what's going on. (Apprentice)

Well, I had something happen with my pay. So the company that hired me is not paying me at the rate that the Union I'm supposed to be at because they redid everything. So I just spoke to the contact, Will, over there at the laborers. I said, hey, this is the wrong number. I need you to talk to them. So he's working on it. (Apprentice)

Participants reported some additional current opportunities for receiving mentoring and non-financial support, such as opportunities to informally talk with other tradespeople or receive formal mentoring. Specific organizations mentioned include: Oregon Tradeswomen, Constructing Hope, Sisters in the Brotherhood (through the Electricians IBEW/NECA Apprenticeship Program). As two apprenticeship coordinators noted:

Within the last year I think the main challenges is just the support. The ODOT program is great. I wish it would transfer more into our trade. But we're not heavy highway, so we get a little bit when I do have apprentices on those programs. (Apprenticeship coordinator)

I know that Oregon Tradeswoman has some mentoring. Penny Painter [from Akana, which provides BOLI/ODOT supportive services] does a lot of that. And so, our apprentices oftentimes will get hooked up with them. (Apprenticeship coordinator)

In the apprentice focus groups, when asked what supports are available, many participants noted

that their pre-apprenticeship programs had been an important source of support. As one apprentice said: “Oregon Tradeswomen has been incredible for me. Like, they’re the resource that I’ve had and used. And if more programs like that existed, it would be incredible.”

Several apprenticeship coordinators noted that their organizations provided financial support for women to attend the Women Build Nations conference⁶ (the 2017 conference took place during the study period)

Like we have an annual Women Build Nations Conference that’s geared toward steering women into leadership and retention, giving them the tools. So it’s a real good thing. We sponsor apprentices [to go to the conference]. And we do it as an organization, the local does, the training center. And then the region also sends women there. And we try to tie that in with women that we see that can take advantage of that. And hopefully, they’ll pass it forward. (Apprenticeship coordinator)

Some apprentices noted that they connected with other tradespeople on social media for support. As one apprentice recalled: “I had an issue last week. And I spelt it out in a long Facebook post. And, I put it out there. I was like, ‘I need advice.’ I was like, ‘am I dramatic, making this just like ten times worse, or what?’ And, a lot of them were telling me different ways of approaching this person. And just how to word it and stuff like that”

Many participants noted the need for more non-financial support, that is, groups that form a support system, individual or group mentoring, or other kinds of one-on-one support (such as financial planning). As several apprenticeship coordinators noted:

I think definitely having some kind of formal mentorship program would be a really good help. I think a resource and support system from everything to childcare to counseling to...I think mentorship is the biggest one, to be honest. Just having someone to talk to that’s been there and has dealt with the specific situation, it really helps. (Apprenticeship coordinator)

I think there’s things we can do to support all groups, minority groups, people of color, women...with better partnerships, as far as mentorship, support. I think that a lot of women that come in, even from Oregon Tradeswomen, or who are just in general public applications, they tend to have less of a support system. And so they tend to drop out at a higher rate. I think a lot of the things we need to be looking at is support for women coming in to the industry, with childcare, with healthcare, just a lot of specific support for parents which a large majority of the women are. (Apprenticeship coordinator)

There’s not enough networking available for a new person to have someone checking on them a little more. Especially in the beginning, I think people need a lot more hand-holding, a little bit. So that’s something that I’m looking at. As far as what I’ve seen so far from women, just coming in and then they’re leaving because they make decisions that this isn’t for them. Or it’s too tough, too hard. So I think that network would be something that we can put together with an OTI or somebody like that. (Apprenticeship coordinator)

Several apprenticeship coordinators reported desiring increased mentoring for apprentices, but had not yet initiated a formal mentoring program and noted some challenges with this type of initiative. As participants noted:

⁶ Women Build Nations Conference <http://chicagowomenintradess2.org/women-building-nations/>

We tried to get the journeyworkers to try to sort of adopt an apprentice. It hasn't really gone anywhere yet. But that sort of idea to sort of help them through. (Apprenticeship coordinator)

So we try to involve the journeyworkers and connect...networking, I guess, within the...within the network of [people in our trade], try to connect individuals with people that are out in the field. But we have yet to really get a really good mentorship program, per se, an official site where people actually sign up and are assigned, volunteer-wise. So it's basically just reaching out to people you know and say, hey, this person could really use a mentor. And would you mind doing that? It's pretty informal right now. And I think that's a huge need. (Apprenticeship coordinator)

Everybody has tried to set it [a mentoring program] up and do something here. But it never, never takes. There's no traction. So I think if you had a mentoring program that somebody could adopt, I think that would be great. Because I think that is probably one of the biggest barriers that all the apprentices have. It doesn't matter, you know, if you're female or minority. I think could really help a lot of the apprentices make it through the program. And, you know, this is great we're talking about the female and the minority. But I lose three times as many white males as I do females and minorities. But nobody ever talks about that. (Apprenticeship coordinator)

Another participant recalled a failed attempt to start a mentoring group in their organization:

We did try with the females, some of our gals, the OTI gals, I sent out a notice, saying, you know, that they want to get a support group together. And I said, you could have pizza here, you know. And no one ever responded to them. And I felt bad for them but, you know. I think everybody's just so busy right now. And then if you have families, you know, you just don't have time. And maybe they just don't feel like they need any support? Because I think they are. They are treated equal. You know, they are just one of the guys when they're out there. So, I thought that was kind of a good sign that they didn't feel [they needed to meet]... But for the most part, I think those females just fit right in with the guys. I don't think they even notice them. (Apprenticeship coordinator)

This participant was not sure why the group was not successful. The participant guessed it could have been that the women did not have time to meet or did not have any challenges to discuss (unlikely, considering the research to date on women in construction). Other reasons why the group may have failed could be an inconvenient time and/or location or the failure to clarify the purpose of the group.

Increase ongoing supportive services for apprentices

Participants noted that there are some opportunities for financial and non-financial support currently available, but there are significant unmet needs, particularly among apprentices. Many participants noted that some apprentices would benefit from both financial and non-financial support. As one participant reported:

I think that a lot of women that come to us don't have that support system, and men as well. I think it's almost something that we're missing because we tend to look at people like, you have to be self-sufficient. And you've got to be tough and strong to make it in this industry. I

mean, a lot of people come to us with a lot of baggage. And they don't know how to alleviate that, whether it's criminal background or whether it's mental or abuse, or whatever it is in their background. The system that we have right now is not there to support these people and succeed. So you give them a good job. You give them the opportunity. But if they don't have the support, they're going to fail. And it just kills me when I see that because where do I turn, you know? We don't have the system set up to support that. I think it would be huge and could make a big difference. (Apprenticeship coordinator)

Participants in both the apprenticeship coordinator interviews and the worker focus groups noted a variety of financial supportive services currently available to apprentices. These support services provide assistance with tools, clothing, and protective equipment, fuel assistance, per diem for out of town work, childcare subsidies, support for tuition and books for classes. The specific organizations mentioned include: BOLI/ODOT, WorkSource, Impact NW, Labor's Community Service Agency. Individual apprenticeship programs also provide some financial support. As one apprenticeship coordinator noted, "[We] help them with tuition, books and such, once they get in to ensure that it's not financial reasons that make them leave." Another participant noted stipends for travel to the classes required for the apprenticeship program.

As one participant noted, that there are currently support services but they are not available to all trades: "Support services, certainly. We definitely need more of those. There's a lot of support services for the highway trades. But there aren't really any for some of the other trades." (Apprenticeship coordinator)

Participants noted that the cost of housing was a challenge and thought some assistance could be helpful. As one participant suggested:

One thing that would be really amazing would be to have some type of transitional housing in place. I think, you know, not all the time, but oftentimes when young men and women, when they're making a change and they're coming into a career, sometimes it would be nice if they had the opportunity to get a hand up with that. And they may have to leave a situation that isn't ideal. And if we could have something in place that was run similar to the campus dorms where you had monitors and you had some structure there, and you had some support for them until they got to, you know, sixth or seventh term and were able to stand on their own two feet. I think this is really important now, especially with the increase in the rents across our area, to have some type of transitional housing would be great for them. I think that would be awesome. (Apprenticeship coordinator)

Several participants noted that having a driver's license was a barrier for some apprentices. One participant suggests some financial assistance for apprentices to get a license: "We have a lot of young men and women that they're trying to get their driver's license. And they don't have a car to go take their driving test with, you know? So, I mean, just some type of a mechanism in place where you could help fund a school and some instructors and things like that, so they could go through a driving school." (Apprenticeship coordinator)

Participants also noted that having reliable transportation was a barrier that could use some support. As one participant noted "Some type of funding in place to help them in those early years to be able to get car insurance and get a reliable car, and just get those things in place, that's going to help them survive those first couple years in the apprenticeship would be huge." (Apprenticeship coordinator)

Given issues with language that some apprentices experience, one participant suggested an English language class that focused on construction language: “Like regular ESL classes, conversational and that sort of stuff, is different, completely, than construction ESL and giving them the basic safety stuff that they need to be on that job site.” (Apprenticeship coordinator)

Participants noted that both the cost and availability of childcare was a challenge for apprentices. Expanding access to childcare would reduce work/family conflict for parents in the trades. As one participant noted:

Childcare is a big issue because they’re not usually provided for women in construction as far as the times that they need to be at work, whether it’s really early in the morning or overtime, those kind of things. I think it’s kind of punitive because the way childcare is set up, you know, most of them don’t open up early enough. You’ll have to get family members or friends to cover for you or drop your kids off, or whatever. And then if you have to work overtime, which you never know, right, based on what’s going on on the job that day. And so you can’t really preplan that. And most people, like most childcare that I’ve known, even for my own experience, if you’re not there to pick up at a certain time, then it starts accruing like really high cost. And some don’t offer it at all. So, it’s real difficult. (Apprenticeship coordinator)

As another participant noted: “Well, daycare dollars is a huge thing. But hours of daycare don’t match up and align with construction hours. That’s a pretty big deal. I always envisioned like a multi-trade daycare center.” (Apprenticeship coordinator) Several participants noted that a childcare center for parents working in the trades that was open 24 hours would be helpful.

Tradespeople with smaller bodies consistently noted that finding tools, clothing, and protective equipment that fit their bodies was a challenge. As one participant stated: “I can’t find good small work gloves to save my life. And also, that’s something my company could do better is they don’t ever keep smalls in stock. So I have to buy my own gloves or I have to wear larges. And my paws are not going to fit a large.” (Apprentice) Having appropriately sized tools and clothing on job sites is important for safety and productivity. It would also demonstrate organizational support for workers with smaller bodies.

Enforce contract goals, with consequences for non-compliance

Several participants noted that contract goals were an important mechanism for ensuring that diverse workers were consistently employed, which promoted their retention in the trades. One participant noted that contract goals helped keep women in their trade employed:

[Apprentices] got laid off in September, and they didn’t go back until June. So, it’s a long time. But honestly, I think that the...the white males were actually more out of work than the females. Because the women that we have tend to stay busy with the contractors that they have. I think maybe that’s to do with the goals that the employers have for the jobs that they’re doing. We have some pretty good apprentice females too. And they’re good workers. And so the employers like them and they keep them busy, so. (Apprenticeship coordinator)

Participants noted that there was not always a supply of diverse workers available to meet the needs of contracts with goals and that they can be challenging to enforce:

I think it's great. I mean, they're always pushing to get higher numbers [of diverse workers]. And sometimes it's hard to get the numbers that we are required. They just don't seem to be there. (Foreman)

By requiring it means that we're going to get more workers. So sometimes employers don't do what they're supposed to. And that's why they have those oversight committees to check up on people. So I know it's for the right reason. It just, sometimes it's hard in the administration day to day. (Apprenticeship coordinator)

Several participants noted that contract goals had to be monitored and enforced to be effective. As participants stated:

If you have an apprenticeship requirement, for example, but then there's nobody policing that requirement, it really doesn't mean a whole lot. But if you have apprenticeship requirements that are enforced, and are policed, and then you put realistic goals in those apprenticeship requirements that reflect your diversity numbers, I think those two things in place will help. (Apprenticeship coordinator)

One of the things I can say is having the goals doesn't work if there's no penalty, no responsibility. There's contractors that are going to do it because it's the right thing. But they're few and far between. There's contractors that are going to do it the wrong way just because it saves them a dollar, and cover it up and hide it. So there has to be some reward for the people that are doing it correctly and some...something to inhibit people from not following it. (Apprenticeship coordinator)

I think the transparency data is really important. And I think having everyone at the table is going to be really important, as far as achieving diversity goals. (Apprenticeship coordinator)

Another participant noted that although contract goals may help individual women find work, they may unintentionally perpetuate negative attitudes within the industry. They may also not be successful in promoting long-term employment. As participants articulated:

And you know, sometimes it helps if there's some kind of requirement for females on the job. But that's not always the case. And you don't want it really to be you're hired as a women because you fill a number. (Apprenticeship coordinator)

I would say with the contractor buy-in [for contract goals], you also need like rank and file union membership buy-in. Because a lot of bitterness is generated. I just heard an apprentice yesterday ask me, "well, minorities get the advantage because, you know, there's these jobs that require people to hire them on these jobs. " And there's a lot of bitterness about that. And he was saying how he hears journeymen all the time complaining about it. And so I think that that harms the atmosphere on the job site and could potentially lead to resentment that these people are going to feel. I felt the brunt of it when I was working out in the field. (Apprenticeship coordinator)

Putting those goals out there. I hate to see somebody get hired onto a construction site, just for that one job. And then after the jobs end, and their job's, you know, their career is gone. They just, they don't move on to the next job. So that, that's, that's a struggle with that whole, you know, putting numbers on things. We want to see the best for each person that goes through the program or journey level worker from start to finish. And that's their whole

career of, you know, twenty to thirty years, not necessarily a six-month job that's requiring, you know, a woman or person of color on that one job. (Apprenticeship coordinator)

One apprenticeship coordinator noted that some contractors will pay apprentices wages but not have them work on the job site. As this apprenticeship coordinator reported "Oh, yeah, I've had my contractor call me that, tell me that. He said, 'I will pay him to sit home for two weeks so that I don't get fined.'"

Another participant noted that contractors who continually fail to meet diverse workforce goals should not be awarded future projects. As they stated:

If a contractor doesn't have a good track record in the past, why are we letting them on projects time and time again? It all comes down to the mighty dollar. If you're going to hit these goals that you're trying to achieve, it can't always be about the dollar. It's got to be about the people. (Apprenticeship coordinator)

A minority of participants were frustrated with contract goals because they perceived that they were unable to meet them. As one participant noted:

I know the City of Portland thinks they're doing us a favor saying they need twenty percent apprentices, and it's not helping apprenticeship at all. Not with the programs I have. Because we don't have females in [our] program. And, you know, we're not going to just find them out of the clear blue just because they need twenty percent for a job. So, I just think that's silly that they do that. (Apprenticeship coordinator)

In particular, the non-union Apprenticeship programs felt opposed to contract goals, and that they have not been included in these policies to date, and that it limits individual choice:

Because that was the first thing that popped into my mind. That targets. To me... Okay, I'm going to sound really not very educated. But we have freedoms in the Country that we live in. So you have a freedom to own a business and run it the way that you want to run it. And to have this kind of over-site squishes the freedom out...if you're a woman and you want to work construction because you have skill and you...you visualize how to make something...I mean, that's an individual gifting and design of a person. I think it's in your DNA. And if construction fits that, then you go for it, you know. Same thing if you're a minority of any kind. I think it's people, their own individual what they want to that's either going to propel them forward into the career of construction or not, you know...And I still feel like a lot of this is targeted. And it really is up to the individual, anymore, what they want to do with their life. There are so many possibilities. And I just don't know that it should always be on the contractor or the training program, or whatever, to... We need to do our job in educating everyone, as a whole. (Apprenticeship coordinator)

Several participants reflected on opportunities to promote diversity in the trades through local hiring requirements in contracts. As one participant argued:

I always think, you know, this is taxpayer money. We're investing in our youth and our community and giving people good jobs. That money is going to come right back into our community, right? I mean, why do we accept the low bid from an out-of-State contractor that brings in their own workforce and takes it all out? It's just nuts. (Apprenticeship coordinator)

This participant went on to compare bidding in Oregon to Seattle, where the City has implemented a priority hiring program to ensure local residents are hired on City projects. Another apprenticeship coordinator noted challenges in the past with dispatching workers when there are residential or income goals: “there are several jobs that you have to live in a zip code. You have to make less than a certain amount of money. Those are extremely challenging for dispatchers to fill.”

Appendix: Focus group participants

	Number	Percent
Focus group		
Foremen	6	24
Oregon Tradeswomen	11	44
Constructing Hope	8	32
Current position		
Foremen/superintendent/VP	6	24
Apprentice	16	64
Other	3	12
Trade (apprentices only)		
Carpenter	5	20
Heavy Equipment Operator	1	4
Inside Electrician	1	4
Ironworker	1	4
Laborer	4	16
Pile driver	1	4
Pipefitter	1	4
Plumber	1	4
Sheet metal	1	4
Gender		
Male	10	40
Female	14	56
Non-binary	1	4
Transgender		
Yes	2	8
No	22	88
No answer	1	4
Race/ethnicity		
White	10	40
African American	8	32
Latinx	3	12
Multiracial	4	16
Sexual identity		
LGBTQ	8	32
Straight	16	64
No answer	1	4
Age		
Average age	35	--
Age range	26-56	--
Total participants	25	

Appendix: Training Programs Interview Participants

Organization	Contact name	Union/Nonunion/ Mixed	Contact
AREA I HVAC JATC	KATRINA CLOUD, DIRECTOR	N	Interviewed
OR & SW-WA SPRINKLER FITTERS JATC	KATRINA CLOUD, DIRECTOR	N	Interviewed
OR COLUMBIA TILE TRADES JATC	KATRINA CLOUD, DIRECTOR	N	Interviewed
OR SW-WA MASON TRADES JATC	Shawn Lenczowski - Mason Trades TC	U	Interviewed
OR/COLUMBIA HEAVY EQUIP OPERATOR JATC	KATRINA CLOUD, DIRECTOR	N	Interviewed
OREGON COLUMBIA LABORERS JATC	KATRINA CLOUD, DIRECTOR	N	Interviewed
OREGON COLUMBIA MASONS TATC	KATRINA CLOUD, DIRECTOR	N	Interviewed
OREGON TEST, ADJUST & BALANCE JATC	KATRINA CLOUD, DIRECTOR	N	Interviewed
Oregon Tradeswomen	Kelly Kupcak, Executive Director	N/A	Provided written comments
OREGON/COLUMBIA CARPENTERS JATC	KATRINA CLOUD, DIRECTOR	N	Interviewed
PCC Swan Island Pre-apprenticeship	Emma Gray, Apprenticeship	N/A	Interviewed
SHEET METAL JATC	KATRINA CLOUD, DIRECTOR	N	Interviewed
AREA I INSIDE ELECTRICAL JATC	IRENE WEBER	N	Interviewed
AREA I PAINTERS JATC	MARIANNE CARLEY	N	Interviewed
AREA I PLUMBERS JATC	MARIANNE CARLEY	N	Interviewed
AREA I SIGN INSTALLERS JATC	MARIANNE CARLEY	N	Interviewed
LTD ENERGY TECHNICIANS JATC	Bridget Quinn- NECA-IBEW	U	Interviewed
NECA-IBEW ELECTRICAL JATC	Bridget Quinn-NECA-IBEW	U	Interviewed
OR & SW-WA FLOOR COVERING JATC	John Lawson- APPRENTICESHIP	U	Interviewed
OR SW-WA GLAZR ARCH METL GLASS WRKR JATC	Craig Feely - Glaziers Training Center	U	Interviewed
OR SW-WA HEAT/FROST INSUL/ WRKRS JATC	Dave Gamble, COORD LOCAL 36	U	Interviewed

Organization	Contact name	Union/Nonunion/ Mixed	Contact
OR SW-WA IUOE LOCAL #701 & AGC JATC	DEANNA ROBLES	U	Interviewed
OR/SW-WA ROOFERS & WATERPROOFERS JATC	Joel Gonzalez	U	Interviewed
OREGON & SW-WA CEMENT MASONS JATC	Craig Smith- APPRENTICESHIP	U	Interviewed
OREGON LABORERS JATC	Aida Aranda	U	Interviewed
OREGON SW WASHINGTON CARPENTERS JATC	Mike Hawes Pacific NW Carpenters	U	Interviewed
OREGON SW-WA ELEVATOR INDUSTRY JATC	Randy Carmony	U	Interviewed
PORTLAND SHEET METAL WORKER JATC	Kevin Roth - APPRENTICESHIP	U	Interviewed
OREGON SW WASHINGTON PLASTERERS JAC	Craig Smith- APPRENTICESHIP OFFICE	U	Interviewed
PACIFIC NW IRONWORKER & EMPLOYER JATC	Jason Fussell	U	Contacted
LTD ENERGY ELECTRICIAN JATC	Eva Sizelove - IEC	N	Contacted
OR & SW-WA DRYWALL FINISHERS JATC	James Phelps, Coordinator	U	Contacted
OR SW-WA NW-CA MTL TRDS PIPEFITTERS JATC	Bob Degraw, Coordinator	U	Contacted
OR SW-WA NW-CA PLMBR & STMFITTR JATC	Justin May, Director	U	Contacted
OREGON & SW WASHINGTON PAINTERS JATC	James Phelps, Coordinator	U	Contacted
RENEWABLE ENERGY JATC	Lou Long	N	Contacted