METRO WORKFORCE DISPARITY STUDY
EXECUTIVE SUMMARY
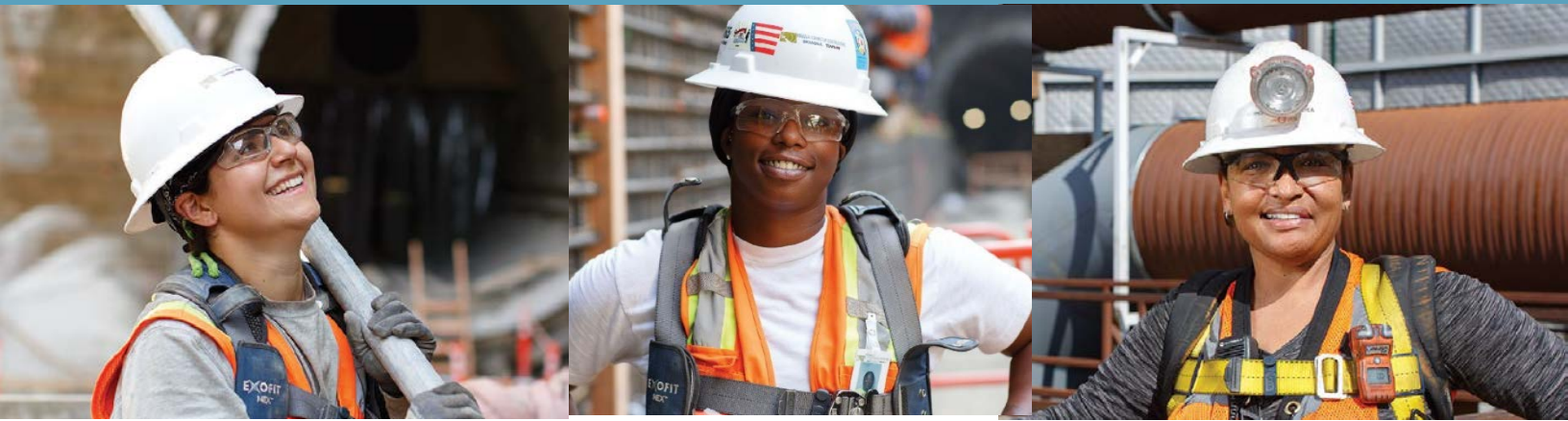
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EXECUTIVE SUMMARY

Background

In November 2017, the Los Angeles County Metropolitan Transportation Authority (Metro) Board of Directors (Board) approved a motion to encourage contractors on Metro construction projects to increase women's workforce participation to meet or exceed the nationwide female participation goal of 6.9% as set forth by Executive Order 11246. The female participation goal is expressed in terms of hours of training and employment as a proportion of the total number of hours to be worked by the contractor's aggregate workforce. The purpose of the workforce disparity study is to determine the availability and utilization of female workers to meet the demand for the future infrastructure projects in the region. The study includes an overview of the current state of the construction workforce, including a forecast of workforce supply and demand within the Greater Los Angeles Area focusing on the availability of women.
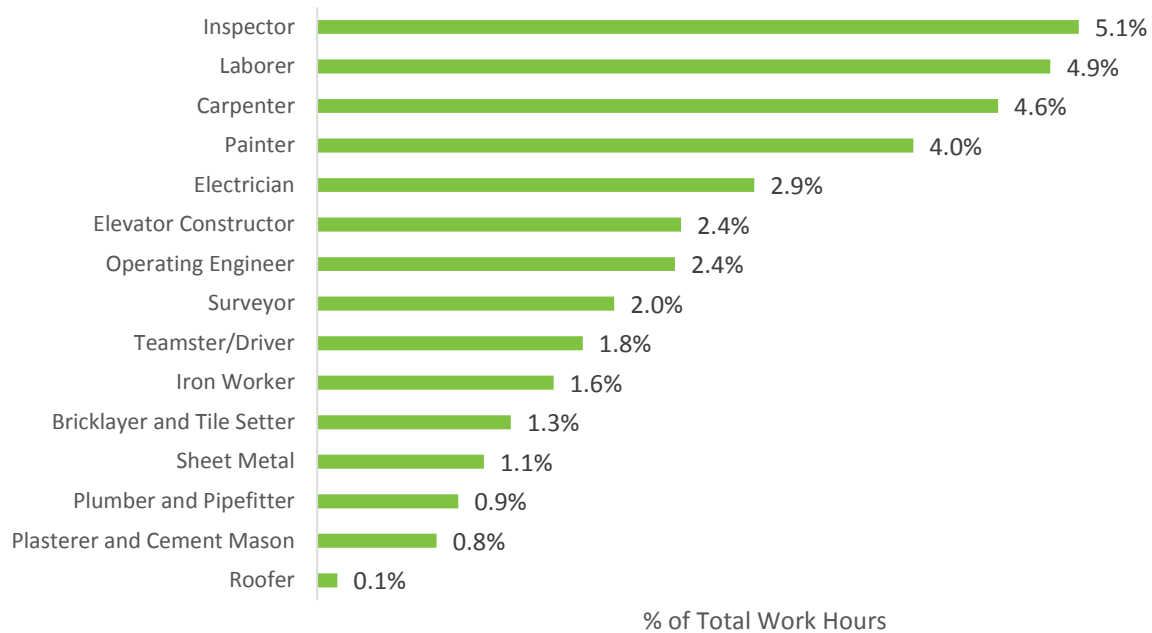
Diversifying Metro's Construction Workforce

As of December 2018, all contractors on projects subject to Metro's Project Labor Agreement (PLA) have exceeded their attainment in Metro's minority participation goal of 23.8%. However, female workers remain significantly underrepresented on Metro's construction projects. None of the current Metro PLA/CCP projects have met the 6.9% female participation goal. The average female participation on Metro construction projects between 2014 and 2018 is 3.5% compared to 1.9% on other Non-Metro public works construction projects in the region.

Overview of Metro Construction Projects

Metro's projects represented a total of 34% of the total hours performed on public works construction projects in the region over the past 5 years. The data also shows that women are working more hours on Metro projects. Approximately 64% of the total hours performed by female construction workers in the region over the past 5 years were on Metro projects. This is a significant achievement and demonstrates Metro's role as a leader and its capacity to impact the construction workforce. According to LCPtracker, the top construction trades based on the *percentage of total work hours* performed by female construction workers on Metro projects from 2014 and 2018 were: ***Inspector, Laborer, Carpenter, Painter, and Electrician.***

**Female Participation on Metro Construction Projects by Trade (2014 – 2018)**

Trade	% of Total Work Hours
Inspector	5.1%
Laborer	4.9%
Carpenter	4.6%
Painter	4.0%
Electrician	2.9%
Elevator Constructor	2.4%
Operating Engineer	2.4%
Surveyor	2.0%
Teamster/Driver	1.8%
Iron Worker	1.6%
Bricklayer and Tile Setter	1.3%
Sheet Metal	1.1%
Plumber and Pipefitter	0.9%
Plasterer and Cement Mason	0.8%
Roofer	0.1%

% of Total Work Hours

Source: LCPtracker

Metro Construction Workforce Demand

The Greater LA Area is in a period of high construction activity with dozens of transportation infrastructure projects already underway. With new long-term funding sources, Metro will likely shape and be affected by the demand for construction workers for years to come. Based on Metro's pipeline of projects through Measure M and the acceleration of 28 by '28 Initiative, Metro is anticipated to see projected construction demand peak at approximately 13 million construction work hours in 2023.

Current and Projected Workforce Demand for Metro Projects (Total Work Hours)

Current and Projected Hours Demanded by Metro (2017-2027)
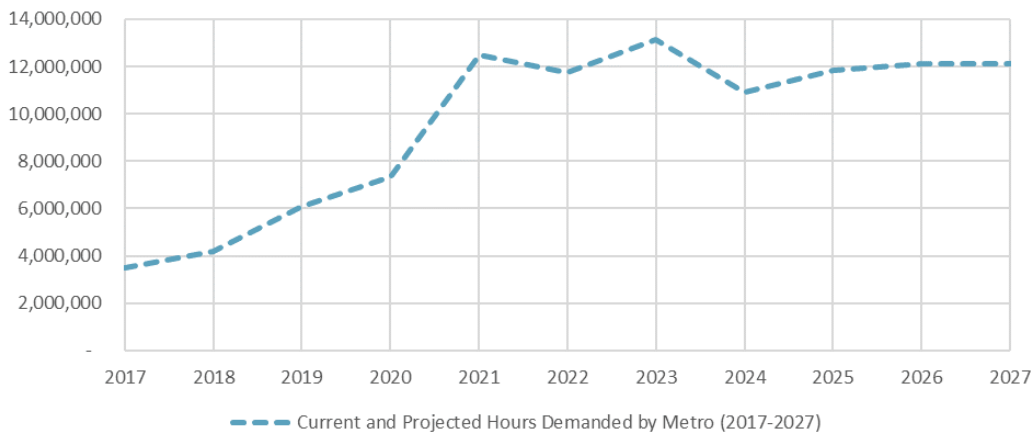
Source: Metro, LCPtracker, ELA, and ICF

Here are key findings from the Metro Construction Demand Analysis:

> Analysis shows that the estimated total workforce demand on Metro projects in terms of total work hours by trade indicates a high demand for **Laborers, Operating Engineers, Carpenters, Electricians, and Iron Workers**.
> in order for Metro to meet its female participation goal in 2017, the female workforce would have needed to perform at least 239,922 of the total work hours. Instead, a total of 185 women performed 120,376 (or 3.5%) work hours in 2017.
> An estimated **1,770 women will be needed in 2027** to perform over 836,000 of the total work hours on Metro projects in order to meet Metro's female participation goal of 6.9%.

Female Construction Workforce Availability

The U.S. Census Bureau data indicates that both the male and female construction workforce share the same characteristics in terms of the workforce growth rate and the age distribution of the workforce. Below are key findings based on the workforce data on private construction projects:

> A majority of the construction workforce for both male and females is between the ages of 25 and 54. The female construction workforce in the older age range of 55 years and over is higher compared to the male construction workforce. the construction workforce is also experiencing an aging labor force.
> Young people are not entering the construction trades at the rates they used to while older workers are not leaving the workforce at the rates they used to. As the older construction workforce continues to grow faster than the young workers entering the trade, the region will need to recruit more workers to replace those who will retire from the construction industry soon.

Current and Projected Regional Female Construction Workforce Availability (Apprentices and Journey Workers)

According to data from LCPTracker, the estimated total number of female workers available to work on public works construction projects in Greater LA Area in 2018 was 775 (or 1% of the total workers available).

> Of the total number of estimated female workers, approximately 250 were apprentices (or 32% of total female workers) and 525 were journey workers (or 68% of total female workers).
> The trades with the highest number of female workers (including both journey workers and apprentices) were: **Laborer, Carpenter, Electrician, Operating Engineer, and Teamster/Driver.**
> The trades with the highest number of female journey workers were Laborer (51% of total female journey workers) followed by Operating Engineer (8% of total female journey-workers).
> The trades with the highest number of female apprentices were Carpenter (24% of total female apprentices) followed by Laborer (23% of total female apprentices).

Estimated Female Workforce Availability on Regional Public Works Construction Projects (2018)

# of Female Workers
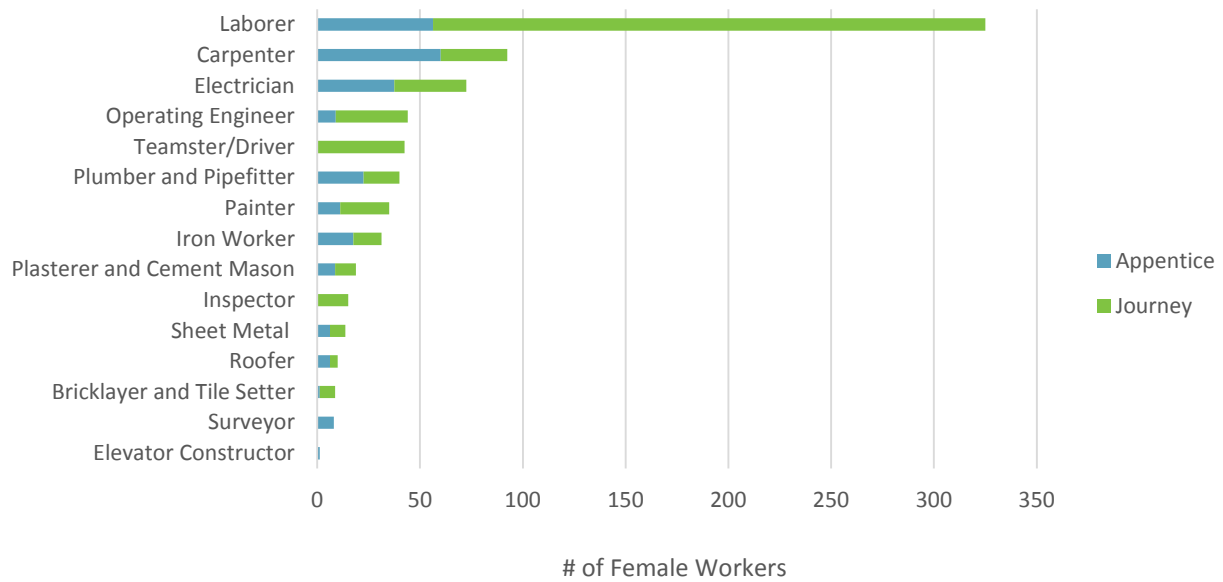
Source: LCPtracker

Based on two growth scenarios "Moderate Growth" and "Sustained Growth" evaluated in this study, the projected female construction workforce is estimated to increase between 981 to 1,178 in 2021. The female construction workforce could reach up to a range of 1,332 to 1,879 workers in 2027. These projections assume that significant female recruitment and retention efforts are made in the region.

**Regional Availability of Female Construction Workers (2014 – 2027)**
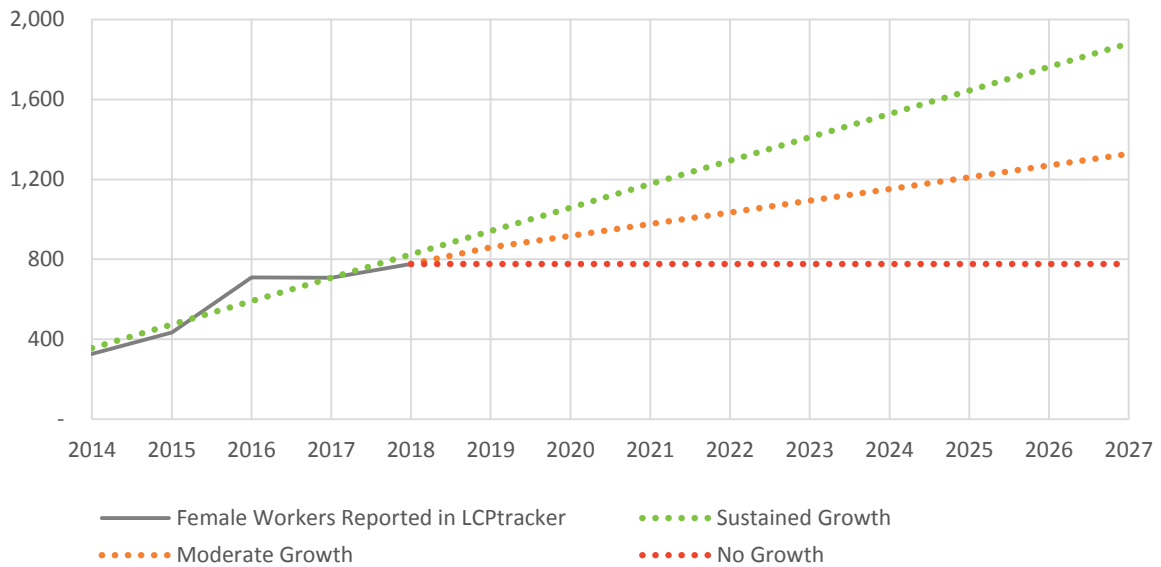
Source: LCPtracker, ELA, and Inclusive Economics

Female Apprentice Recruitment Trends

Female participation in apprenticeship programs is increasing with the number of recruits more than doubled since 2008. Based on the cohort of apprentices that started apprenticeship programs since

2008, female apprentices as a percent of total apprentices has doubled between 2008 and 2018 from 96 (1.3%) in 2008 to 232 (2.6%) in 2018.
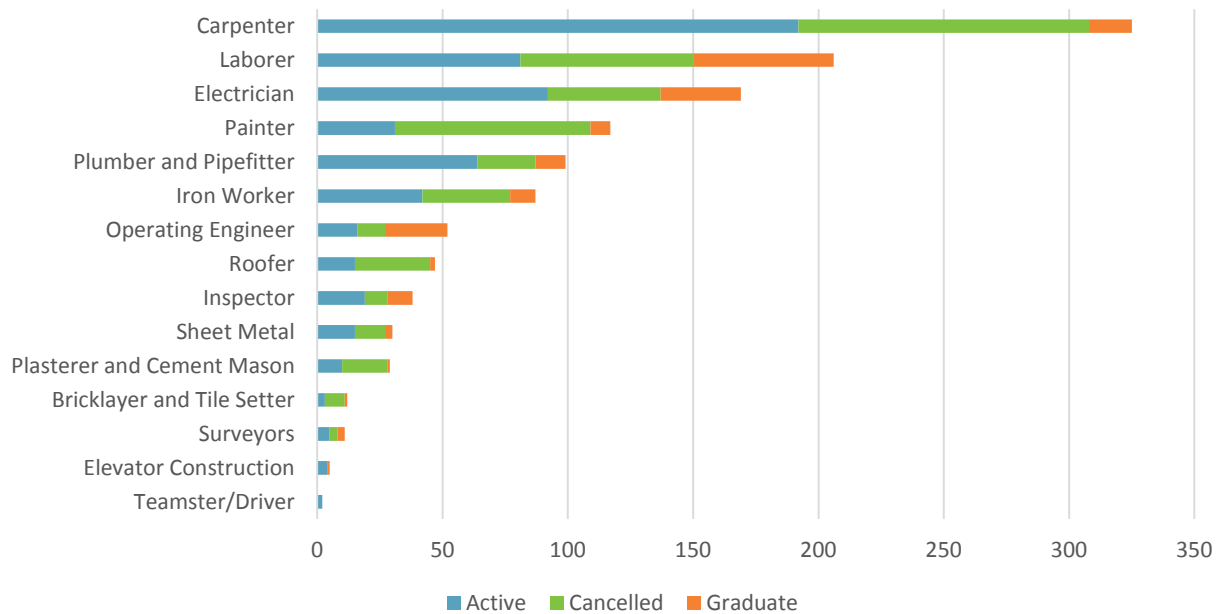
Female Apprenticeship Participation in the Greater LA Area (Start Year 2008 - 2018)
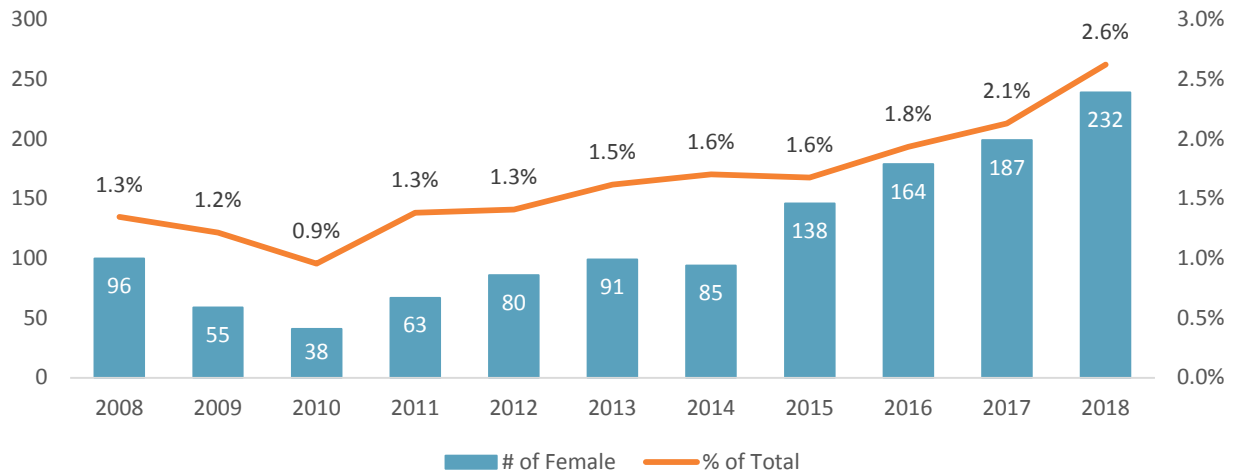
Source: California Department of Industrial Relations Division of Apprenticeship Standards

The trades with the highest number of overall female recruitments were (1) Carpenter; (2) Laborer; (3) Electrician; (4) Painter; and (5) Plumber and Pipefitter. This is consistent with the trades with the highest number of available female construction workers in the overall region, which were Laborer, Carpenter, Operating Engineer, Electrician, and Teamster/Drivers.

Female Apprentices in the Greater LA Area by Trade and Status (Start Year 2008 – 2018)

Source: California Department of Industrial Relations Division of Apprenticeship Standards

Pre-Apprenticeship Programs, also called Apprenticeship Readiness Programs, are a critical component of the training pipeline. These programs are often run by community-based organizations or situated within high schools or community colleges. These programs offer exposure to a range of construction trades through work experiences and visits from people working in that trade. This exposure is valuable for participants and provides hands-on experience for what it is like to work in a particular trade that would provide better prepare individuals in registered apprenticeship programs and help improve retention and graduation rates. The Women in Non-Traditional Employment Roles (WINTER) organization runs a robust program that focuses on female recruitment. Significant efforts, particularly in this program, is needed to boost recruitment of female construction workers in order to meet Metro's female participation goal of 6.9%. Here are a few key statistics from WINTER's apprenticeship readiness program in FY 2017-18:

> Out of 130 women who attended WINTER's program orientation, 70 ended up enrolling in the program
> The program completion rate that year was 93%
> The age range of female participants were 18-44—the average age was 33
> 50 women were placed in apprenticeship programs upon graduation, while 10 were placed in employment within the construction industry

Construction Workforce Gap Analysis

In 2017, Metro did not meet its 6.9% female participation goal overall, or within any of the 15 key trades. Based on Metro's existing workforce gap, women would have needed to perform 119,545 more hours in 2017 in order to meet the 6.9% female participation goal. The projected gap based on three scenarios are as follow:

> Under a "No Growth" scenario, Metro is projected to meet and/or exceed the 6.9% female participation goal by 2021 in the following trades: *Painter, Plumbers and Pipefitter, Sheet Metal Worker, and Roofers*. Metro would not reach the 6.9% goal for any other trade by 2027 under this scenario.
> Under a "Moderate Growth" scenario, Metro would achieve the 6.9% female participation goal in the following trades by 2021: *Painter, Plumbers and Pipefitter, Sheet Metal Worker, and Roofers.* However, Metro would not reach the 6.9% goal by 2027 for the overall workforce or in the following trades: Operating Engineer, Teamsters/Driver, Iron Worker, Plasterers and Cement Mason, Elevator Constructor, Surveyor, Bricklayers and Tile Setter, and Electrician.
> Under a "Sustained Growth" scenario, Metro would achieve the 6.9% female participation goal for *Carpenters, Painters, Plumbers and Pipefitters, Sheet Metal Workers, and Roofers* by 2021. By 2024, Metro's total workforce would reach the overall 6.9% goal. However, Metro would not reach the 6.9% goal by 2027 in the following trades Operating Engineer, Iron Worker, Teamsters/Driver, Plasterer and Cement Mason, Surveyor, and Elevator Constructor.

The region should focus recruitment and retention efforts for all 15 major trades associated with Metro's projects. However, a significant push should be placed on the trades that are anticipated to experience the largest female workforce gap on Metro Projects, such as the following trades: *Operating Engineer, Iron Worker, Teamsters/Driver, Plasterer and Cement Mason, Surveyor, and Elevator Constructor.*

Barriers to Opportunity for Women in Construction

The lack of encouragement and support, coupled with the insular nature of the male-dominated trades, create a hostile and unwelcome environment for women. Together, these factors reinforce a perception that women do not belong in the trades. Drawing from interviews with stakeholders and a review of the literature, the following barriers were identified as most pertinent to preventing women from entering the industry:

1. Lack of Awareness and Exposure to Trades
2. Hiring Practices and Poor On-The-Job Training
3. Hostility and Sexual Harassment
4. Lack of Mentorship and Kinship Networks
5. Scheduling and Childcare

Recommendations

Based on the findings in this report and a review of best practices in the construction industry, the following recommendations aim to:

> Expand and diversify the construction workforce to meet growing demand and skills-gaps;
> Create a gender-balanced workforce by targeting the recruitment of females to enroll in apprenticeship readiness programs and registered apprenticeship programs;
> Promote and support the retention of female construction workers by addressing the barriers and challenges for women in construction;
> Develop the capacity and pathways for women in leadership and career growth on the job and/or within their union; and
> Fully utilize the current female construction workforce by providing women with opportunity to work more hours on a project.

Short-Term Recommendations (Less than 1 year)

1.) Continue Metro's internal efforts through policies and programs related to supporting female participation in construction
2.) Expand upon Metro's Expose, Educate, and Employ (E3) Initiative to include to exposure to and training in construction related fields.
3.) Engage Metro Board Members in advocating for the recruitment and retention of female workers regionally
4.) Participate and/or host more career fairs, workshops, and conferences in collaboration with public agencies, community partners and the building trades to recruit and retain female workers in construction
5.) Convene a meeting with the building trades and prime contractors

Mid-Term Recommendations (1-5 years)

1.) Coordinate with the National Center for Women's Equity in Apprenticeship and Employment and the Chicago Women in Trades to establish a local Tradeswoman organization
2.) Encourage the formation of a Regional "Creating Supply" Committee
3.) Encourage building trades to track workforce participation

4.) Encourage unconscious bias training among all contractors
5.) Revise current Request for Proposals requirements for Metro construction projects to encourage contractors to provide a workforce development strategy
6.) Create a dedicated funding source to support the retention of female construction workers

Long-Term Recommendations (5-10 years)

1.) Renegotiate the PLA with LA/OCBCTC to include incentives and/or mandates in supporting females in the construction trades
2.) Monitor the Governor's proposed budget and statewide initiatives for funding that supports Early Childhood Development