



Acknowledgments

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About the Women's Environment and Development Organization (WEDO)

The Women's Environment and Development Organization (WEDO), founded in 1990, is a global women's advocacy organization, working for a just world that promotes and protects human rights, gender equality, and the integrity of the environment. WEDO's headquarters is located in New York. Visit us at wedo.org.



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Preamble

We cannot confront the climate crisis without transforming how we all move through the world. At present, the transportation sector accounts for almost one third of U.S. greenhouse gas emissions, and is steeped with environmental injustices that disproportionately impact communities of color and low income communities, including the public health impacts of air and noise pollution, the economic impact of navigating inaccessible, costly and unreliable systems, and disinvestment in low-emissions, sustainable and healthier transportation alternatives.

We present this brief with the deep conviction that we all have the right to move safely and freely through the world. But we know that across the landscape of transportation infrastructure and mobility systems in the United States, this remains far from the reality; existing and overlapping inequalities persist to erode mobility access for all. Across lines of race, class and gender, transportation has historically served to entrench white supremacy, patriarchy, and deepening wealth inequality. With an intersectional feminist analysis that confronts and addresses how systems of oppression influence and structure our mobility policies, it is possible for transportation to take on new forms, as a catalyst for transformation. By realizing the potential for intentional and equitable investment that prioritizes universal access and affordability for all, takes into account the differentiated needs of users it has historically marginalized, and learns lessons from feminist transportation advocates, U.S. mobility infrastructure can serve as a critical pathway to achieving racial, economic and gender justice.





Introduction

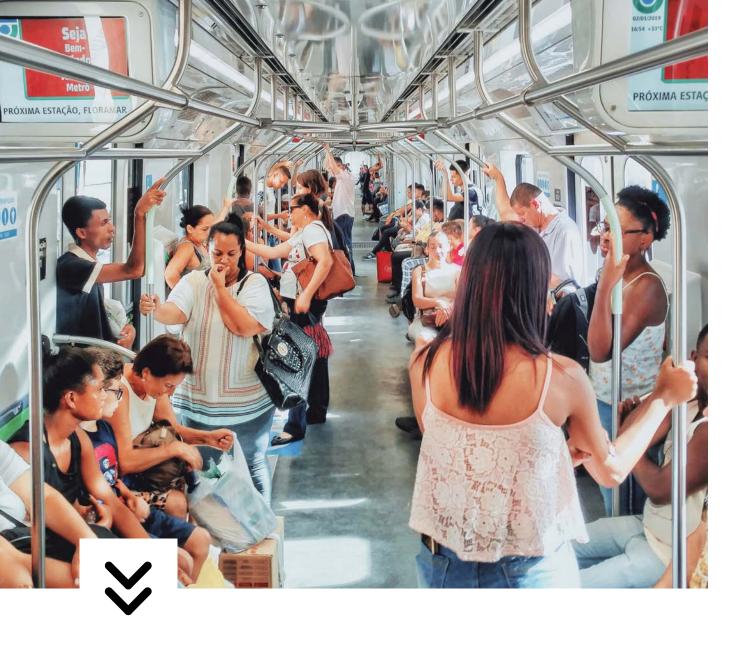
Infrastructure and transportation planning are crucial to addressing climate change. In the United States, the transportation sector is the largest source of greenhouse gas emissions, accounting for 28%.¹ The majority of greenhouse gas emissions from transport are caused by light-duty vehicles. This is a consequence of an automobile-dominated transportation system. Infrastructure and transportation investments prioritize roadways over other modes of transportation,² which contributes to automobile dependency.

Automobile-centric planning practices are not just an issue of emissions. They have been weaponized as a tool of oppression. Urban highways were designed and built in the mid-20th century to serve white suburban commuters and reinforce racial residential segregation.3 Highway construction divided and displaced poor communities of color, predominantly Black communities, ⁴ a practice that continues today.⁵ Moreover, public transit is largely underfunded, and public transit investments favor "choice riders" over "dependent riders." terms with differential assumptions of race and class.^{6,7} These inequitable investments contribute to transportation systems that restrict mobility along race, class and gender lines, often exacerbating isolation from social and economic opportunities and increasing vulnerability to climate-induced disasters.8 Infrastructure and transportation polices should take an intersectional approach to ensure that the transition to a carbon-free transportation system does

not perpetuate racial, class and gender inequities.

Equity was not considered in federal infrastructure and transportation policy until the Obama administration.9 Former-U.S. Secretary of Transportation Anthony Foxx formally recognized and addressed the inequitable racial and economic impacts of infrastructure and transportation projects. He incorporated social equity measures in decision-making for initiatives funded by the Department of Transportation's discretionary budget.9 The recently elected Biden administration is poised to build off this foundational work and center racial, economic, and gender equity in its push for sustainable infrastructure and an equitable clean energy economy. 10 This presents a pressing policy opportunity to transform the transportation system with a focus on equity, sustainability and a just transition.

In this Brief, an intersectional gender lens is used to examine the impacts of inequitable infrastructure and transportation systems. The Brief also provides policy recommendations to implement a gender-inclusive transition to sustainable infrastructure and transportation. These urgent policy recommendations give guidance on how to systematically integrate considerations of gender and the care economy. Case studies of gender-inclusive projects from feminist organizers are presented to show solutions that make transportation more intersectionally just.



Gender Considerations in Infrastructure & Transportation

Infrastructure and transportation systems differently impact all genders, including women, men, transgender, non-binary, and gender nonconforming people, along intersecting identities, such as race and class. However, planning and design have historically centered the concerns of white, middle-class, cisgender men. Low-carbon transportation modes, such as public transit

and walking, are not an exception. Planning practices, along with issues of affordability and safety, have contributed to inequitable transportation systems that hinder use of low-carbon transportation and limit participation in the transition to the clean energy economy. This section examines these challenges at the intersection of transportation, climate and gender.

Planning Practices

Planning tends to reflect traditional binary gender roles and gendered division of labor. Single-use zoning segregates work, residential, school and care service areas into separate and distant locations. 11 This practice increases the reliance on automobiles to reach destinations, embedding inequality. Furthermore, distance creates challenges to engaging in both non-care and care work. In the U.S., women spend 37% more time on unpaid household and care work than men. 12 Women make more trips for household-sustaining activities, such as shopping and errands, than men.¹³ Infrastructure and transportation planning prioritize traditional travel patterns of men over the care economy and the "mobility of care." Mobility of care¹⁴ signifies travel associated with caring tasks.



Automobile Access

Women have less access to automobiles than men. Figure 1 shows that women-headed households are more likely to not have access to an automobile.¹⁵ There are differences by race and ethnicity. Black, women-headed households are the most likely to not have access (21%). 15 Another important consideration are auto-deficient households, those with fewer vehicles than drivers that must negotiate vehicle use. 16 Four factors that may influence intra-household automobile sharing decisions are economic power, practical necessity, gender norms, and gendered preferences in mode choice. 16 In an automobile-dominated transportation system, living in zero-vehicle or auto-deficit households makes it difficult to reach destinations, including activities that support the household, and increases household vulnerability to disaster.

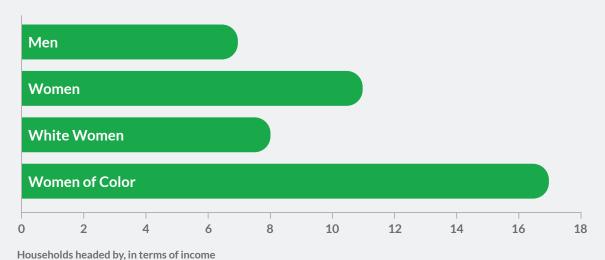




Figure 1

Percent (%) of households without a vehicle by gender and race

Data is taken from the National Equity Atlas, as of 2017.



We recognize that this data, as pulled from the National Equity Atlas, invisibilizes non-binary individuals, and only underscores the imperative for additional and focused research and exploration of mobility usage and needs of all genders.



Public Transit

Public transit is a low-carbon mobility option. It emits less greenhouse gas emissions per passenger mile than single-occupancy vehicles.¹⁷ Most public transit riders in the U.S. are women (55%).¹⁸ However, transit systems have not accounted for the mobility needs of women, transgender, non-binary, and gender nonconforming people. Public transit schedules are planned around traditional male commuter patterns, including 9-to-5 work schedules. This creates barriers for part-time, service, informal and care work, which do not follow peak hour transit times. A higher proportion of women and transgender people work part-time than men. 19,20 Public transit service is less reliable and less frequent during off-peak hours.

Further, public transit fare policies are designed for direct commute trips. Riders who make multiple stops are required to pay multiple fares, which increases the cost of a trip. Women are more likely to



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stop on their way to or from work than men, meaning their trips are more likely to consist of multiple stops.²¹ Women have to pay multiple times as they trip chain for their care work responsibilities.

Public transit vehicles and facilities often do not accommodate the needs of care work. In the U.S., public transit vehicles are designed with little space for shopping bags, shopping carts, and strollers. Additionally, most buses and trains prohibit open strollers and require caregivers to take out the child(ren) and fold up the strollers. Some only allow open strollers if there is space in the area designated for wheelchairs. This policy is particularly burdensome for those who have to carry their child, especially when carrying other bags. Another challenge for women responsible for the mobility of others, including the elderly and people with disabilities, is the lack of bench seating at bus stops and transportation facilities. According to the Federal Transit Administration, the Americans with Disabilities Act (ADA) does not require public transit agencies to install bench seating.²²

Moreover, public transit facilities in the U.S. lack restrooms.²³ When restrooms are present, they are often gendered, and therefore, less accessible to transgender, non-binary, and gender nonconforming people. Inadequate opportunities to use the restroom during transit trips is a barrier to riding transit.





Walking

Walking is a sustainable, active transport mode. However, planning and road infrastructure design prioritize automobiles. Walkability is limited by distance to employment and services, such as education, health care, grocery stores, and places of worship. Further, walkability is inhibited by inadequate sidewalks, crosswalks, curb ramps, lighting, and space between the sidewalk and roadway. Low-income communities are significantly less likely to have walkable streets. Sidewalks, marked crosswalks, and lighting are significantly less common in low-income communities. Insufficient pedestrian infrastructure makes it harder for the elderly, people with disabilities, children and caregivers to move and access transit stops.



Affordability

A major barrier to transportation access is affordability. Transportation is the second largest household expenditure after housing.²⁶ Households in the bottom income quintile spend 38% of their pretax income on transportation, on average.²⁶ This is a financial burden on low-income households.

In the U.S., more women live in poverty than men. 56% of people living in poverty are women.²⁷

- → Women (12%) experience higher poverty rates than men (9%).²⁸
- → Among women, Indigenous women have the highest poverty rate (25%), followed by Black women (23%) and Latinas (19%).²⁹
- → Poverty rates for people in women-headed households (22%) are higher those for people in men-headed households (12%).²⁸

One contributor to the gender disparity in poverty rates is the gender wage gap. On average, women working full-time for a wage or salary earn 82 cents for every dollar earned by men counterparts.³⁰ Women who work in transportation and material moving occupations earn 78 cents for every dollar men earn, and women who work in construction and extraction occupations earn 81 cents for every dollar men earn.³¹ The wage gap is wider for most women of color.³² Another factor is the lack of reliable and affordable care. Women work part-time at a higher rate than men.¹⁹ The difference is greater among parents with children under the age of 6.^{33,34} One-third of women part-time workers work part-time because of child care reasons or other family or personal obligations.³⁵ Further, the low wages for paid care workers, who are predominantly women of color, results in high levels of poverty. 16% of direct care workers live below the poverty line.³⁶

Research also documents that transgender people have high poverty rates (29%).^{20,37} The unemployment rate among transgender people is especially high (15%).²⁰ Unemployment is even higher among Indigenous, Latino/a, and Black transgender people. Access to employment is hindered by mistreatment, harassment, and discrimination in hiring and in the workplace, including being fired or being denied a promotion.²⁰





Safety

Traffic Injuries and Fatalities

Road infrastructure that prioritizes traffic creates safety issues. In the U.S., women are involved in less traffic crash deaths. Men account for 71% of all traffic crash deaths.³⁸ 70% of pedestrians killed in traffic crashes are men.³⁸ Most pedestrian fatalities occur in the dark (75%).³⁹ For passenger vehicle driver deaths, men also account for 71%.38 However, women drivers have a higher injury and fatality risk. 40,41 This can be partially attributed to vehicle design.⁴⁰ A recent study shows that other contributors are that women more often drive smaller, lighter cars and are more likely to be driving the struck vehicles. 41 The problem is exacerbated by the rise in popularity of SUVs and pickup trucks in the U.S. SUVs first outsold sedans in 2015.⁴² In 2019, SUVs made up 47% of vehicle sales, while sedans made up 22%.⁴³ SUVs and pickup trucks continue to increase their market share.⁴³ In addition to safety concerns, the rise in larger vehicles has climate implications since they are less fuel efficient and more polluting than passenger cars. 44,45 For some, high-emitting trucks are a symbol of petro-masculine identity, a masculine identity closely linked to fossil fuels.46



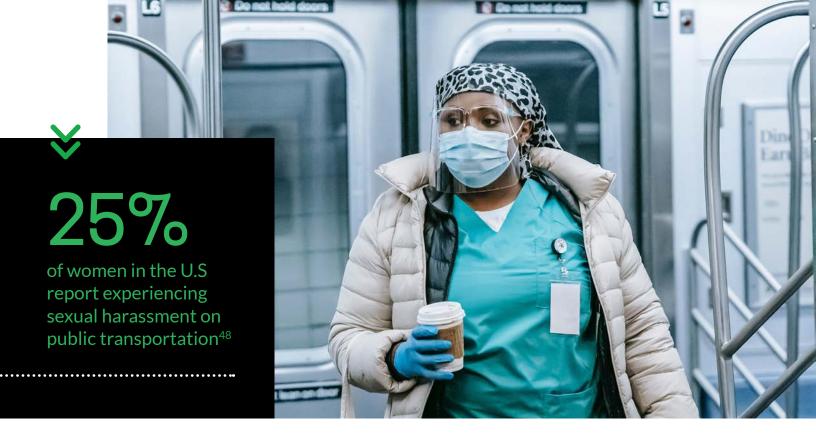


Gender-Based Harassment and Violence

Safety design in transportation infrastructure often neglects gender-based harassment and violence. Not accounting for this has serious impacts. For example, while public transit decreases the chance of being in an accident by more than 90% when compared to driving,⁴⁷ gender-based harassment and violence are pervasive on public transit:

- → Nationally, 25% of women report experiencing sexual harassment on public transportation as compared to 10% of men.⁴⁸
- → A 2018 survey of D.C. Metro riders found that 27% of women report experiencing sexual harassment on public transportation, and 14% of men report.⁴⁹
- → A 2018 LA Metro survey of women, men, and non-binary riders found that 25% of women bus riders and 33% of women rail riders report being sexually harassed on transit within the past six months prior to taking the survey.⁵⁰ Non-binary riders are the most likely to experience sexual harassment on the bus (41%), and 29% of non-binary riders report experiencing sexual harassment on rail.⁵⁰
- → Nationally, 32% of transgender riders who thought employees thought or knew they were transgender reported experiences of unequal treatment or harassment when using public transportation because of being transgender.²⁰ Non-binary people (39%) were more likely to have experienced unequal treatment or harassment.²⁰
- → A 2007 survey of the New York City subway system found that 10% of riders report being sexually assaulted and 63% of riders report being sexually harassed.⁵¹ Over 99% of those who reported experiencing sexual assault and/or sexual harassment are women.⁵¹





Research shows that harassment and violence are largely underreported. With regard to public transit, the aforementioned New York City subway survey found that 86% of those who were sexually assaulted and 96% of those who were sexually harassed did not contact the NYPD and/or the MTA to file a report or seek assistance.⁵¹ An online survey of New Yorkers found that 88% of those who experienced harassment did not report the incident.⁵²

The pervasive problem of gender-based harassment and violence affects the mobility of women, transgender, non-binary, and gender nonconforming people. Fear of harassment and violence impedes freedom of movement and reduces the use of public transit, which have economic and climate implications. Fear and safety concerns lead to modified travel behavior to reduce the risk of harassment and violence. A recent LA Metro study found that only 21% of women riders feel safe riding transit after dark, 13% feel safe waiting for transit after dark, and 18% feel safe traveling to the stop or station after dark. Strategies to avoid fearful settings include changing routes, not walking or traveling alone, traveling at specific times, not riding public transit, and substituting with more expensive travel options. At night, women with the financial ability often use ride-hailing services rather than walk or use public transit for safety reasons. Thus, fear and safety concerns result in a "pink tax" on women. The online survey of New Yorkers found that women spend an additional \$26-50 per month due to safety concerns. For women with care work responsibilities, this additional cost is on top of the increased travel costs for frequent care trips and trip-chaining, as noted earlier.

Infrastructure and transportation design contribute to feeling unsafe. Desolate settings, long wait times, unreliable real-time information, poor lighting traveling to and waiting at transit stops, and long walking distances to transit stops amplify safety concerns. ^{50,53,54}



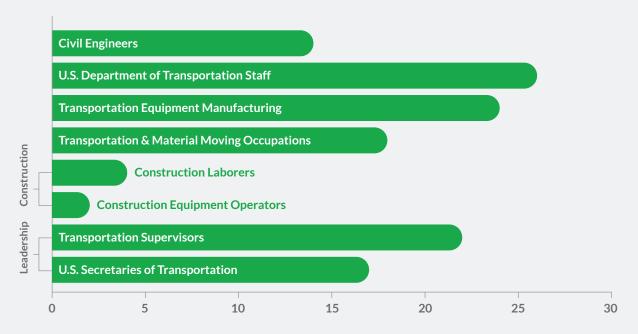
Gendered Employment in the Transportation Sector

Figure 2 demonstrates that women are underrepresented in the transportation industry, including in leadership positions.^{31,55-59} The lack of women's voices in the planning process and decision-making contributes to transportation systems that disregard the mobility needs of women and care work.

Figure 2

Percent (%) of women in transportation occupations as of 2019.

Data taken from the U.S. Bureau of Labor Statistics and the U.S. Department of Transportation.



The transportation industry faces challenges recruiting and retaining women. Major barriers include work-life imbalance, inflexibility in scheduling, an unclear promotion process, and an unwelcoming work environment. Further, the lack of family friendly policies, including parental leave and dependent care policies, results in the loss of new mother workers. A just transition to a clean energy economy requires the transportation sector to adopt measures to attract, retain, promote, and equally pay women.



Policy Recommendations

The Biden-Harris Administration recently proposed the American Jobs Plan,⁶² which aims to rebuild the U.S. infrastructure and create millions of good, high-wage jobs. The Plan includes proposals to increase women's participation in infrastructure, transportation, and clean energy through expanding access to jobs and investing in care infrastructure. However, the Plan

does not explicitly address transport as a barrier to economic opportunity. Below are specific gender-responsive policy recommendations to ensure that infrastructure and transportation investments are intersectionally just and result in a sustainable and equitable transportation system that is accessible, affordable, and safe.

Investments

Interventions that incorporate gender considerations and care work in infrastructure and transportation investments:

Increase public transit funding.

Currently, the Plan proposes \$115 billion for roads and \$85 billion to modernize and expand transit over eight years. At minimum, public transit should be funded equally to road infrastructure. Transit parity has implications for gender and economic equity because women rely more on public transit. Additionally, more public transit helps reduce automobile dependency, which has climate and safety implications. In June 2021, Congressman Hank Johnson introduced the Stronger Communities Through Better Transit Act, which proposes \$80 billion over four years to support public transit operating budgets to increase service, particularly in low-income and underserved communities. Additional stand-alone bills should not be necessary to provide the federal support required for expanded and equitable public transit. The American Jobs Plan and the surface transportation reauthorization bill must include equal funding for public transit.

→ Target 40% of infrastructure and transportation investments to Black, brown, and Indigenous communities.

Executive Order 14008 established a Justice40 Initiative, which aims to deliver 40% of benefits of federal investments to disadvantaged communities. He American Jobs Plan adheres to this E.O. by targeting 40% of the benefits of climate and clean infrastructure investments to disadvantaged communities. However, as demanded in the Green New Deal Network's THRIVE Agenda, 40% of investments should go to "communities that have been excluded, oppressed, and harmed by unjust practices," with a particular focus on Black, brown, and Indigenous communities. With regard to infrastructure and transportation, this would include 40% of investments in road and public transit infrastructure, complete streets, and electrification.

→ Integrate care infrastructure investments with transportation infrastructure investments.

While the Plan proposes large-scale investment in care infrastructure, including \$25 billion to upgrade and build new child care facilities, transportation and care should be linked to enable women to move more easily between productive and care work. For example, transit stops should co-locate at local services, including child care and health services.

→ Tie public transit infrastructure investments to explicit equity targets.

Investments to "modernize public transit" 62 must prioritize the mobility needs

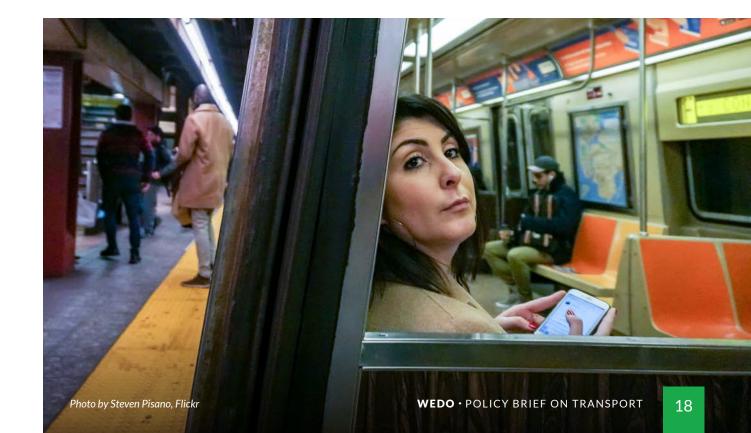
of all genders and mobility of care. Public transit vehicles should be designed with designated stroller areas that do not take up the wheelchair area. Funds must also be allocated to improve transit waiting areas to address comfort and safety, including benches, working elevators, gender-neutral bathrooms, real-time information displays, sufficient lighting, gender-based violence report mechanisms, and increased presence of unarmed civilian transit staff.

→ Tie public transit investments to explicit equity targets in transit service.

The Plan articulates the need to expand transit to meet rider demand. However, demand must be based on equity. There should be an explicit prioritization of service expansion during off-peak hours to provide frequent and reliable service all day and accommodate the transport needs of care work. Frequent and reliable service also reduces waiting and transfer times. This helps improve access to employment and address safety concerns.

→ Require fare-free public transit.

Federal transportation investments must be sufficient to enable free public transit. Free public transit increases access for low-income riders. In addition, free public transit addresses the fare policy challenges discussed in this Brief, including transfer fees and increased travel costs due to trip-chaining and multi-stop journeys. Further, free public transit eliminates inequitable enforcement of fare evasion. Free public transit eliminates inequitable enforcement of fare evasion. The recently re-introduced Freedom to Move Act would provide grants for fare-free transit and require grantees to decriminalize fare evasion. Such policies empower freedom of movement.





Job Creation

The American Jobs Plan states that infrastructure and transportation investments will create good, high-wage jobs with a fair choice to join a union and bargain collectively.⁶² Infrastructure projects not only create a large number of construction jobs; the majority of jobs created are non-construction jobs.⁶⁹ The Plan includes explicit calls to tie investments to high-wages and labor protections. There are also calls for new jobs to be open to women and people of color, for fair and equal pay, and for workplaces to be free from racial, gender, and other forms of discrimination and harassment.

As the THRIVE agenda notes, a just transition to a clean energy economy requires equitable job entry and placement for previously excluded groups, such as women and people of color, and for communities impacted by the transition.⁶⁵ Investments must be tied to gender and racial equity interventions, such as explicit workforce participation goals for women and people of color and workplaces free from discrimination and harassment, 70,71 to ensure that the clean energy economy does not recreate employment barriers and oppressive industries. Additional interventions to add to the Plan include family-sustaining wages⁶⁵ and opportunities for advancement to ensure diverse voices in leadership roles in the transport sector.

Importantly, equitable access to care through policies such as universal child care and paid family leave⁷² is a prerequisite for women and caregivers to participate in the clean energy economy.



Civilian Climate Corps

The American Jobs Plan also proposes \$10 billion to create a Civilian Climate Corps, a government jobs program that would employ people in conservation and resilience jobs to address climate change and advance environmental justice. 62,64 The Biden-Harris Administration has not released details to date.

In April 2021, Representative Alexandria Ocasio-Cortez and Senator Ed Markey proposed the Civilian Climate Corps for Jobs and Justice Act, a vision for the Civilian Climate Corps that would employ 1.5 million people over five years.⁷³ Climate Corps members would be paid at least \$15 per hour and receive full health care coverage and support for transportation, housing and childcare. They would also receive educational grants of \$25,000 per year, up to \$50,000, for further education or student loan debt. The proposal also includes providing career opportunities for Climate Corps members through training, apprenticeship and pre-apprenticeship programs. The Act proposes that 50% of climate service projects are based in environmental justice communities, of which 10% are in tribal areas. It also calls for 50% of Climate Corps members to be from environmental justice communities and for the inclusion of rural participants and all genders. For a just transition to green careers, the Civilian Climate Corps and apprenticeship programs must include specific participation goals by race and gender.70,71



Conclusion

The American Jobs Plan is a \$2.3 trillion infrastructure and transportation investment. An investment of this magnitude is an opportunity to redress inequitable planning and design practices that privilege white, middle-class, cisgender men and systematically integrate considerations of gender and the care economy. This Brief identifies how

investments can be targeted to create a sustainable and equitable transportation future that is responsive to the needs of all genders and care work. Importantly, these gender-responsive transportation strategies must be locally-adapted through decision-making processes that involve women, transgender, non-binary, and gender nonconforming people.

Annex

Case Studies



Alliance for Girls' "Not One More Girl" Campaign

Centering girls and gender-expansive youth to address gender-based harassment and violence on public transit

"Looking at the aspect of economic access and mobility, education, and healthcare, all those pieces, basically, access to all the resources that allow you to thrive. If girls don't have access to mobility, they can't get to school. There are data points that we have that show that students had missed school because they didn't feel safe taking public transportation; that they weren't able to keep certain jobs because it meant getting on public transportation at a later time that they weren't comfortable doing or didn't feel safe doing. It meant missing medical appointments and meant missing opportunities that enhance your quality of life, even access to your community, access to fun. And, so, it's just really an issue that touches so many areas. And, also, this is an issue of racial justice because we know this issue is disproportionately impacting Black youth and youth of color, especially when people's first response to this issue is, 'oh, let's have a police officer on every BART car, on every train.' Not One More Girl reimagines safety for BIPOC youth and takes an intersectional approach to safe and just passageways."

HALEEMA BHAROOCHA

Senior Advocacy Manager, Alliance for Girls

Alliance for Girls is an alliance of over 190 organizations and members in the San Francisco Bay Area that serve girls and gender expansive youth to advance gender and racial equity.⁷⁴ In its Together, We Rise report on the lived experiences of girls of color in the Bay Area, Alliance for Girls documented how girls feel unsafe on public transit and experience physical and verbal harassment.⁷⁵ Following a series of community town halls, Alliance for Girls developed a gender equity action plan in partnership with groups in the Bay Area. Alliance for Girls staff presented their plan to the Bay Area Rapid Transit (BART) staff. In response, BART

partnered with Alliance for Girls to develop a campaign against gender-based harassment and violence on public transit in the Bay Area. The "Not One More Girl" campaign was developed in partnership with Alliance for Girls, Betti Ono, Black Girls Brilliance, The Unity Council's Latinx Mentorship and Achievement Program, and 15 Alliance for Girls member organizations. Through listening sessions and workshops, Black and brown girls and gender-expansive youth, artists, and community advocates were centered in this youth-driven campaign. Nearly 500 youth were involved, including 100 roles paid at least \$18/hour. The "Not One More Girl" campaign includes: a new "unwanted verbal/nonverbal sexual harassment (non-criminal)" reporting category on the BART Watch App; a sexual harassment question on BART's customer satisfaction survey to address the lack of data; a webpage with police and non-police resources on reporting; a bystander intervention training video; 300 posters designed by youth; an amendment to the Code of Conduct to explicitly prohibit sexual harassment; and, paid youth positions on hiring panels for unarmed, frontline responders, such as transit ambassadors and crisis intervention specialists. 76,77 The campaign emphasizes non-police interventions out of recognition that not everyone feels safe with police. The "Not One More Girl" campaign is the first phase of an effort to create systemic change on public transit to improve safety and empower riders. Alliance for Girls is developing a toolkit for transit agencies across the nation to replicate this model that centers local community in addressing gender-based harassment and violence.



LA Metro's Women and Girls Governing Council

Applying a gender lens to transportation planning

The Women and Girls Governing Council (WGGC) was established in 2017 to examine LA Metro's policies, programs and services through a gender lens. The objective of the Council is to identify and remove challenges and barriers women face in transportation. The WGGC has implemented several initiatives, including changes to hiring practices to eliminate barriers to employment as well as career events to expose girls to opportunities in the transportation industry. Another initiative was the 2019 Understanding How Women Travel study to provide gender specific data to understand how women travel in LA County and inform gender responsive transportation planning decisions. Gender disaggregated data was collected through surveys, focus groups, participant observation, participatory design workshops, and pop-up engagements at transit stations. Results are currently being used to develop a Gender Action Plan.





Increasing access to infrastructure jobs and improving workplace environments

"Women want fair access to jobs in the infrastructure sector. As a whole, women, and especially women of color, have been overlooked when it comes to occupations connected to infrastructure. That means they have not had the opportunity to be included in highly skilled careers in construction, utility systems, ventilation, energy efficiency, trucking, vehicle repair & maintenance, transit operations, waste management & remediation, water & sewage, electric grid, rail systems and the list goes on and on. These blue color industries are a means for women to have economic freedom. It gives us the ability to take care of ourselves and our families. We want these opportunities. We need these opportunities and when given the opportunity we have proven time and again that we have the grit needed to excel in these industries."

LEAH RAMBO

Co-Chair, National Taskforce on Tradeswomen's Issues

The National Taskforce on Tradeswomen's Issues is a coalition of organizations and members that helps address access, opportunity, and equity in the construction industry and other skilled trades occupations through policy and advocacy at the national, state and local levels. The Taskforce recently released a Framework for Promoting Equity and Inclusion for Women and People of Color in the Traders on Publicly Funded Infrastructure Projects to ensure infrastructure investments promote gender and racial equity in skilled trades. Chicago Women in Trades is co-chair of the Taskforce. In 2017, the U.S. Department of Labor awarded Chicago Women in Trades and partners a Gender Equity Contract to establish the National Center for Women's Equity in Apprenticeship and Employment. The National Center for Women's Equity in Apprenticeship and Employment provides technical assistance and online resources for registered apprenticeships and local employers to advance women's opportunities in apprenticeship and skilled trades. Overall, the Taskforce promotes equity in apprenticeship, training, workforce development, career education, and job site experience.

References

- US Environmental Protection Agency. (2020). Inventory of US Greenhouse Gas Emissions and Sinks 1990-2018. Retrieved from epa.gov/sites/production/files/2020-04/ documents/us-ghg-inventory-2020-main-text.pdf.
- 2. Wilson, K. (2020). Three Reasons to Put the 1980s in the Past And #EndTheEightyTwentySplit. Streetsblog USA. Retrieved from usa.streetsblog.org/2020/11/18/three-reasons-to-put-the-1980s-in-the-past-and-endtheeightytwentysplit.
- **3.** Rothstein, R. (2017). The Color of Law: A Forgotten History of How our Government Segregated America. Liverlight Publishing.
- **4.** Rose, M.H.; Mohl, R.A. (2012). Interstate: Highway Politics and Policy Since 1939. University of Tennessee Press.
- **5.** Uteuova, A. (2021). Plan to expand Texas highway stalled over environmental racism concerns. The Guardian. Retrieved from theguardian.com/us-news/2021/mar/23/plan-to-expand-texas-highway-stalled-over-environmental-racism-concerns.
- 6. Higashide, S. (2016). Who's On Board 2016: What Today's Riders Teach Us About Transit That Works. TransitCenter. Retrieved from transitcenter.org/ wp-content/uploads/2016/07/Whos-On-Board-2016-7_12_2016.pdf.
- 7. Bullard, R.D. (2005). All transit is not created equal. Race, Poverty & the Environment. 12, 9-12.
- **8.** Bullard, R.D. (2003). Addressing urban transportation equity in the United States. Fordham Urb. LJ. 31, 1183-1209.
- Ross-Brown, Sam. (2016). Transportation Secretary
 Foxx Moves to Heal Scars of Urban Renewal. The
 American Prospect. Retrieved from prospect.org/
 civil-rights/transportation-secretary-foxx-moves-heal-scars-urban-renewal.
- **10.** Mintz, Sam. (2021). How Biden is betting on Buttigieg to drive a new era of racial equity. Politico. Retrieved from politico.com/news/2021/03/08/biden-buttigieg-acial-equity-473928.
- **11.** Silbaugh, K.B. (2007). Women's place: Urban planning, housing design, and work-family balance. Fordham L. Rev. 76, 1797-1852.

- 12. Hess, C.; Ahmed, T.; Phil, M.; Hayes, J. (2020). Providing Unpaid Household and Care Work in the United States: Uncovering Inequality. Institute for Women's Policy Research. Retrieved from iwpr.org/wp-content/uploads/2020/01/IWPR-Providing-Unpaid-Household-and-Care-Work-in-the-United-States-Uncovering-Inequality.pdf.
- **13.** McGuckin, N.; Fucci, A. (2018). Summary of Travel Trends: 2017 National Household Travel Survey. Federal Highway Administration. Retrieved from nhts.ornl.gov/assets/2017_nhts_summary_travel_trends.pdf.
- **14.** de Madariaga, I.S. (2013). From women in transport to gender in transport: Challenging conceptual frameworks for improved policymaking. J. Int. Aff. 67, 43-65.
- **15.** The National Equity Atlas. (2017). Car access. Retrieved from national equity atlas.org/indicators/Car_access.
- 16. Blumenberg, E.; Brown, A.; Schouten, A. (2018). Auto-Deficit Households: Determinants, Travel Behavior, and the Gender Division of Household Car Use. University of California Center for Economic Competitiveness in Transportation. Retrieved from ucconnect.berkeley.edu/sites/default/files/research-papers/2017-TO-052.1-65A0529.pdf.
- 17. Federal Transit Administration. (2010). Public Transportation's Role in Responding to Climate Change. Retrieved from transit.dot.gov/sites/fta.dot.gov/files/docs/PublicTransportationsRoleInRespondingToClimateChange2010.pdf.
- **18.** Clark, H.M. (2017). Who Rides Public Transportation. American Public Transportation Association. Retrieved fromapta.com/wp-content/uploads/Resources/resources/reportsandpublications/Documents/APTA-Who-Rides-Public-Transportation-2017.pdf.
- **19.** U.S. Bureau of Labor Statistics. (2020). Employed and unemployed full- and part-time workers by age, sex, race, and Hispanic or Latino ethnicity. Retrieved from bls.gov/cps/aa2019/cpsaat08.htm.
- **20.** James, S.E.; Herman, J.L.; Rankin, S.; Keisling, M.; Mottet, L.; Anafi, M. (2016). The Report of the U.S. Transgender Survey: 2015. National Center for Transgender Equality. Retrieved from ustranssurvey.org.

- 21. U.S. Department of Transportation, Bureau of Transportation Statistics. (2018). Transportation Statistics Annual Report. Retrieved from bts.dot.gov/sites/bts.dot.gov/files/docs/browse-statistical-products-and-data/transportation-statistics-annual-reports/Preliminary-TSAR-Full-2018-a.pdf.
- **22.** Federal Transit Administration. (n.d). Are bus stops and other transportation facilities required to provide bench seating? Retrieved from transit.dot.gov/are-bus-stops-and-other-transportation-facilities-required-provide-bench-seating.
- 23. Jaffe, E. (2013). Why Don't American Subway Stations Have Public Bathrooms? Bloomberg CityLab. Retrieved from bloomberg.com/news/articles/2013-01-03/why-don-t-american-subway-stations-have-public-bathrooms.
- **24.** Federal Highway Administration. (2013). A Resident's Guide for Creating Safer Communities for Walking and Biking. Retrieved from safety.fhwa.dot.gov/ped_bike/ped_cmnity/ped_walkguide/sec1.cfm.
- 25. Gibbs, K.; Slater, S.J.; Nicholson, N.; Barker, D.C.; Chaloupka, F.J. (2012). Bridging the Gap. Income Disparities in Street Features that Encourage Walking. Retrieved from bridgingthegapresearch.org/_asset/02fpi3/btg_street_walkability_FINAL_03-09-12.pdf.
- **26.** U.S. Bureau of Labor Statistics. (2020). Consumer Expenditures Report 2019. Retrieved from bls.gov/opub/reports/consumer-expenditures/2019/home.htm.
- **27.** IPUMS NHGIS, University of Minnesota. (2020). Retrieved from doi.org/10.18128/D050.V15.0.
- 28. Semega, J.; Kollar, M.; Shrider, E.A.; Creamer, J. (2020). Income and Poverty in the United States: 2019. U.S. Census Bureau. Retrieved from census.gov/library/publications/2020/demo/p60-270.html.
- 29. Bleiweis, R.; Boesch, D.; Gaines, A.C. (2020). The Basic Facts About Women in Poverty. Center for American Progress. Retrieved from american progress.org/issues/ women/reports/2020/08/03/488536/basic-facts-women-poverty/.
- **30.** U.S. Bureau of Labor Statistics. (2020). Highlights of Women's Earnings in 2019. Retrieved from bls.gov/opub/reports/womens-earnings/2019/home.htm.
- **31.** U.S. Bureau of Labor Statistics. (2020). Median weekly earnings of full-time wage and salary workers by detailed occupation and sex. Retrieved from bls.gov/cps/aa2019/cpsaat39.htm.

- **32.** U.S. Census Bureau. (n.d.). PINC-05: Work Experience-People 15 Years Old and Over, by Total Money Earnings, Age, Race, Hispanic Origin, Sex, and Disability Status: 2019. Retrieved from https://www.census.gov/data/tables/time-series/demo/income-poverty/cps-pinc/pinc-05.html.
- **33.** U.S. Bureau of Labor Statistics. (2020). Table 5: Employment Status of the Population by Sex, Marital Status, and Presence and Age of Own Children Under 18, 2018-2019 Annual Averages. Retrieved from bls.gov/ news.release/famee.t05.htm.
- **34.** U.S. Department of Labor. (n.d.). Full-Time/Part-Time Employment. Retrieved from dol.gov/agencies/wb/data/latest-annual-data/full-and-part-time-employment.
- **35.** Hegewisch, A.; Lacarte, V. (2019). Gender Inequality, Work Hours, and the Future of Work. Institute for Women's Policy Research. Retrieved from iwpr.org/iwpr-issues/employment-and-earnings/gender-inequality-work-hours-and-the-future-of-work/.
- **36.** PHI. (n.d.). Workforce Data Center. Retrieved from phinational.org/policy-research/workforce-data-center/.
- **37.** Badgett, M.V.L; Choi, S.K.; Wilson, B.D.M. (2019). LGBT Poverty in the United States: A study of differences between sexual orientation and gender identity groups. UCLA School of Law Williams Institute. Retrieved from williamsinstitute.law.ucla.edu/publications/lgbt-poverty-us/.
- **38.** National Highway Traffic Safety Administration. (2021). Fatality and Injury Reporting System Tool (FIRST). Retrieved from cdan.dot.gov/query.
- **39.** National Highway Traffic Safety Administration. (2019). Traffic Safety Facts: Pedestrians 2017 Data. Retrieved from crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812681.
- 40. Kahane, C.J. (2013). Injury Vulnerability and Effectiveness of Occupant Protection Technologies for Older Occupants and Women. National Highway Traffic Safety Administration. Retrieved from crashstats.nhtsa. dot.gov/Api/Public/ViewPublication/811766.
- **41.** Brumbelow, M.L.; Jermakian, J.S. (2021). Injury Risks and Crashworthiness Benefits for Females and Males: Which differences are physiological? Insurance Institute for Highway Safety. Retrieved from https://www.iihs.org/topics/bibliography/ref/2219.
- **42.** Voelk, T. (2020). Rise of SUVs: Leaving Cars in Their Dust, With No Signs of Slowing. The New York Times. Retrieved from nytimes.com/2020/05/21/business/suvsales-best-sellers.html.

- **43.** Libby, T. (2020). New vehicle registrations show record share levels for SUVs. IHS Markit. Retrieved from ihsmarkit.com/research-analysis/new-vehicle-registrations-show-record-share-levels-for-suvs.html.
- **44.** International Energy Agency. (2019). Growing preference for SUVs challenges emissions reductions in passenger car market. Retrieved from iea.org/commentaries/growing-preference-for-suvs-challenges-emissions-reductions-in-passenger-car-market.
- **45.** International Energy Agency. (2020). Carbon emissions fell across all sectors in 2020 except one SUVs.

 Retrieved from iea.org/commentaries/carbon-emissionsfell-across-all-sectors-in-2020-except-for-one-suvs.
- **46.** Daggett, C. (2018). Petro-masculinity: fossil fuels and authoritarian desire. Millennium. 47, 25-44.
- 47. American Public Transportation Association. (2016). The Hidden Traffic Safety Solution: Public Transportation. Retrieved from apta.com/wp-content/ uploads/Resources/resources/reportsandpublications/ Documents/APTA-Hidden-Traffic-Safety-Solution-Public-Transportation.pdf.
- **48.** Kearl, H.; Johns, N.E.; Raj, A. (2019). Measuring #MeToo: A National Study on Sexual Harassment and Assault. UCSD Center on Gender Equity and Health & Stop Street Harassment. Retrieved from gehweb.ucsd.edu/wp-content/uploads/2019/05/2019-metoo-national-sexual-harassment-and-assault-report.pdf.
- **49.** Washington Metropolitan Area Transit Authority. (2018). Understanding Sexual Harassment on Public Transportation 2018. Retrieved from wmata.com/about/news/042018-Sexual-Harassment-Awareness.cfm.
- 50. Los Angeles County Metropolitan Transportation Authority. (2019). Understanding How Women Travel. Retrieved from metro.net/projects/wggc/economic-developments/.
- **51.** Office of the Manhattan Borough President Scott M. Stringer. (2007). Hidden in Plain Sight: Sexual Harassment and Assault in the New York City Subway System. Retrieved from nytimes.com/packages/pdf/nyregion/city_room/20070726_hiddeninplainsight.pdf.
- 52. Kaufman, S.M.; Polack, C.F.; Campbell, G.A. (2018). The Pink Tax on Transportation: Women's Challenges in Mobility. NYU Rudin Center for Transportation. Retrieved from wagner.nyu.edu/files/faculty/ publications/Pink%20Tax%20Report%2011_13_18.pdf.
- **53.** Loukaitou-Sideris, A. (2014). Fear and safety in transit environments from the women's perspective. Secur. J. 27, 242-256.

- **54.** Loukaitou-Sideris, A. (2009). How to Ease Women's Fear of Transportation Environments: Case Studies and Best Practices (No. 09-01). San Jose: Mineta Transportation Institute
- 55. Center for American Women and Politics. (2021). Women Appointed to Presidential Cabinets. Eagleton Institute of Politics. Retrieved from cawp.rutgers.edu/ sites/default/files/resources/womenapptdtoprescabinets.pdf.
- **56.** U.S. Department of Transportation. (2021). DOT Onboard Demographics, April FY 2021. Retrieved from transportation.gov/assistant-secretary-administration/human-resources/dot-onboard-demographics-april-fy-2021.
- **57.** U.S. Bureau of Labor Statistics. (2021). Employed persons by occupation, sex, and age. Retrieved from bls. gov/cps/cpsaat09.htm.
- **58.** U.S. Bureau of Labor Statistics. (2020). Employed persons by detailed industry, sex, race, and Hispanic or Latino ethnicity. Retrieved from bls.gov/cps/aa2019/cpsaat18.htm.
- 59. U.S. Bureau of Labor Statistics. (2020). Employed persons by detailed occupation, sex, race, and Hispanic or Latino ethnicity. Retrieved from bls.gov/cps/aa2019/ cpsaat11.htm.
- **60.** Godfrey, J.; Bertini, R.L. (2019). Attracting and Retaining Women in the Transportation Industry. Mineta Transportation Institute, San Jose State University. Retrieved from transweb.sjsu.edu/sites/default/files/1893-Godfrey-Attract-Retain-Women-Transportation.pdf.
- **61.** Palladino, L.; Gunn-Wright, R. (2021). Care & Climate: Understanding the Policy Intersections. Feminist Green New Deal. Retrieved from https://wedo.org/femgnd-releases-care-climate-issue-brief/.
- **62.** The White House. (2021). Fact Sheet: The American Jobs Plan. Retrieved from whitehouse.gov/briefing-room/ statements-releases/2021/03/31/fact-sheet-the-american-jobs-plan.
- **63.** Congressman Hank Johnson. (2021). Congressman Johnson Proposes Transformation Public Transit Bill. Retrieved from hankjohnson.house.gov/media-center/press-releases/congressman-johnson-proposes-transformational-public-transit-bill.
- **64.** Executive Office of the President. (2021). Tackling the Climate Crisis at Home and Abroad. Federal Register. Retrieved from federalregister.gov/documents/2021/02/01/2021-02177/tackling-the-climate-crisis-at-home-and-abroad.

- **65.** Green New Deal Network. (n.d.). Thrive Agenda. Retrieved from thriveagenda.com.
- **66.** Stolper, H. (2020). The MTA's False Fare Evasion Narrative. Community Service Society. Retrieved from cssny.org/news/entry/mta-false-fare-evasion-narrative-data.
- **67.** Washington Lawyers' Committee for Civil Rights and Urban Affairs. (2018). The Committee Releases Report on Shocking Disparities in Fare Evasion Enforcement by Metro Police. Retrieved from washlaw.org/the-committee-releases-report-on-shocking-disparities-in-fare-evasion-enforcement-by-metro-police.
- **68.** The Associated Press. (2021). Legislation Would Support Fare-Free Public Transit Systems. WBUR News. Retrieved from wbur.org/news/2021/03/31/mbta-mar-key-pressley-free-public-transportation-bill.
- **69.** Austin, Algernon. (2017). To Move is to Thrive: Public Transit and Economic Opportunity for People of Color. Demos. Retrieved from demos.org/sites/default/files/publications/Public%20Transit.pdf.
- 70. National Taskforce on Tradeswomen's Issues. (n.d.). Framework for Promoting Equity and Inclusion for Women and People of Color Working in the Trades on Publicly Funded Infrastructure Projects. Retrieved from http://womensequitycenter.org/wp-content/ uploads/2021/03/TWTF-Infrastructure-Equity-Framework-FINAL.pdf.
- **71.** National Taskforce on Tradeswomen's Issues. (n.d.). Towards Women's Equitable Access to and Retention in High-Wage, High-Skilled Apprenticeship, Training, and Trades Employment. Retrieved from tradeswomentaskforce.org/policy-platform.

- **72.** Kalipeni, J.; Kashen, J. (2020). Building Our Care Infrastructure for Equity, Economic Recovery and Beyond. National Domestic Workers Alliance. Retrieved from caringacross.org/wp-content/uploads/2020/09/Building-Our-Care-infrastructure_FINAL.pdf.
- **73.** Senator Edward J. Markey. (2021). Civilian Climate Corps for Jobs and Justice Act of 2021. Retrieved from markey.senate.gov/imo/media/doc/ccc_one_pager.pdf.
- **74.** Alliance for Girls. (n.d.). Who We Are. Retrieved from alliance4girls.org/who-we-are.
- **75.** Alliance for Girls. (2019). Together, We Rise: The lived experiences of girls of color in Oakland, San Francisco, and San Jose. Retrieved from alliance4girls.org/wp-content/uploads/Together-We-Rise-Report.pdf.
- **76.** Bay Area Rapid Transit. (n.d.). Addressing Gender Based Violence. Retrieved from bart.gov/NotOneMoreGirl.
- **77.** Bay Area Rapid Transit. (n.d.). Not One More Girl Campaign. Retrieved from bart.gov/guide/safety/gbv/campaign.
- **78.** Los Angeles County Metropolitan Transportation Authority. (n.d.). Women & Girls Governing Council. Retrieved from metro.net/projects/wggc.
- **79.** Tradeswomen Taskforce. (n.d.). The National Taskforce on Tradeswomen's Issues. Retrieved from tradeswomentaskforce.org.
- **80.** Chicago Women in Trades. (n.d.). National Center for Women's Equity in Apprenticeship and Employment. Retrieved from womensequitycenter.org.

