

## Designing Electric Vehicle Charging Infrastructure to Benefit Historically-Marginalized Residents

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**Abstract :** In the rush to meet electric vehicle (EV) adoption goals that address environmental and health concerns, engineering planners and community policy experts cannot separate the socioeconomic and equity factors from transportation needs. Two gaps are identified in existing research: concrete proposals that address affordable micromobility options and provide for needs of community members without cars, and community-engaged research that elevates the concerns and solutions brought forward by historically-marginalized community members. This data analysis from a recent case study in a vulnerable community indicates that because transportation decisions are inextricably linked to health, work, and housing, EV adoption must also address multifaceted human needs. Communities focused on building more electric vehicle charging stations must find ways for lower-income households to also benefit. This research engaged residents in the planning process and resulted in a template for charging stations to advance mobility justice with a range of options that purposefully benefit the whole community.

**Keywords :** community engagement, electric vehicle charging, environmental justice, participatory research, transportation equity

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