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Vision for Transportation Equity in Colorado
  Community-Driven Decision-Making
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    Provide compensation for participation
  Robust and Tailored Protection, Mitigation, and Investment for DICs and AICs
  Minimize or Eliminate Transit Policing
  No More Highway Expansion
  Infilling, Walkable/Rollable Communities, and Community-Centered Land Use Planning
  Investments in Transit within Cities, between Cities, and in Rural Areas
    Within and Between Cities
    Rural Transit
  Accessibility for Community Members with Limited Mobility or Disabilities
  A More Equitable Future with EVs

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Part I - Background and Contexts
Introduction to Equity and Environmental Justice

According to the White House, equity is “the consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment, such as Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality” (1). While a long description of the term, a majority is spent defining the diverse and important communities that have endured insufficient care, and sometimes overt exploitation and discrimination, at the hands of historic U.S. governments and leadership.

A related, though different, principle in modern environmental political movements is environmental justice. The environmental justice movement originated among primarily People of Color towards the end of the Civil Rights Movement, as recognition of discriminatory and drastic negative health impacts in environmental decision-making rose (2). According to EPA, environmental justice is defined as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. This goal will be achieved when everyone enjoys: 1) The same degree of protection from environmental and health hazards, and 2) Equal access to the decision-making process to have a healthy environment in which to live, learn, and work” (3). Representatives at the First National People of Color Environmental Leadership further defined environmental justice in their creation of the 17 Principles of Environmental Justice (4). Since its inception, environmental justice has grown into a multi-faceted and pervasive movement that, at its core, aims to reconcile the systemic oppression, exploitation, and disproportionately large environmental burdens that People of Color in the United States have faced since the country’s inception.

2. Environmental Justice Timeline, EPA (2021)
3. Environmental Justice, EPA (2022)
4. The Principles of Environmental Justice, EJNet
The Intersection of Equity, Environmental Justice, and Climate Change

Transportation is a highly polluting and emissive sector. Pollutants from freight and personal vehicles lead to public health concerns locally, due to the prevalence of harmful particulates, ozone precursors, and noise—particularly in DICs. Additionally, the greenhouse gases (GHGs) emitted by vehicles are the biggest driver of climate change in Colorado. According to the recently released 2022 IPCC report, “there is at least a greater than 50% likelihood that global warming will reach or exceed 1.5°C in the near-term, even for the very low greenhouse gas emissions scenario” (5). Climate change in excess of 1.5°C is predicted with increasing certainty to create catastrophic consequences globally, with the greatest impacts on those who contribute the least emissions, and have the fewest resources to rebuild or relocate. In order to build resilience and prevent the worst impacts of anthropogenic climate change, transportation systems must become more efficient, less emissive, and less resource intensive.

Globally, transportation is the 4th highest contributor to greenhouse gas (GHG) emissions (14%) (6). In the US and in Colorado, transportation is the highest emitter of GHGs at 29% and 25%, respectively (7,8). The Colorado Energy Office’s GHG Reduction Roadmap calls for a 26% reduction in GHGs across all sources by 2025, 50% by 2030% and 90% by 2050 (all from 2005 levels) (9). Due to the impactful nature of the transportation sector on emissions in the state, it only follows that the sector must undergo a rapid decarbonization in order to meet these goals. It is critical that, in this transition, principles of environmental equity and justice are centered and frequently measured against, to ensure that decarbonization efforts do not simply delegate the greatest environmental and social burdens to DICs already facing the greatest impacts of climate change.

Combustion engines also contribute greatly to PM2.5 and ozone pollution, which significantly impact the health of communities through smog and poor air quality (10). As it stands, transportation is a “significant contributor to local air pollution that disproportionately impacts lower-income communities and communities of color” (11). In 2010, “vehicle tailpipe emissions [were linked] to ~361,000 premature deaths from ambient PM2.5 and ozone worldwide”; in 2015, that number increased to ~385,000 (12). In 2021, Front Range residents “suffered through a record 65 days of ozone levels in excess of the federal standards set to protect public health” (13).

5. Climate Change 2022 - Impacts, Adaptation and Vulnerability, IPCC (2022)
7. Sources of Greenhouse Gas Emissions, EPA (2022)
10. Smog, Soot, and Other Air Pollution from Transportation, EPA (2022)
The Denver Metro Area and the Front Range are “currently designated as a “serious” nonattainment area for the 2008 75 parts per billion (ppb) ozone standard, but designation as “severe” is imminent in early 2022 as a result of continued violations picked up by air monitors” (14). Communities in close proximity to highways also bear a disproportionately high burden from particulates and poor air quality; in Colorado, “highway-adjacent communities are home to high percentages of people with low incomes, mostly Latine, Black, Indigenous, and other people of color” (15). In short, the impacts of pollutants emitted by the transportation sector are negatively impacting Coloradans’ day to day lives, and disproportionately burdening Black, Indigenous, and People of Color (BIPOC) communities in particular.

Transportation Equity

Transportation Equity combines principles of equity, environmental justice, and social justice and focuses specifically on human relationships to mobility access and land use planning. The USDOT defines transportation equity as “…seek[ing] fairness in mobility and accessibility to meet the needs of all community members…and facilitat[ing] social and economic opportunities by providing equitable levels of access to affordable and reliable transportation options based on the needs of the populations being served, particularly populations that are traditionally underserved.” They further go on to say that “an equitable transportation plan considers the circumstances impacting a community’s mobility and connectivity needs, and this information is used to determine the measures needed to develop an equitable transportation network.” The National Campaign for Transit Justice expands on equity by declaring that transportation must also be sustainable, economically productive, affordable, safe, and accessible (16). Transportation equity is also lightly reflected in Colorado’s EJA, which provides the directive that the state must “promote an equitable transition to transportation electrification, zero emission vehicles, transportation systems, and land use patterns that reduce energy use and greenhouse gas emissions” (17).

On the advocacy side, Front and Centered, Akima Asian Pacific Islander Coalition, Disability Rights Washington, and 350 Washington have published a Transportation Bill of Rights that has gained over 270 co-signing organizations (18). A future of transportation equity will look different in every community due to the vast diversity in populations, developments, densities, environments, and other factors—but versions must be grounded by shared principles including affordability, accessibility, safety, minimal environmental impacts/hazards, distributed benefits and burdens, and diverse forms of mobility for bodies of all ability levels. Many activists specifically highlight community concerns, social benefit, and health impacts to be core tenets of successful implementation of equity; additionally, they consider transit, density, and walkable/rollable communities to be crucial elements of an equitable transportation future (19, 20).

17. House Bill 21-1266, Colorado General Assembly (2021)
18. Does America Need a ‘Mobility Bill of Rights’? Kea Wilson, Streetsblog US (2022)
20. Transportation Justice, Urban Habitat (2022)
Equity, Justice, and Transportation in Recent Government Action

Equity and environmental justice have recently emerged as recognizable, important, and politically viable themes in government action at all levels. Below is a brief introduction to four notable examples at the federal and state levels, that are pertinent to our later recommendations.

President Biden’s Executive Order 13985 - Advancing Racial Equity and Support for Underserved Communities Through the Federal Government

Executive Order 13985, issued by President Biden in January 2021, aims to advance equity, civil rights, racial justice, and equal opportunity, and acknowledges that as a perpetrator and perpetrator of these injustices, the U.S. Government must bear responsibility for remedying them. The Order requires each government agency to “assess whether, and to what extent, its programs and policies perpetuate systemic barriers to opportunities and benefits for people of color and other underserved groups” (21). It also calls for increased fairness in decision-making processes, better identification methods to assess equity, the allocation of federal resources to advance fairness and opportunity, the promotion of equitable delivery of Government benefits and equitable opportunities, and increased engagement with members of underserved communities.

Similarly, through many of its laws, public policies, and public and private institutions, the State of Colorado has itself enacted the injustices outlined in Executive Order 13985, and therefore also has a responsibility to correct them. Transportation agencies in Colorado should begin by referencing and applying the Director of the Office of Management and Budget (OMB)’s Study to Identify Methods to Assess Equity: Report to the President. Moreover, as demonstrated by Section VI of this report, the Colorado Department of Transportation (CDOT) and all other transportation agencies in Colorado should conduct an equity assessment similar to what is required of Federal agencies in Section 5 of the executive order and implement principles of equity throughout its funding, planning, community engagement, decision-making, and implementation processes.
President Biden’s Justice 40 Initiative

In order to advance environmental justice and increase economic opportunities in disadvantaged communities, President Biden has “committed to delivering 40 percent of the overall benefits of Federal climate, clean energy, affordable and sustainable housing, clean water, and other investments to disadvantaged communities that have been historically marginalized, underserved, and overburdened by pollution” (22). The Interim Implementation Guidance for the Justice 40 Initiative defines both “community” and “disadvantaged” and outlines “a set of actions required of agencies that manage covered Justice40 programs” (23). Criteria of disadvantaged communities includes high transportation cost burden and/or low transportation access, disproportionate environmental stressor burden and high cumulative impacts, disproportionate impacts from climate change, and distressed neighborhoods, among many others (24).

Clean transportation, reduction of greenhouse gas emissions and local air pollutants, and remediation and reduction of legacy pollution qualify as covered programs, and therefore fall within the scope of the Justice 40 Initiative. The White House Council on Environmental Quality (CEQ)'s Climate and Economic Justice Screening Tool can be utilized to help identify disadvantaged communities and allocate appropriate investments and funding in Colorado.

Colorado HB21-1266 - Environmental Justice Act (EJA)

In July 2021, Governor Polis signed the Environmental Justice Act (EJA) into law. Through this Act, the state of Colorado accepts responsibility for correcting historical and ongoing environmental injustices at the hands of the State, (re)defines environmental justice and Disproportionately Impacted Communities (DICs), and calls for/sets in action increased environmental protections for and investments in DICs. The EJA declares that “all people have the right to breathe clean air, drink clean water, participate freely in decisions that affect their environments, live free of dangerous levels of toxic pollution, experience equal protection provided by environmental policies and share the benefits of a prosperous and vibrant pollution-free economy” (25).

The EJA’s current framework and legal requirements are not applied to the Colorado Department of Transportation (CDOT) or Transportation Commission of Colorado. Consideration for transportation planning is also absent from the Colorado Department of Public Health’s (CDPHE) Climate Equity Framework (26). As the transportation sector was the largest source of GHG emissions in the state of Colorado, and as it is responsible for corresponding pollution and other environmental injustices in DICs and other Additionally Impacted Communities (AICs), the framework and legal requirements in the EJA should be expanded to include transportation planning in the state. Without consideration or planning for the impacts of transportation on designated DICs, the EJA will fail to fulfill its vision of environmental justice for all Coloradans.

25. House Bill 21-1266, Colorado General Assembly (2021)
Colorado’s Greenhouse Gas (GHG) Standard for Transportation Planning

The 2021 GHG Standard for Transportation Planning was designed to reduce emissions and air pollution in Colorado’s transportation system, as well as expand travel options for Coloradans. Accordingly, “the GHG Pollution Standard Rule would require CDOT and the state’s five Metropolitan Planning Organizations to determine the total pollution and greenhouse gas emission increase or decrease expected from future transportation projects and take steps to ensure that greenhouse gas emission levels do not exceed set reduction amounts” (27). Mitigation measures are also set for transportation agencies unable to meet GHG reduction targets.

Although not expressed in the current standard, efforts to address transportation inequity and environmental injustices in Colorado would simultaneously decrease GHG emissions. Adding and repairing sidewalks, improving access to efficient and affordable transit options, and developing new transportation projects driven and co-developed by community members will improve safety and reduce transportation-related emissions. Crucially, DICs and disabled residents in all communities must be consulted in the developments of these projects. Future GHG standards for transportation planning should include explicit standards, measurements, and requirements for addressing transportation inequities in the State. GHG mitigation measures must also be driven by community members through authentic and meaningful engagement as outlined in section VII.1.

DICs and Disabled residents in all communities must be consulted in the developments of these projects.
## Measuring Equity

This section provides an overview of commonly used metrics and best practices for measuring equity and incorporating community feedback and qualitative data into project location, selection, and implementation.

### Evaluating Current Inequities

<table>
<thead>
<tr>
<th>Tool and Source</th>
<th>Source</th>
<th>Description</th>
<th>Data/Criteria/Other</th>
</tr>
</thead>
</table>
| Climate Equity Viewer | Colorado Department of Public Health and Environment (CDPHE) | This tool was created by CDPHE in order to help “prioritize engagement efforts and help evaluate potential policy impacts of climate-related decisions in Colorado.”<sup>29</sup> | • Particulate matter (PM2.5)  
• Ozone  
• Lead paint  
• Traffic proximity and volume  
• Diesel Particulate Matter |
| Data Viewer for Disproportionately Impacted Communities in Colorado | Colorado Department of Public Health and Environment (CDPHE) | The data viewer displays disproportionately impacted communities as defined by the Environmental Justice Act (HB21-1266) | • Proximity to National Priority List/Risk Management Plan Sites  
• Wastewater discharge indicator  
• Proximity to hazardous waste  
• Flood  
• Drought  
• Wildfire  
• Asthma  
• Heart disease  
• Low birth weight  
• Population under 5/over 64  
• People of Color  
• Low income  
• Less than HS education  
• Linguistic isolation  
• Population  
• Urban/Rural  
• Oil and gas operations  
• Coal power plants  
• Disproportionately impacted community  
Census block groups where greater than 40% of households are:  
• low income  
• housing cost-burdened  
• Include people of color or identifies as a minority |
<table>
<thead>
<tr>
<th><strong>Climate and Economic Justice Screening Tool (CEJST)</strong></th>
<th><strong>White House Council on Environmental Quality (CEQ)</strong></th>
<th><strong>Mapping Inequality Redlining in New Deal America</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>This Federal tool identifies disadvantaged overburdened by pollution. In addition to meeting environment and climate criteria, populations must also be above the 65th percentile for low income AND 80% or more of adults 15 or older are not enrolled in higher education</td>
<td></td>
<td>This map displays the Home Owners' Loan Corporation (HOLC) scores of different neighborhoods around the United States, highlighting previously redlined communities</td>
</tr>
<tr>
<td>Climate change</td>
<td>At or above the 90th percentile for expected agriculture loss rate OR expected building loss rate OR expected population loss rate</td>
<td>A, B, C, or D &quot;grades&quot; and colors assigned to communities/neighborhoods by HOLC, and the reason for their designation. This map, used in comparison to the other map tools on this chart, displays ongoing discrimination and inequities in Colorado.</td>
</tr>
<tr>
<td>Clean energy and energy efficiency</td>
<td>At or above the 90th percentile for energy burden OR PM2.5 in the air</td>
<td></td>
</tr>
<tr>
<td>Clean transit</td>
<td>At or above the 90th percentile for diesel particulate matter exposure or traffic proximity and volume</td>
<td></td>
</tr>
<tr>
<td>Affordable and sustainable housing</td>
<td>At or above the 90th percentile for lead paint AND median home value is at or less than the 90th percentile OR at or above the 90th percentile for the housing cost burden</td>
<td></td>
</tr>
<tr>
<td>Reduction and remediation of legacy pollution</td>
<td>At or above the 90th percentile for proximity to hazardous waste facilities OR proximity to National Priorities List (NPL) sites OR proximity to Risk Management Plan (RMP) facilities</td>
<td></td>
</tr>
<tr>
<td>Critical clean water and waste infrastructure</td>
<td>At or above the 90th percentile for wastewater discharge</td>
<td></td>
</tr>
<tr>
<td>Health burdens</td>
<td>At or above the 90th percentile for asthma OR diabetes OR heart disease OR low life expectancy</td>
<td></td>
</tr>
<tr>
<td>Training and workforce development</td>
<td>At or above the 90th percentile for low median income as a percentage of area median income OR linguistic isolation OR unemployment OR percent individuals in households at or below 100% Federal poverty level</td>
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</tbody>
</table>
While the quantitative criteria listed above is valuable, these tools must be used in tandem with qualitative data collaboratively informed by and collected with community members. Solely focusing on quantitative data can distort both the perception of environmental issues and their impact on communities (30). Community and Indigenous forms of knowledge must also be included in the identification, assessment, and solutions of environmental and other problems.

29. Transportation-Related Equity Indicators to Improve Mobility and Transportation System Access for Low-Income and Disadvantaged Communities, Caltrans Division of Research, Innovation and System Information (2021).

There are important limitations to the tools above that should be noted. For example, in the CEJST tool, race is absent as an indicator, despite extensive evidence that race is and has been a more accurate and significant indicator of proximity to toxic waste and other environmental pollutants than income or any other factor (31). The CDPHE tools do not account for travel time, vehicle ownership, transit infrastructure, sidewalk quality, safety, or other transportation data when calculating their final “scores.” Furthermore, attempts to quantify or calculate environmental injustices frequently fail to account for the many ways Indigenous people have been undergoing environmental degradation and violence that is different from that of non-native people of color and communities (32).

These tools do not define all areas that may be affected by environmental injustice or specific environmental burdens, incorporate individual health problems and experiences, or include all environmental exposures—no single map or tool can be used in isolation to establish a comprehensive assessment of current inequities. However, these gaps also provide an opportunity to advocate for more comprehensive and accurate methods for assessing equity and environmental justice concerns in Colorado.

Additionally, there are several different analysis methods to evaluate equity as outlined in Caltrans’ “Transportation-Related Equity Indicators to Improve Mobility and Transportation System Access for Low-Income and Disadvantaged Communities” (33). It is important to note that multiple of the following methods should be used when conducting analyses:

- Activity-based
- Geography-based
- Population-based or population-weighted
- Project mapping
- Ridership-based
- Travel demand model
- Use-based


33. *Transportation-Related Equity Indicators to Improve Mobility and Transportation System Access for Low-Income and Disadvantaged Communities*, Caltrans Division of Research, Innovation and System Information (2021)
Evaluating Proposed and In-Progress Projects

In identifying criteria to select and evaluate transportation projects, authentic and meaningful collaboration and engagement with community members must be at the forefront of the project selection process and strategy. The following frameworks offer guidance on evaluating proposed and in-progress transportation projects:

<table>
<thead>
<tr>
<th>Guide/Toolkit</th>
<th>Source</th>
<th>Description</th>
<th>Areas of Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equitable Development Principles &amp; Scorecard</td>
<td>Alliance for Metropolitan Stability, Asian Economic Development Association, Asian Media Access, Aurora St. Anthony Neighborhood Development Corporation, Blake Road Corridor Collaborative, Centro de Trabajadores Unidos en la Lucha Community Stabilization Project, Harrison Neighborhood Association, Heritage Park Neighborhood Association, Jewish Community Action, La Asamblea de Derechos Civiles Lao Assistance Center of MN, Metropolitan Interfaith Council on Affordable Housing, MN Center for Neighborhood Organizing, New American Academy, Nexus Community Partners, Northside Residents Redevelopment Council, Umoja Community Development Corporation. Funded by Headwaters Foundation for Justice and the National Convergence Fund</td>
<td>This document was created as a tool for communities and planners &quot;to ensure that the principles and practices of equitable development, environmental justice, and affordability are applied in all communities as they plan for economic development and wealth creation that benefits everyone.&quot;</td>
<td>• Equitable Community Engagement • Equitable Transportation • Equitable Land Use • Equitable Economic Development • Equitable Housing</td>
</tr>
<tr>
<td>Transportation Equity Toolkit</td>
<td>Prepared by USF Center for Urban Transportation Research for Center for Transportation, Equity, Decisions, and Dollars (CTEDD)</td>
<td>This toolkit was developed to help screen and prioritize transportation projects from an equity lens.</td>
<td>• Access to Opportunity • Health and Environment • Safety and Emergency Evacuation • Affordability • Mobility • Burdens</td>
</tr>
</tbody>
</table>

Please note that although it is not described in this document, the analysis of project outcomes is an iterative process that involves deep community engagement.
Part II - Existing Inequities and Proposed Best Practices
We interviewed several equity/justice groups versed in Colorado transportation issues, to determine what communities and advocates are experiencing as equity and justice concerns in transportation. Additionally, we compiled comments from the public on recent policies and transportation developments to ensure inclusion of even more community voices. We worked with these same groups and resources to understand the solutions communities are seeking to solve existing problems. These findings fell into several broad categories:

**Highlighted Existing Inequities:**
- Highway Placement and Expansion
- Lack of Access to Transit and Mobility Options
- Transit-Induced Gentrification
- Inequities in Electric Vehicles

**Proposed Best Practices:**
- Community-Driven Decision-Making
- Robust and Tailored Protection, Mitigation, and Investment for DICs and AICs
- Minimize or Eliminate Transit Policing
- No More Highway Expansions
- Infilling, Walkable/Rollable Communities, and Community-Centered Land Use Planning
- Investments in Transit within Cities, between Cities, and in Rural Areas
- Accessibility for Community Members with Limited Mobility or Disabilities
- A More Equitable Future with EVs

We have expanded upon these topics and provided historical context where appropriate. None of these solutions are complete or a cure-all, as any process must be informed by community engagement in order to be most effective, equitable, and impactful. However, we hope that these summaries will provide a good starting point off of which to base future engagements and decision-making efforts, and bring to light the greatest concerns of community organizations in Colorado.

**Existing Transportation and Land Use Inequities in Colorado and their Histories**

**Highway Placement and Expansion**

The initial development of the national highway system was rooted in racism and injustice. The Federal Aid Highway Act of 1956, a massive federal investment in the interstate highway system, “...routed some highways directly, and sometimes purposefully, through Black and brown communities. In some instances, the government took homes by eminent domain” (34). Motivation for these decisions can vary. In many cases, low income, Black, and brown communities do not have the resources to fight against imposition of undesirable and harmful government actions in the same way that affluent white communities can, resulting in disproportionate placements in these communities. In other cases, decisions have

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34. *A Brief History Of How Racism Shaped Interstate Highways*, Noel King, NPR (2021)
also been made specifically to target Black and brown communities. The first wave of highway development emerged at the same time as talks of integration (after segregation) emerged; “[white] community members asked the highway builders to create a barrier between their community and encroaching Black communities” (35).

Presently, highways continue to be placed through low income, Black, and brown communities, displacing families from their homes, fracturing neighborhoods, devaluing properties, and imposing significant health burdens from particulates, noise, and other pollutants—all while seeing little to no benefit to these same communities. Air pollution from high-volume road traffic has been linked to “...respiratory conditions like wheezing... decreased lung functioning, and also cardiovascular disease. Long term exposure to related air pollution is linked to childhood asthma” (36).

It is not only existing highways, however, that impose unjust burdens on low income communities and communities of color. Highway expansions are often advertised as modes to significantly decrease traffic congestion. Commuters endure months, if not years, of slow, noisy, and dirty highway construction with the promise of open skies and empty roads pulling them through to the end. However, this hope generally does not reflect reality; newly finished expansive highways become enticing to those who were not previously driving, increasing single-occupancy commutes and car purchases in the area (37). This idea multiplies across populations, and results in a phenomenon known as induced demand, wherein the demand of drivers grows to meet the supply of road space. Induced demand from highway expansions increases traffic, pollutants, and ultimately does not have much positive impact on travel times in the medium to long term (38). The reliable phenomenon of induced demand often means that the immense funding spent on highway expansion is spent in vain—at least, in terms of the intended positive benefits for commuters.

35. A Brief History Of How Racism Shaped Interstate Highways, Noel King, NPR (2021)
36. Transportation and Health, American Public Health Association (2021)
37. Five myths about highways, David Zipper, Washington Post (2021)
38. Five myths about highways, David Zipper, Washington Post (2021)
There has been significant community opposition to several proposed (and ongoing) highway expansions throughout the Front Range and greater Colorado. One recent example was the expansion of I-70 in the Elyria-Swansea and Globeville neighborhoods (39). The initially proposed project displaced 57 residents and 16 businesses, brought more residents into a high impact pollution radius, demolished a playground, and had the potential to contaminate groundwater resources (40). Notably, the populations in these two neighborhoods are predominantly Hispanic/Latinx, face significant linguistic isolation (many predominantly Spanish-speaking households), contain more children and families than other Denver neighborhoods, and the median household income is just over half of the median income in Denver as a whole (41). Despite these significant barriers to political participation, community members and local organizations came together to form the Ditch the Ditch Campaign, advocating firmly against the expansion of I-70. The project broke ground in August 2018, though resistance continued. Local organizations, community members, and the Sierra Club filed an injunction against the project, citing that the project had not considered environmental concerns sufficiently (42). CDOT settled, offering $550,000 to run an independent study on health impacts in the neighborhoods, and despite continued community concern and resistance, construction is ongoing and nearing completion—all for a project that is statistically unlikely to be a long-term solution to the problem it set out to solve in the first place (43, 44).

### Lack of Access to Transit and Mobility Options

#### Transit Options in the Denver Metro Area

Historically, many cities in the U.S. had robust transit systems and substantial usage among diverse populations (45). However, with the dawn of the single-occupancy vehicle and the combined fossil fuel/car lobbies, many of these dense and efficient transit systems got moved out and paved over, making room instead for cars to take over as the primary and default mode of transportation (46). While some cities still have this history built into their land use plans, many cities out West, including the Denver Metro Area, have much more recent expansion and development, meaning that transportation planning and land use design has often centered cars as the primary mode of transportation from the beginning (47).

Neighborhoods in the Denver Metro Area and southern Front Range are often far apart, low-density, and zoned for single- and multi-family homes, meaning that individuals must travel long distances to get to the places where they need to go, such as grocery stores, doctors appointments, work, and schools. There are some exceptions—city and town centers, and the mixed-use developments that immediately surround them, are relatively walkable or accessible by transit. However, these areas are often lacking in sufficient affordable housing, and are therefore limited to higher-income individuals, or plagued with insufficiently maintained infrastructure (48, 49).

39. Ditch the ditch: Citizens respond to I-70 expansion, Bren Crowther (2019)
40. Ditch the ditch: Citizens respond to I-70 expansion, Bren Crowther (2019)
41. Demographics and Health in Globeville and Elyria Swansea Today, City of Denver
42. It’s not too late to kill I-70 Project, Expert Says, Michael Roberts, Westword (2019)
43. Ditch the ditch: Citizens respond to I-70 expansion, Bren Crowther (2019)
44. Central 70 Project, Colorado Department of Transportation (2022)
46. The real story behind the demise of America’s once-mighty streetcars, Joseph Stromberg, Vox (2015)
48. As housing costs soar, Colorado leaders will push cities to get denser, Alex Burness, Denver Post (2021)
49. Where the sidewalk ends: Denverite turns to TikTok to spotlight precarious pedestrian walkways, Elizabeth Hernandez, Denver Post (2021)
This sprawl leads to difficulties on all sides. Underfunded transportation services must travel long distances, follow inconveniently planned roads, and bridge the gap between geographic equity and usable dense networks. Community members face difficulties too; cars are expensive and deteriorating assets, transit is often insufficient either in range or in frequency, and sidewalk/path/bike infrastructure is often lacking or insufficiently maintained. “On average, low-income households spend 37% of their income on transportation, almost twice the percentage of middle-income households” (50). When considering the losses in revenue and ridership faced by RTD due to the COVID-19 pandemic, it can become difficult to see a way to meet community transportation needs (51). However, up-front transit investment, long term in-filling, strategic land use planning, and community consultation strategies (all outlined in section VII), can help improve outcomes and target areas of highest need first.

**Intercity Transit**

Colorado is a very expansive state, with population hubs spreading out increasingly far beyond the Denver Metro Area and surrounding cities. Beyond the limited services of the Bustang and Bustang Outrider that have been growing since 2015, community members are largely limited to movement inside of their towns if they do not have access to a car. Additionally, many Bustang routes only go in and out of town once or twice per day, meaning that if residents miss their bus, they must arrange for expensive alternative transportation or find somewhere to stay for the night. This high risk is a likely deterrent to transit ridership, leading to low usage which, on the surface, may seem like grounds to discontinue the service altogether. However, key principles of increasing transit ridership require that rides be frequent in both directions, in order for the service to feel like a viable option to the average transit user.

Even within the Front Range, it can be difficult to get from city to city, particularly outside of peak commuting hours. A drive from Boulder to Fort Collins takes 1-1.5 hours. If one does not have a car, transit takes between 1.75-3 hours if traveling from downtown center to downtown center. Traveling from a home in North Boulder to a doctor or office in East Fort Collins may add an additional hour overall. On weekends, one is lucky if they can even make it to Fort Collins at all, with only one direct bus trip in the evening. Transit options like these are unfortunately unreliable and unviable for people needing to travel long distances regularly. As home values and rent prices continue to increase dramatically, many Coloradans are being pushed further and further from the cities where they work, learn, and receive essential services. This pattern is causing more people to rely on privately-owned vehicles to commute, as there are little to no viable alternatives to driving. This places an additional financial burden on Coloradans, while also taking the state further from our emissions and decreased VMT goals.

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51. *Special report: RTD faces a future clouded by new commuting patterns, staff shortages and big questions about service*, John Murray, Denver Post (2022)
We recognize that balancing geographic distribution with maximum impact and limited funding can lead to significant challenges. However, we must acknowledge that in terms of human behavior, infrequent service (52) and long/unreliable travel times (53) lead to low ridership, and not the other way around.

**Rural Transit**

Currently, a majority of local rural transit access is limited to wealthy resort towns and their surrounding areas. For example, the Summit County Stage is one of the most robust rural transit networks in the country, serving several towns and resorts on 11 different routes (54). Summit County is also one of the largest draws of tourism and recreation in the state (only second to Denver County) (55), with travelers arriving from across the world to ski snowy winters and golf their way through summer. In contrast, Alamosa County (about half of Summit County’s population, 16,000 vs 31,000), has no local bus routes, and is only serviced by one Bustang Route that connects to Pueblo.

A review of the transit in tourism towns, however, shows that transit service largely caters to the needs of tourists (and the workers that service them), but does not support those same workers and other residents in accessing key places like doctors’ offices, affordable grocery stores, or other similar essential destinations. Instead, these services prioritize hubs of rental housing, hotels, city downtowns, and ski/golf resorts themselves, demonstrating that local planning authorities prioritize accessibility for tourism over accessibility and basic needs for the workers and the permanent community. It is clear that planners also recognize the importance of transit to maintaining a robust economy in their communities, but that tourists are prioritized over residents in support of that economic movement.

**Transit-Induced Gentrification**

Unfortunately, improvements in transit infrastructure and mobility can come with a heavy price for communities, too. When new transportation infrastructure is developed, property values and interest in neighborhoods increases dramatically, resulting in gentrification (56). Most residents that live in low-income communities are renters, so when rent rises along with property values, they are unable to afford to easily access the transportation amenities that were originally designed for them. As a result, communities of color and low-income communities sometimes advocate against mobility improvement projects, particularly if they are not accompanied by a plan to maintain housing affordability and center community. The Colorado Housing Affordability Project’s State of Colorado Housing Report lists effective strategies to mitigate displacement, including inclusionary zoning and deed-restricted housing products, asset building for low income current residents, sweat equity and land trust ownership models, resident preference policies or first rights for new affordable units, affirmative marketing requirements of developers, eviction mediation and prevention, and property tax exemptions for older adults, residents with disabilities, and low income households (57).

The development of transit infrastructure must be paired with community-informed processes and affordable housing protections, rent caps, and other policy mechanisms that ensure that current residents are not priced out of their communities.

52. Cross-Elasticities in Frequencies and Ridership for Urban Local Routes, Joseph C. Totten and David M. Levinson, Ph.D., University of Minnesota–Twin Cities (2016)
53. Transit Ridership, Reliability, and Retention, State of Florida Department of Transportation (2008)
54. Summer 2022 Bus Schedule, Summit County (2022)
57. State of Colorado Housing Research, Colorado Housing Affordability Project (2021)
Electric Vehicles

While EVs may offer some alleviation from the air pollution coming from the streets and highways, alone they cannot remedy the structural inequities that plague Colorado's transportation system, as they do not address congestion, road/highway expansion, road safety, or lack of access to reliable, efficient, and affordable public transportation (58). An electrified fleet and expanded accessibility to EVs will not reduce the number of single-occupancy vehicles on the road; instead, rapid growth of EV adoption may even exacerbate the current problem as increased car usage and demand for road space follows (59).

Transitioning to EVs, while a good way to combat carbon emissions in the existing system, unfortunately also leads to environmental destruction, state violence, and human rights violations due to sourcing mineral resources for the electric wiring, rechargeable and lithium-ion batteries, and electric motors of hybrid and electric vehicles (60, 61). For example, copper is used in much larger quantities in hybrid vehicles than in conventional vehicles. Copper mines, as some of the most environmentally destructive on the planet, produce hundreds of thousands of tons of waste daily. Community members protesting or resisting these mines in Indonesia, Peru, the Democratic Republic of Congo, Ecuador, and elsewhere have been met with military violence, extrajudicial killings, criminalization, and other human rights abuses (62). The majority of lithium, increasingly in demand because of its use in EV batteries, is mined from what has been dubbed the “Lithium Triangle” in Chile, Argentina, and Bolivia. As a result of these mines, the surrounding communities have been exploited for their resources, their land and air contaminated with toxic chemicals, and their limited water supply largely consumed by lithium extraction processes (63). Furthermore, “a full accounting of the costs associated with the widespread production of hybrid vehicles must acknowledge...that it would require large quantities of specific mineral resources that may increase rates of environmental destruction and military violence experienced by individuals living near existing or future mines” (64). Unless we find a way to source the materials and minerals required for an electric/hybrid fleet sustainably, ethically, and at pace with the current growth and demand rate, then full fleet electrification is not a viable or equitable solution to Colorado’s transportation and climate challenges.

Other factors contributing to EV inequity are the high cost and limited access to charging stations. EVs can be expensive to purchase, so the benefits of saving on gas are only left to those who can afford them. Furthermore, in Colorado, many EV owners rely on privately owned charging stations in single-family homes, with charging stations in well-lit locations close to apartments or rental properties few and far between (65). Home ownership and wealth should not be prerequisites to benefit from what EVs can offer and Colorado must work to make both EVs and changing stations more accessible.

63. The Lithium Triangle: Where Chile, Argentina, and Bolivia Meet, Samar Ahmad, Harvard International Review (2020)
65. In Colorado, electric cars are mostly for rich people, Sam Brasch, Colorado Public Radio (2021)
Community-Driven Decision-Making

Historically, decisions been made through top-down processes with limited, superficial, or non-existent public engagement and input. Even when there are public engagement processes in place, there are several barriers that prevent community members from being able to provide feedback. When decisions are made, community members are often left wondering if and how their input was taken into consideration. These practices have led to an inequitable and unjust distribution of transportation benefits and negative impacts. Community engagement cannot be treated as a box-checking exercise, but instead should be viewed as essential to equitable and successful transportation outcomes. The folks with lived experience navigating broken transportation systems can often provide the most insight into how to repair the system, and the process of moving towards transportation equity and justice in Colorado begins with how decisions are made. Outlined are several best practices to help drive community-centered decision-making:

Vision for Transportation Equity in Colorado

Accessible Listening Sessions and Meetings

- Offer multiple times and ways to attend meetings and provide comments. Public hearings and meetings often happen during the work day (9:00am-5:00pm). This requires community members to take (unpaid) time away from their jobs to attend, which may not be possible, particularly for low-wage, hourly workers. If a meeting is at a physical location, recording and posting the meeting (in a timely manner) for community members who cannot attend improves access. Holding meetings outside of standard work hours offers flexibility to those who are unavailable during the day.
- Locate meetings in the communities that are Disproportionately or Additionally Impacted and/or within the community that a proposed project is taking place. If meeting locations are inaccessible by public transportation and/or far from the project site, it is not only inconvenient, but difficult and potentially expensive for community members, particularly those without cars, to attend. If meetings are located in easily accessible areas close to communities, public engagement increases.
Offer opportunities to submit comments and feedback virtually and outside of the designated meeting time(s). For community members who are unable to attend meetings during the designated time, offer options to give feedback virtually or over the phone, with a comment period that extends beyond the physical meeting time. If meetings are virtual, be sure to include live captioning.

Offer opportunities to submit comments and feedback at different locations and outside of the designated meeting time(s). In Colorado, there are still 5.1% of households without access to a computer and 10.4% of households without access to broadband internet connection, and these percentages exclude unhoused community members (66). Setting up “drop boxes” with paper and pens at popular community locations (public libraries, community centers, transit hubs, schools/universities etc.) ensures that community members without internet or computer access are still able to participate in these processes.

Offer and make clear translation and interpretation services. Even if community members take the time and effort to come to the meeting location, there is no guarantee that the meeting will be accessible to them due to language or ability barriers. Ensure and advertise that appropriate translation and interpretation services are available. Additionally, clarifying the processes to request translation or interpretation services increases accessibility.

Make sure the location is ADA accessible. If possible, share pictures and detailed descriptions of the meeting location and available accommodations so that community members can effectively gauge the level of accessibility of the meeting space and determine if additional accommodations and support are needed.

Advertise meetings and listening sessions broadly. The more people know about a meeting, the more people will attend. Advertise meetings on various social media platforms (Twitter, Instagram, Facebook, TikTok etc.) and community locations (schools, post offices, libraries, community centers, parks, farmers markets etc.), in addition to government websites. Include accessibility, translation, and interpretation information on all advertising materials.

Additional resources and tips for enhancing equitable community participation at public meetings can be found in the Environmental Protection Agency’s (EPA) Public Participation Guide.

Co-Develop Projects and Plans with the Communities and Residents Most Impacted

Principle Seven of the 17 Principles of Environmental Justice declares that “Environmental Justice demands the right to participate as equal partners at every level of decision-making, including needs assessment, planning, implementation, enforcement and evaluation” (67). Community members who regularly rely on public transportation, including low-income people of color, disabled people, and non-drivers, often have the most insight into the shortcomings and solutions to our transportation system, yet are first to be overlooked and systematically excluded from transportation decision-making processes.

Current community engagement and feedback processes are often top-down, with transportation agencies and organizations first offering prescriptive solutions to communities and then asking them for input. There are also various ways of knowing, like Indigenous and community-based knowledge, that are often disregarded (68).

66. Colorado Quick Facts, U.S. Census Bureau (2021)
67. The Principles of Environmental Justice, EJNet
When done prescriptively, community involvement and enthusiasm is lower and the project may inadvertently perpetuate existing inequities and injustices. Much like the 50th St Complete Streets and Gathering Place Project in San Diego, California, plans that aim to solve transportation inequities must be co-developed with the communities most impacted.

*Increase transparency on decision-making processes & outcomes of public input/comments*

Increasing transparency on decision-making processes and outcomes of public comments is essential to remedying current and historic environmental inequities and injustices. Increased transparency can help foster trust between the agency and the community, and the agency is held accountable to the community for its decisions.

If a community is sited for a transportation project or investment, it should be made clear to community members what criteria was used to determine their selection. After community engagement and feedback processes, there should be communication to community members conveying how their input is being incorporated into the current plan/project. If a significant concern or feedback is not addressed or incorporated into the plan/project, community members should be provided an explanation detailing the reasons for its exclusion.

*Provide compensation for participation*

It is important to acknowledge that for many community members, basic needs such as access to food, housing, childcare, and other immediate needs take precedence over their desire and capacity to participate in public engagement. Additionally, community members provide their feedback, only to often be ignored by a decision-making body. Because of patterns of dismissive behavior towards DICs, communities of color, immigrant communities, Indigenous communities, and other marginalized communities, many of these community members are rightfully hesitant and skeptical about engaging with government officials and decision-making bodies (69). As public engagement requires time, resources, and at times, emotional labor, particularly if decision-making bodies are asking for continuous feedback, participants should be compensated accordingly via stipends or other forms of monetary compensation. To both show communities that their input is valued and to acknowledge the time and labor they are dedicating, compensation is essential.

Robust and Tailored Protection, Mitigation, & Investment for DICs and AICs

The protections for disproportionately and additionally impacted communities are currently insufficient. In a public comment of proposed revisions to 2 CCR 601-22, rules governing statewide transportation planning process and transportation planning regions, EarthJustice, (representing the Elyria and Swansea Neighborhood Association and GreenLatinos), argued that "communities living w/i 5,000 ft of a roadway that carries more than 30,000 vehicles/day need additional protections and should be prioritized for benefits" (70). More efforts should focus on reducing traffic and VMT to meet GHG, particulate, and other pollutant reduction goals.

Approximately 40% of Coloradans live in Disproportionately Impacted Communities (DICs). In alignment with the Justice 40 initiative, at least 40% of investments and funding under Mitigation Action Plans should be funneled to DICs. Governments should engage with community members early in the mitigation process before the project has been designed and funded to ensure that projects are both desired by and beneficial to communities. Any mitigation actions taken should also be unique to and informed by the communities and their specific needs. Universal, one-size-fits-all solutions are both inappropriate and insufficient to address the varying types of transportation and pollution disparities across the state. For example, adding a bike lane that runs along I-70 or I-270 does not adequately address the vast amounts of air, construction and other pollution impacting the surrounding neighborhoods.

Lastly, knowledge is not static, and environmental conditions are ever-changing. Unfortunately, for communities regularly exposed to environmental hazards and toxins, the conditions of consent and impacts of an existing problem or action may rapidly change without their knowledge (71). Therefore, protection for DICs and AICs includes the right to free, prior, and informed consent to the fullest extent possible for proposed and ongoing transportation projects. This means that communities are regularly informed about the transportation projects in their communities and have ongoing opportunities to consent to environmental pollution.

Minimize or Eliminate Transit Policing

Safety is a key component to a successful transportation system. In order to increase ridership, transit riders must feel safe from the beginning of their journey until they reach their destination. Heavy policing significantly decreases safety for many riders on public transportation, which ironically is what many transit agencies rely on to improve safety. Black, Brown, and Indigenous people have faced disproportionate and undue amounts of violence at the hands of the police, including while aboard buses and trains (72). Rather than increasing either the reality or perception of safety, increased policing places Black, Brown, and Indigenous transit users at a higher risk for harm and discourages ridership. “Law enforcement strategies like broken windows that target low level offenses in public spaces such as subways and buses or that criminalize poverty like fare evasion and homelessness reinforce and operationalize racist assumptions of criminality among Black people, people of color, and low-income people” (73). Alternatively, agencies can focus on other alternative safety mechanisms, like unarmed customer and social workers, to address transit safety without endangering and criminalizing Black, Brown, Indigenous, and low-income riders.

72. Report: To Make Transit Safe, Rethink Transit Cops, Kea Wilson, StreetsBlog USA (2021)
73. Safety For All, Transit Center (2021)
No More Highway Expansions

Not only do highway expansions further threaten and compound harm on already overburdened communities, they also fail to fix congestion or reduce vehicle miles traveled (VMT). The locations chosen for highway expansions are almost exclusively in DICs, and like with the tree-lined boulevard proposed by Unite North Metro Denver in response to the expansion of I-70, community-suggested alternatives are often dismissed (74). For many reasons that we have outlined previously, neither the drivers on the highways nor the communities surrounding benefit from an expansion long-term, yet governments continue to invest in these expensive and harmful projects.

Instead of spending money on highway expansions, funding should be directed towards projects that make our communities clean, safe, accessible and connected to transit. To achieve an equitable and sustainable transportation future, highway expansions must stop. Colorado can look to California’s Assembly Bill 1778, which, if signed into law, would block highway expansions that run through environmental justice communities (75).

Infilling, Walkable/Rollable Communities, and Community-Centered Land Use Planning

Transportation and land use planning go hand-in-hand. While not an explicit recommendation for transportation planning, increasing density and zoning diversity concurrently with access to transit frequently leads to decreased VMTs (76) and in turn, decreased emissions and pollutants. Notable effective infill strategies include increasing employment density and residential density, and decreasing block size (77). Additionally, concurrently developing/improving infrastructure for accessible active transportation can increase community vitality and economic growth in these target areas.

Many of these recommendations make sense logically; bringing in more businesses and services to residential areas, and vice versa, decreases the distances that residents must travel to reach the places they need to go. Adding accessible, safe, and low-stress space for walking, rolling, and biking, becomes more feasible as travel to areas increases, and adding new businesses and attractions increases demand on transit systems that currently have to bridge long distances to move people between destinations.

74. Ditch the ditch: Citizens respond to I-70 expansion, Bren Crowther (2019)
75. CA Bill Would Outlaw Freeway Expansions through Environmental Justice Communities, Melanie Curry, StreetsBlog CAL (2022)
As an additional benefit, re-zoning single family occupancy areas for multi-unit developments and business adds housing supply, ideally mitigating financial strain for families that are currently struggling to afford rent or mortgages. These recommendations come at the risk of gentrification; it is important that any development is done with community engagement and strategies for maintaining housing affordability, such as minimum mandatory affordable housing, regional annual rent increase limits, assistance in first-time home purchasing, and other effective strategies (78).

Additionally, we recommend incorporating Equitable Transit-Oriented Development (eTOD) where possible. At its core, eTOD is affordable, high-density housing near high-frequency transit stations, with low unit-to-parking ratios. eTOD is an effective approach to meet climate, air quality, and equity goals, as it allows low-income homes to live with access to transportation, and maximizes land use that might typically be used for parking alone (79). Additionally, eTOD allows greater density in high-traffic areas, and significantly decreases transportation expenses for low-income households (80). RTD recently adopted an eTOD policy, which is an excellent start in the right direction (81). We hope to see expanded eTOD prevalence both in the Denver Metro Area and throughout Colorado.

**Investments in Transit Options within Cities, between Cities, and in Rural Areas**

**Within and Between Cities**

The impacts of COVID-19 cannot be ignored, as people continue to use transit at lower levels than before the pandemic hit. Service levels have not returned to pre-2020 levels. Certain routes are being discontinued permanently after suspension of services in 2020, as part of RTD’s System Optimization Plan; for example, Boulder Junction, a neighborhood designed entirely around connections to RTD, will see only one of five routes fully restored. Overall, systems will only be restored to 85% of pre-pandemic capacity, with some towns seeing less (82).

Changes and cuts to service impact those with language barriers and low incomes first; a commuter with access to a car or high English literacy may be able to quickly adjust to a drastically changed or cut route, but someone without those same resources might face significant difficulty in adjusting. Modifications will likely lead to ridership confusion and isolation in areas where services are significantly impacted, potentially causing a domino effect of continued decreases in ridership, and therefore revenue and political support for these routes. We encourage CDOT, RTD, and related agencies to pursue additional funding or re-allocate funding slated for less equitable projects to invest in a transit revitalization that meets and exceeds service levels seen before COVID-19, especially as funds from Congress and the Biden Administration arrive for infrastructure. Only with exceptional service that feels like a comparable alternative to driving in terms of time and convenience (83) will we be able to see comprehensive and lasting changes in ridership behavior and decreases in VMT.

The currently proposed bill to provide fare-free transit in Denver “for at least 30 days during ozone season” is an excellent step in the right direction (84). This proposed fare lift will not only promote increased transit usage to limit smog generated by SOVs, but will also make transit more accessible. Individuals who

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78. *Gentrification doesn’t have to force minority residents out of their homes*, Mariette Williams, Business Insider (2020)
80. *What Rising Gas and Rent Prices Mean for Families with Low Incomes*, Yonah Freemark, Urban Institute (2022)
82. *Big changes coming to Boulder’s bus routes*, Shay Castle, Boulder Beat (2022)
84. *Programs To Reduce Ozone Through Increased Transit*, Colorado General Assembly (2022)
are usually limited in travel by cost, physical ability, and/or health, will have affordable access to jobs, schools, medical care centers, and other key destinations (85). Initiatives like these, while sometimes expensive and logistically intensive up front, are precisely the types of action we will need to take regularly across the state to improve equity in transit, mitigate emission and pollution, and build resilience and vitality in communities.

**Rural Transit**

Coloradans deserve accessible intra- and inter-city transit regardless of where they live. While we recognize that rural transit will not be as robust as urban areas due to density and population, certain investments in transit routes and frequencies can have meaningful and high impacts for residents. For example, adding one or two additional Bustang trips to a rural town per day would increase rider confidence in being able to reach their destinations without being stranded overnight. Additionally, updating routes in high-tourism areas to include residential areas, offices, and shopping centers more frequently used by residents and seasonal workers, rather than tourists, could dramatically help those who need to reach every-day destinations, all while decreasing congestion for those who can’t get where they need to on a bus.

**Accessibility for Community Members with Limited Mobility or Disabilities**

It is important that any investments in sidewalks, paths, transit vehicles, and other related services be designed with accessibility in mind. Even if 99% of a journey is accessible and ADA compliant, something as small as an incomplete sidewalk or steep curb can prevent community members from reaching a destination. This is also important when placing amenities for rest or transition between modes of transportation. For example, sidewalks that narrow in front of benches at a bus stop may make those benches inaccessible to those who would benefit from them most.

Many cities are experimenting with new designs in hopes that they will be more accessible to those with mobility needs; however, novel designs can become a challenge for those with limited or no vision to navigate with ease, so these changes must be designed with care, and with sufficient consultation with disabled community members. Small improvements like bright paint colors or longer walk/roll signals can change an intersection from a point of stress to an easily navigable experience. When we design with inclusivity for those who need the most support, we guarantee that everyone using a space will benefit and feel comfort, regardless of their own ability levels.

Other considerations that may not be related specifically to transit, but are important in supporting mobility for people of all ages and abilities, include increased availability of benches, shade, and free and accessible public restrooms. In cold seasons, consistent snow clearing and ice maintenance can be the difference between someone safely completing a trip, or getting stuck and seriously hurt.

85. Commentary: Rolling Out The Red Carpet For Transit, Matt Frommer, StreetsBlog Denver (2021)
A More Equitable Future with Electric Vehicles

We recognize that incorporating any or all of the above recommendations will take significant financial and labor investments, along with intense construction. In the interim, many trips throughout Colorado are difficult or impossible using currently available transit options or active transportation alone, and meeting GHG reductions goals will require additional support from other sources. As such, many governments are encouraging the expansion of EVs, both in transit/industrial fleets as well as in privately owned vehicles (POVs), especially as the electrical grid becomes significantly less emissive over time (86). Additionally, the upfront cost of an EV is expected to reach price parity with a comparable gas car by 2024 and get cheaper from there. With today’s gas prices, EVs can save drivers almost $2,000 per year in fuel costs - a huge benefit for low-income households who spend almost a 3rd of their income on transportation expenses.

Electrification of vehicles has positive impacts on communities where those vehicles are driven; electric vehicles are quieter, less polluting, less emissive, and generally less costly to maintain overtime than their gas- or diesel-fueled counterparts. Improvements to air quality from vehicle electrification, particularly in heavy traffic areas like highways and industrial parks, can substantially mitigate the impacts of pollutants on community health. In turn, it is important that the benefits of electrification are not lost on DICs and AICs. When developing charging infrastructure, these communities must be prioritized as highly as any other community. Additionally, buying assistance programs for POVs should specifically target assisting low-income households in the purchase of EVs and be more accessible, and should be driven by community need. For example, programs could provide instant rebates, subsidies, or bulk-buy rates, rather than tax credits or longer term rebates that require more cash up-front.

Finally, we advise that more resources are directed to electrification of buses and other transit vehicles that will decrease demand for POVs. While an important piece of the solution, relying on POV electrification alone will be insufficient to meet targets; at current rates of private fleet turnover (~6%/year) and anticipated levels of statewide population growth (+750,000 by 2030), the conversion rate will not happen quickly enough to meet current GHG reduction targets. Therefore, it is important that Colorado significantly and equitably expands electric transit infrastructure, to ensure that we support a transition away from widespread reliance on POVs.

86. Colorado State Profile Overview, U.S. Energy Information Administration (2022)
Conclusion

Colorado is a rapidly growing state that will require significant investments and infrastructure development over the coming years in order to maintain sufficient transportation for residents. Currently, issues like highway placement/expansions, lack of transit and mobility options, gentrification, single-track focus on electrification, and more are leading to increasing inequity and injustice in communities, which disproportionately impact Coloradans of Color and low-income Coloradans. If unaddressed, existing inequities will only continue to amplify as the population of the state grows at projected rates, and as increased pollutants and extreme climate events continue to increasingly impact communities across the state.

It is important that any new projects going forward are developed with community input and with consideration for impacts on residents, particularly when working in or near DICs and AICs, in order to prevent continued disproportionately large burdens on these communities. Projects must also be prioritized intentionally and carefully, prioritizing aid and improvements for DICs and AICs, infilling and equitable development in high-sprawl communities, investments in intra- and intercity transit, rural transit, and avoiding highway expansions or investments that maintain the status quo.

Acknowledgements

We recognize that the state of Colorado rests upon the traditional and ancestral homelands of the Apache, Arapaho, Cheyenne, Pueblo, Shoshone, and Ute Nations and Peoples (87). We further recognize that this land was a site for trade, gathering, and healing for 48+ other Native tribes. Please go to native-land.ca to learn more about whose land you are on.

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87. Native American Tribes of Colorado, Colorado Department of Education