# Table of Contents

1. Introduction .................................................................................................................. 1
2. Background .................................................................................................................... 1
   2.1 Charlottesville Area Transit (CAT) ........................................................................ 1
   2.2 Transportation Equity ............................................................................................ 1
   2.3 Affordable Housing and Zoning Practices ............................................................ 2
   2.4 Transportation and Climate .................................................................................. 2
   2.5 Benefits of Transit Investment .............................................................................. 3
   2.6 Electrifying Transit ............................................................................................... 3
3. Community Surveys ...................................................................................................... 4
4. Focus Groups and T&E Survey’s Open-Ended Questions ............................................. 8
5. Scenario Analysis .......................................................................................................... 8
   5.1 Reminder of Bus-occupancy Levels and Battery Electric Buses ......................... 10
6. Recommendations ......................................................................................................... 10
7. Conclusion .................................................................................................................... 12
8. Bibliography ................................................................................................................ 13

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1 Introduction

Transportation is central in everyday life, connecting us to essential services, economic opportunity, recreation, and each other. The quality of transportation infrastructure significantly impacts the quality of our lives: our ability to care for ourselves, provide for our families, and achieve our goals. However, transportation is also the leading source of carbon emissions, both in our community and in Virginia as a whole. An improved transit system is an effective method to reduce vehicle emissions and address climate change.

C3’s Transit Equity and Climate: Moving to a Cleaner Future was developed in conjunction with a community survey and focus groups to aggregate and amplify community members’ experiences with Charlottesville Area Transit (CAT). The report also includes a revision of literature on improving transit services, a cost-benefit analysis of deploying battery electric buses (BEBs), and a scenario analysis illustrating the benefits of growing ridership and improving equity in Charlottesville’s public transit system. Among the report’s guiding principles were:

- Access to affordable and convenient transportation should be considered a right.
- Inequitable transportation burden creates a structural barrier to putting food on the table, economic mobility, and building financial stability and generational wealth.
- Car-centric planning produces higher emissions of air and climate pollutants.
- CAT has a unique opportunity in 2021 to make transit permanently free, reconfigure its service to serve those that need it most, and lay out a plan for cleaning its bus fleet.

2 Background

2.1 Charlottesville Area Transit (CAT)

The City of Charlottesville operates Charlottesville Area Transit (CAT), which is the largest transit agency in its metropolitan area. CAT’s Free Trolley and Route 7 have consistently been the agency’s most utilized routes, accounting together for 57% to 65% of CAT’s total ridership for the years between 2015 and 2019. The Free Trolley connects UVA to the Downtown Mall while Route 7 connects Fashion Square Mall to the Downtown Mall. Similar to many small transit systems around the country, CAT’s ridership has been declining steadily (about -7% per year since 2015).

2.2 Transportation Equity

In transportation, equity analysis considers the fairness of how the benefits and costs are distributed across society. The main benefits of transportation are access to essential services, economic opportunity, recreation, and community.
We achieve equitable transportation when all community members have options that are reasonably convenient, affordable, and safe. Therefore, our transportation system can become more equitable by better addressing:

- **Transportation energy burden.** Transportation is the second highest expense for U.S. households after housing-related expenses (BTS, 2019).

- **Car-centric planning.** Transportation energy burden is exacerbated by planning that focuses disproportionately on accommodating privately-owned vehicles.

- **Under-investment in public transit.** Lack of funding for public transit has created a major disparity within the transit systems, leaving underserved communities without reliable access to transportation (Climate Justice Alliance, 2020).

- **Air pollution.** Transportation contributes to pollution that causes 3,600 hospitalizations and 3,000 premature deaths in Virginia annually (EF & VCCA, 2020).

- **Racial history of transportation planning.** Transportation infrastructure planning has been used as a mechanism to marginalize communities of color (CLIHC, 2020).

### 2.3 Affordable Housing and Zoning Practices

A network of factors shapes housing access in Charlottesville, including affordability and zoning practices. Land closer to employment centers, transit, and amenities is often more expensive, pushing affordable housing sites to the outskirts of the communities and forcing residents to use cars or walk long distances to public transit. Planning for affordable housing and transit should be developed and reviewed together.

### 2.4 Transportation and Climate

Climate change is the greatest threat the human race has ever faced. To avoid the worst effects of climate change, we need to limit global warming to 1.5°C, which means cutting emissions by at least 50% by 2030 and reaching net zero emissions by 2050 (IPCC, 2019). Currently, transportation is the number one source of GHG emissions in the United States, accounting for 29% of total GHG emissions in 2019 (EPA, 2021). For Albemarle County, transportation represents a massive 52% of the community-wide GHG emissions for the year of 2018 (Albemarle County, 2021). In 2016, transportation accounted for 28% of Charlottesville’s greenhouse gas emissions, with personal cars and SUVs making up the vast majority of those emissions (EPA, 2018; Watson, 2019; Lewis, 2020).

Well-designed transit systems can significantly reduce transportation emissions by aggregating travel demand from many, often single-occupancy, vehicles’ trips into a single bus (see Section 5 “Scenario Analysis”). Increased reliance on transit can also prevent the need for new road infrastructure and parking, which takes up valuable land, decreases density, and has emissions implications of its own. The benefits of using public transit to displace car-based trips are especially potent if transit vehicles are powered with cleaner fuels (e.g., electricity), as analyzed in Section 2.6 “Electrifying Transit.”
2.5 Benefits of Transit Investment

A well-designed and affordable transit system is critical to achieving equitable access for all. On top of that, transit delivers a wide array of benefits:

- **Transit investments double direct economic benefits.** Every dollar invested into transit generates $2.17 in direct benefits and $2.91 in economic activity (DRPT, 2019).
- **Transit delivers jobs.** Transit investments create or enhance jobs by allowing for more options for people to go to work (DRPT, 2019).
- **Transit investments pay for themselves in reduced congestion.** Transit delivers sustained congestion relief, whereas new roadway results in induced demand for travel that eventually leads to more congestion (Anderson, 2013).
- **Transit improves access to essential services.** Transit can increase economic opportunity, access to education, employment, and essential services (VTPI, 2020).
- **Transit is an affordable mobility option to low-income communities.** Many households spend more on transportation than what is affordable, particularly lower income households in automobile-dependent areas.
- **Transit saves lives.** Robust transit systems save lives by providing an alternative for high-risk users and by promoting safer traffic speeds (Hughes-Cromwick, 2019).

Despite the well-established benefits of public transit, conventional transportation planning tends to focus on a limited set of impacts that usually do not include detailed analyses of equity impacts, indirect environmental impacts, or other impacts such as parking costs (Litman, 2020). This results in transportation plans failing to incorporate all the expected benefits of a cleaner and more equitable public transit system. These omissions might result in an undervaluation of transit improvements with equitable and environmental focus and favor project designs that do not properly optimize for these benefit categories.

2.6 Electrifying Transit

Transit can be an important solution to reducing emissions from the transportation sector. However, diesel buses that are operated consistently at low occupancy may actually produce more GHG emissions per passenger-mile of travel than a modern light-duty vehicle (LDV). **Bus occupancy is therefore a critical factor in reducing emissions through transit** (see Section 5 “Scenario Analysis”). One way to guarantee that buses deliver significant GHG emission reductions—and operational savings—is to choose BEBs over diesel buses.

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1 A report produced for C3 and the City of Charlottesville assessed the potential of three alternative strategies for mitigating the GHG emissions of the transportation sector in the City: #1 “Let Present Trends Continue;” #2 “Advance Personal Electric Vehicle Use and Charging Infrastructure;” #3 “Shift City Transit Bus Fleet To Electric Power.” The report concluded that strategy #3 would be the best alternative (Watson, 2019).
While adoption of BEBs is still in the early stages, the data is clear—BEBs are cheaper over the life of the bus and its deployment can offer other benefits: ²

- **Fuel Costs.** Because utility rate structures are typically less volatile than diesel prices, agencies enjoy more predictable fuel costs, making financial planning easier.

- **Fuel Economy.** BEBs are 4x more efficient than diesel buses (Aamodt, et al., 2021).

- **Maintenance.** BEBs are more than 20% cheaper to maintain and operate than diesel buses (Johnson, et al., 2020).

- **Performance.** BEBs run more smoothly and quietly.

- **Emissions.** BEBs emit zero tailpipe emissions, and are as clean as its electricity source, reducing local air pollution (CO₂, NOₓ, HC, PM) in dense urban areas.

- **Environmental Justice:** Disadvantaged individuals are more likely to be exposed to traffic emissions and suffer from the negative health effects from conventional vehicles (CUB, 2020; Pinto de Moura & Reichmuth, 2019).

However, it is worth mentioning a few of possible barriers to BEB deployment:

- **Economic Challenges:** Higher upfront cost of BEBs and new charging infrastructure.

- **Planning Burden:** Planning is more complex than for diesel bus deployment.

- **Operating Range:** The distance a BEB can travel before refueling is shorter.

- **Unfamiliarity:** BEBs technology is in an early enough stage of deployment that there is not yet a proven understanding of BEBs' lifespan.

Our analysis shows how purchasing four BEBs is a better long-term investment than purchasing four diesel buses. It details that, over a life-time of 12 years, buying and operating four diesel buses would be 22% more expensive than buying and operating four BEBs; or even, to put it simply, the lifecycle expenses of three diesel buses would be high enough to justify the acquisition of four BEBs at no extra cost.

### 3 Community Surveys

One of our objectives in this project is to aggregate and amplify the voice of the people of Charlottesville and Albemarle and allow their experience with local transit to inform our research and recommendations. To that end, in late February 2021, we distributed a community survey which received 265 responses (from a wide variety of demographics) and gathered information about individuals' perspectives on the region’s transit service and their habits under “pre-COVID circumstances.”

² For a detailed overview of the benefits and costs of BEBs deployment, as well as practical guidelines for deployment, we refer you to NREL (2021), which is available at [https://www.nrel.gov/docs/fy21osti/76932.pdf](https://www.nrel.gov/docs/fy21osti/76932.pdf)
Of the 265 responses, 63 individuals (or 24%) identified themselves as “regular CAT users” (riders). Overall, the most common destinations for CAT riders were commuting to and from work and running errands. Regular riders’ usage varies widely from using CAT roughly once a week to more than 25 round trips per month (see Figure 1). The highest-frequency users were more likely to be low-income individuals and renters.

Figure 1. Considering pre-COVID circumstances, how often did you use CAT’s services? (n=63)

We also asked CAT riders why they chose to use CAT. The most common reason, selected by 44 participants, was that “It is more eco-friendly.” Some of these riders may be choice riders, or riders that have alternative means of transportation. Choice riders often choose transit for its environmental benefits, avoiding driving traffic, or saving money, even if taking transit may result in longer trips (Perk, et al., 2008).

Conversely, captive riders are transit users that have very few or no alternatives to transit service and, therefore, must use transit out of necessity rather than choice. Over half of the rider respondents answered survey questions in a way that could suggest captive ridership, including answers as “not owning or having access to a vehicle,” “having to share one vehicle with others,” “not having a driver’s license,” or “being differently abled.”

Captive riders are more likely to be low income or BIPOC individuals. In our sample, BIPOC individuals made up a larger share of the captive rider group (24%) than the overall sample (19%). Captive riders were much more likely to be lower-income: 54% of captive rider respondents come from households earning less than $50,000 a year, but these households make up just 26% of the overall sample.
 Particularly for riders that rely heavily on transit to get around and commute to work, trip length can be a significant burden on individuals’ schedules. When considering the demographics of the responses, we found that BIPOC populations, on average, experience trip lengths that are 18% longer than non-BIPOC riders. Additionally, African Americans, households with less than $50,000 annual income, and renters were overrepresented among riders with average trip lengths of more than one hour.

Figure 2. How would you rate CAT’s services for the following categories? (Pre-COVID) [n=63]

HOW WOULD YOU RATE CAT’S SERVICES FOR THE FOLLOWING CATEGORIES?

One of the last questions we asked each of our survey respondents was suggestions for improving CAT service. The top result is an aggregation of multiple choices in the survey focused on making bus stops more accessible through bike and pedestrian infrastructure, including bike lanes, sidewalks, and bike parking. The third most popular feature was increased frequency of service, the importance of which is also reflected in our review of best practices and focus group discussions.

Recommendations that garnered votes from roughly half of our rider respondents include extended service hours, improving route design, extended service areas, and better equipped bus stops. Several answers to open-ended questions as well as focus group comments highlighted the need for service that connects more remote neighborhoods to central Charlottesville, reflecting the reality that many low-income households are being forced out of the urban core by rising cost of living. Participants across the survey and focus groups have also reinforced the need for bus stops with better lighting and weather protection (see Section 4 “Focus Groups and T&E Survey’s Open-Ended Questions”).

Of the 265 responses to our survey, 202 (or 76%) individuals identified themselves as not regular users of CAT services. Of that group, 58 individuals (or 22% of the whole sample
of 265 respondents) said that they were regular CAT users at one time, while the remaining 144 respondents said they had never been a regular CAT user.\(^3\)

The respondents that reported being CAT users at one time contained higher proportions of BIPOC individuals, low-income individuals, renters, and individuals without any college education than the overall sample. While not conclusive, this may indicate that as riders that may be captive advance economically or otherwise gain other transportation options, they choose to use CAT less frequently.

When asked why respondents chose not to use CAT services, the absolutely most common answer was that they did not need to use CAT services. Other common answers covered living in areas that aren’t well-served and generally feeling the service was too infrequent or too inconvenient to justify using.

Like respondents that considered themselves frequent riders, we asked non-riders about features or services that they would like to see implemented at CAT. The most commonly selected answers related to alternative payment and fare pass options. The next four most common responses echoed featured requests of riders, including higher frequency, expanded service, and improved pedestrian and bike infrastructure.

**Key Takeaways**

When considering all the feedback we collected in the community survey, several key takeaways surface, all of which are also supported by our focus group conversations.

- **Frequency.** In our survey, frequency was the lowest rated aspect of CAT’s service and one of the most requested features as well. Infrequent bus arrivals complicate trip planning and make the cost of missing a bus much higher.

- **Bus Stops.** Nearly 40% of our rider respondents rated bus stops as unsatisfactory or unacceptable. Open-ended survey questions and our focus group conversations reinforced the need to improve the cleanliness, safety, and placement of bus stops.

- **Route Designs.** Riders in particular expressed frustration with the circular (one-way) loop that all routes are designed with. Additionally, buses that run along divided roadways in some areas are not well-connected to pedestrian infrastructure. Some examples cited were routes 7 and 8 when trying to access shopping at US-29.

- **Bus fare system:** Respondents also expressed a desire for more flexible payment methods and fare passes, as well as for CAT services to be free.

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\(^3\) We are referring to these individuals as non-riders, but it is important to note that this does not mean that respondents have never used CAT—only that they would not consider themselves regular users.
Focus Groups and T&E Survey’s Open-Ended Questions

All focus group participants were in agreement that the bus system is often unreliable, too infrequent, and inefficient, often leading them to prefer to walk or drive to their destination instead. A few participants mentioned the need for better infrastructure at bus stops, including benches, shelters, and better signage to accommodate weather conditions and those with disabilities. Safety issues were said to discourage using CAT when with children.

Participants mentioned that the bus system does not adequately access places they would like to go, including grocery stores, Stonefield, Walmart, Target, or other areas further out on the US-29 corridor. Most participants mentioned that additional bus routes along the US-29 corridor would improve access to new housing developments and decrease the amount of commuter traffic. Some suggested a rapid transit lane added on US-29. All participants were in agreement that better coverage is needed for locations such as schools, churches, and hospitals. A few participants discussed the need for more Park-&-Rides.

All participants agreed that service hours’ span and infrequency were underlying factors for choosing not to ride the bus. It was also mentioned that the bus schedule is prohibitive to nurses or other working class community members whose work schedules are earlier or later than the bus system runs.

Participants mentioned that beginning a family changed their transportation habits, motivating them to commute by car more often. A senior participant mentioned that due to her age and technological abilities, public transit is not a feasible option for her.

All Latino participants commented that they do not use CAT frequently, despite having used it as their main means of transportation in the past; usually, when they were recently immigrated. Other suggested solutions for equitably enhancing access to CAT include a better indication of bus routes, relaxing restrictive rules (such as prohibition of drinking or carrying “too many bags” on the bus), and reducing bus fares.

Scenario Analysis

Investing in robust, equitable, and clean public transportation yields diverse benefits for communities, the economy, and the environment. This section uses a four-quadrant scenario analysis to illustrate the environmental and social co-benefits of doubling CAT’s ridership from 2019 levels by 2024 with an enhanced equity focus. The four hypothetical scenarios (pathways) considered in this analysis are:

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4 Although scenario analyses are not intended to predict or forecast what will happen, they are a useful way to understand what may happen under a given set of circumstances. Therefore, it is a useful tool to help us to weigh the pros and cons of different approaches to the future of transit in the Charlottesville and Albemarle region.

5 This section will focus primarily on the expected results of each of the four scenarios, not so much on how each of them could be achieved. However, the Recommendations Section of this report sheds light on the factors we consider crucial to doubling the number of CAT passengers and improving its fairness in transit.
I. **Business as Usual (BAU):**
   - Ridership declines at pre-pandemic rates, while equity efforts do not improve.

II. **Ridership Growth Alone:**
   - Ridership doubles by 2024, (compared to 2019); equity efforts do not improve.

III. **Increased Equity Focus Alone:**
   - Ridership declines at pre-pandemic rates; however, the enhanced equity focus allows the transit system to better serve historically underserved groups.

IV. **Ridership Growth with an Increased Equity Focus:**
   - Ridership doubles by 2024 (compared to 2019), while the enhanced equity focus allows the transit system better serves historically underserved groups.

Table 1 shows how CAT’s activities impacted each of the three selected variables in the baseline year of 2019 and how it may impact them under each hypothetical scenario. For all scenarios, CAT’s transit system plays the important role of avoiding millions of car-based trips and hundreds of thousands of dollars in car-fuel costs (with positive impacts in reducing the average transportation burden of community’s households).

Table 1. Key Results for Each Scenario

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<tbody>
<tr>
<td>Avoided non-transit VMT/year</td>
<td>4,550,438</td>
<td>3,514,486</td>
<td>9,100,875</td>
<td>3,514,486</td>
<td>9,100,875</td>
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<td>Net CO₂ emissions (MtCO₂)</td>
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<td>567</td>
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<td>459</td>
<td>-3,354</td>
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<tr>
<td>Avoided car-fuel costs</td>
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<td>493,576</td>
<td>1,278,131</td>
<td>516,834</td>
<td>1,338,357</td>
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</tbody>
</table>

Under scenarios I and III, CAT’s capacity to avert CO₂ emissions is impaired as ridership experiences a steady decrease (followed by an equally steep fall in bus-occupancy levels). Under these scenarios, the agency becomes a net CO₂ emitter. Avoided car-fuel costs also fall, because of the decrease in avoided non-transit VMT/year and CAT’s stable VMT/year.

In scenarios II and IV, where ridership doubles, all three variables improve. Under both scenarios CAT’s services remains a net reducer of CO₂ emissions, reducing 3,074 MtCO₂/year under Scenario II and 3,354 MtCO₂/year if ridership increases with an enhanced equity focus. Avoided car-fuel costs also increase and are at least twice as big as in 2019 in both scenarios, with the highest savings being gained through a higher equity focus.

In scenarios III and IV (where CAT enhances its equity focus) environmental benefits are higher than in their less equitable counterparts, with more avoided MtCO₂ emissions. Socio-economic benefits, in the form of avoided car-fuel costs, are higher too.

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6 Vehicle-miles traveled (VMT) stands for the number of miles traveled by all vehicles in a group over a given period of time, typically a one-year period.
5.1 Reminder of Bus-occupancy Levels and Battery Electric Buses

Considering the climate change impact of public transportation, bus occupancy is a critical metric because there is a threshold over which buses emit less than a car on a per passenger basis. This “break-even” point is between 6.0 and 9.7 passengers per bus, when considering CAT’s current fleet performance and the assumptions over the average occupancy of LDVs trip’s that are being displaced.

An important takeaway from our scenario analysis is that increasing bus occupancy is critical to unlocking the environmental benefits of public transit in Charlottesville. If bus-occupancy does not increase, higher ridership alone might not suffice for CAT to further reduce the community’s CO2 emissions; at least, not with its current fossil-fueled fleet. This issue could be averted if more BEBs were incorporated to the fleet.

6 Recommendations

Learning from the voices of the community and best practices around the country, we have identified key recommendations that the City of Charlottesville, Albemarle County, CAT and any other pertinent authority should move to immediately evaluate and implement.

1) Make fare-free transit permanent. Case studies of fare-free transit systems in other parts of the country show that eliminating fares virtually guarantees rapid increases in ridership. The more important impact, however, is on riders’ pocketbooks, especially those without any other transportation options.

2) Set a goal to double transit ridership by 2024, with an emphasis on increasing average bus-occupancy levels. As we emerge from the COVID-19 pandemic, ridership will naturally rebound and fare-free transit will bolster this upward trend. To make the most of this momentum, setting a target to double ridership can help focus CAT, the City, and community partners to achieve these goals. In order to maximize its environmental gains, the ridership target should be linked to a verifiable commitment to increasing bus occupancy levels.

3) Set a goal to have no route frequencies in excess of 30 minutes intervals. The frequency of buses has a disproportionate impact on whether using public transit is viable for some, particularly those that want to use the service to commute to work and have to arrive at a specific time.

4) Restore and expand pre-COVID service hours. Most of CAT’s routes operate on a limited schedule (CAT, 2018). While service hours on Sundays or earlier/later in the day might attract less ridership than other hours, expanded service hours serve to attract users that need these differentiated services. In many cases, these will be workers with an early/late shift or families going to parks, churches or doing groceries on Sundays. Fortunately, CAT has recently announced the intention of expanding service hours to offer a weekday and Saturday service-hours span from 6:00 am to 11:00 pm for major routes (Charlottesville, 2021).
5) Relax overly restrictive rules. Our focus groups surfaced a common complaint among CAT riders—rules around eating and drinking are overly restrictive and should be relaxed. This is especially important for individuals that spend a lot of time on the bus, such as daily commuters. Riders in our focus group and survey have also reported unreasonable restrictions on carrying bags on the bus, which negatively impacts those who have no alternative choice but to use the bus to do their shopping.

6) Invest in technology upgrades to improve customer experience. According to focus group participants and survey respondents, CAT’s App has proven to be unreliable. Real-time information on the location and on-time status of buses is unavailable, often leading to confusion and eroding trust in the App. We applaud CAT’s recent announcement that it will be transitioning to a new real-time information App (ETA Spot App), discontinuing the former Catch the CAT App on 9/4/2021 (CAT, 2021 a; CAT, 2021 b). We hope that this upgrade will address the App-reliability issues identified by our report and that CAT will share with the community the steps they will take to implement the new App and frequently monitor, evaluate and report on its performance.

7) Move swiftly to invest in increasing safety at bus stops. If the CAT App is the first impression a rider has of CAT’s transit service, their bus stops are the second. In our community survey, 37% of respondents rated bus stops “Unsatisfactory” or “Unacceptable.” Over half listed bus stops enhancements as a top priority improvement for CAT services.

8) Complement main routes with on-demand mobility services. Although all CAT routes cost roughly the same to operate per miles-traveled, the average number of passengers carried per miles travelled can vary up to 20x among routes. In order to maximize the full potential of its resources, CAT could study the feasibility of providing (or outsourcing) on-demand mobility services to substitute routes with lower occupancy and nimbly connect less dense neighborhoods with the core routes of the system.

9) Increase collaboration between key advisory boards to ensure that community voices have a role in transportation planning. CAT (and the Regional Transit Partnership) should ensure transparency and stakeholder engagement through frequent public hearings, surveys, focus groups, and the creation of a Community Transit Advisory Council. The Council should guide future decision-making and have the participation of a variety of interested parties, representing the Charlottesville and Albemarle community, their households, nonprofits, and businesses.

10) Invest in developing comprehensive regional transit policy through increased collaboration across services. The level of fragmentation across transit services in the greater Charlottesville area is a hindrance to improving service. As housing continues to get more expensive, lower-income households are forced to live farther from the urban core of Charlottesville. If this trend continues, it makes ensuring equitable access a multi-jurisdiction challenge that can only be solved through increased collaboration and planning.

11) Develop a pilot program to introduce BEBs to CAT’s system and set a target to transition to a fleet with 50% of its buses being zero emission vehicles by 2030. To maximize the climate and environmental benefits of public transit, Charlottesville and Albemarle should start immediately to lay the groundwork for a zero-emission bus fleet.
12) Double investments in improving pedestrian and bike-friendly infrastructure, with priority placed on areas within one mile of existing and/or planned transit service. For those that rely on transit, walking and biking can also be essential modes of transit to get to and from bus stops. By prioritizing new infrastructure around bus stops to increase walkability and bikeability, the City and the County prioritize the populations with the greatest need for this infrastructure and improve both the safety and attractiveness of using CAT.

13) Commit publicly to building affordable housing in the urban core of Charlottesville. Another way to improve equitable access to opportunity, essential services, and amenities for all is to commit to increasing affordable housing availability in Charlottesville’s urban core. Doing so will help low-income individuals access housing where transportation options are more affordable and diverse.

14) Lay the groundwork for zoning reform that allows for a denser and more transit-oriented development with affordable housing as a central feature. Zoning reform is no easy undertaking, but car-dependence is largely driven by our land use planning decisions. Reversing the decades-old trend of segregating housing from commercial spaces is critical to building communities that are more walkable, mixed use, and sustainable.

7 Conclusion

The recommendations we outline above are just some of the ingredients in a recipe for a more equitable, sustainable, and prosperous Charlottesville. Our call to action is for the City of Charlottesville, Albemarle County, CAT and any other pertinent authority to make a public commitment to the actions they intend to take. First, well-publicized public commitments would signal intention and introduce accountability to the community that our local government institutions serve. Second, a public commitment to ambitious action is also an invitation to potential riders to give the service a try. Finally, a public commitment can also be an invitation to the Charlottesville and Albemarle community to partner with CAT in achieving its goals. C3 and many of our Charlottesville-based partner organizations stand ready to support CAT in any way we can to achieve a shared vision of equitable transit service in Charlottesville and Albemarle.

Improving our transportation systems is essential to extending opportunity and access to all members of our community, contributing to breaking the cycle of poverty many low-income households find themselves in, mitigating climate change, and freeing ourselves from the expense, pollution, and hassle of a car-dependent city. Building a strong transit system is not easy, but it’s also not a mystery—other cities around the country are leading the way, and it is time for Charlottesville and Albemarle to join that leadership.
8 Bibliography


CLIHC, 2020. The Impact of Racism on Affordable Housing in Charlottesville, s.l.: Charlottesville Low-Income Housing Coalition.


CUB, 2020. EV For All: Electrifying Transportation in Low-Income Communities, s.l.: e Citizens Utility Board (CUB).

DRPT, 2019. Economic Impacts of Transit (EIT) Study in the Commonwealth of Virginia, s.l.: Department of Rail and Public Transportation (DRPT).


IPCC, 2019. Global Warming of 1.5°C, s.l.: Intergovernmental Panel on Climate Change (IPCC).


Pinto de Moura, M. C. & Reichmuth, D., 2019. Inequitable Exposure to Air Pollution from Vehicles in the Northeast and Mid-Atlantic. s.l.: The Union of Concerned Scientists.
