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Arrested Mobility™: Policy Grounded Health Equity Solutions and Actions for Georgia

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APPROVAL PAGE

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Acknowledgments

For as long as I can remember, I've always wanted to help others be the healthiest they could be. This started when I was in high school and has carried into my adult life. For the same amount of time, I've always wanted to be a doctor in some capacity. When Facebook was brand new (when you needed a college email address to sign up) and used to ask users in the Facebook status section what they were up to, I used to start my status updates off by saying "better known as Dr. Price" then give my Facebook status update. To see that dream become a reality is exciting to say the least, and I'm thankful for the journey and process.

I am passionate about this work because this work matters to me and to people who look like me. I wish to dedicate this body of work to Trayvon Martin, Manuel Ellis, Ahmaud Arbery, and their respective families for their continued resilience, bravery, and confidence. Their lives were taken too soon. I hope this work respects and uplifts them in a way that they can be proud of. I also wish to dedicate this work to my two late grandmothers - "Granny" Pearlean Anthony Price and "LeneLene" Lena Carroll. It has taken the enduring spirit of two praying grandmothers to get me to this point. I love you both and I know that I have made you proud.

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I like to think of this dissertation as my gift to the world. I have poured myself into these pages with the hopes that I can improve the health for those everywhere by adding something of value for the world to consume. This was made possible by everyone listed here. They have poured into me so that I may pour into the world.

If you think of me as good, it is because they are all better.

Author's Statement Page

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Tony Christopher Price, Jr.
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ABSTRACT

Arrested Mobility™: Policy Grounded Health Equity Solutions and Actions for Georgia

By

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Background: Chronic diseases, the built environment, racism, health equity, and health policy combine to create Arrested Mobility, which is the assertation that Black people and other minorities have been historically and presently denied by legal and illegal authority, the inalienable right to move, to be moved, to simply exist in public space.

Purpose of Research: The purpose of this project was to explore whether or not there are policies and laws that impact Blacks' and other minorities' ability to be physically active in their communities and to identify health equity issues that can be addressed that will help close health disparities for Blacks and other minorities in Georgia.

Methods: Phase one utilized a legal scan to identify the codified laws as of January 1st, 2022 focused on traffic, bicycles, and pedestrians at the state and municipal level that influence Blacks and minorities ability to be physically active in their communities. Phase two relied on open records requests from four rural municipalities and two urban municipalities to determine if law enforcement equitably distributed citations.

Findings & Results: During phase one, 129 municipalities adopted Georgia traffic laws as their own, 60 municipalities have their own written bicycles laws, and 12 municipalities have their own written pedestrian laws. Three municipalities had Complete Streets Policies. During phase two, three of six municipalities were found to cite Blacks and/or Hispanics at a rate higher than their prevalence in the community. Additionally, all demographics in rural areas are fined at a higher rate than their urban counter parts. In Grovetown, not only are Blacks cited at a higher rate than their prevalence in the community, the average fine fee for Blacks is higher than the average fine fee for Blacks across all examined municipalities. The average fine fee for Grovetown is also higher than all other rural municipalities.

Discussion & Recommendations: Based on the information discovered in phases one and two, recommendations to address health disparities in Georgia include 1) all law enforcement undergo modified implicit bias training, have citation reporting requirements, and wear body-worn cameras while on duty; 2) Georgia adopt a law similar to California Assembly Bill 2773; 3) provide support for rural communities to generate revenue; 4) adoption of Complete Streets Policies into all new projects; and 5) decriminalizing certain related laws.

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CHAPTER 1: INTRODUCTION

Background of the Problem

Chronic Disease

Chronic diseases such as diabetes, heart disease, and cancer are increasing in prevalence in the United States and having a significant impact on the nation's collective health (American Public Health Association, 2022a). Currently, six in ten Americans live with at least one chronic condition or more. Although chronic diseases are some of the leading causes of death in the U.S. (CDC/National Center for Health Statistics, 2022), they are also some of the most preventable. When stratifying by race, Black people have disproportionately high rates of various chronic conditions compared to other racial and ethnic groups (Raghupathi & Raghupathi, 2018). In Georgia, the data is consistent with national trends. Leading experts suggest that the prevention of chronic diseases and their associated risks can be supported by following the guidelines recommending at least 150-minutes of moderate intensity aerobic activity every week (*Trending Topic | Physical Activity Guidelines*, 2022).

The Physical Activity Guidelines for Americans, second edition and Centers for Disease Control and Prevention (CDC) describe aerobic activity as those that include running, jogging, walking, cycling, or other activities that increase the body's use of oxygen and the heart rate above its resting level (Patel et al., 2017; U.S. Department of Health and Human Services, 2018). For all intents and purposes, this definition includes leisure time activity as well as active transportation. Leisure time activity is defined as taking time out of one's day to be physically active whereas active transportation is defined as using any self-propelled, human-powered mode of transportation to get from one place to another that is inclusive of those having to use

these methods for non-leisure activity such as commuting to work (National Center for Environmental Health, 2011).

The Built Environment

A key component to ensuring people can be physically active is access to spaces and opportunities where people can be physically active doing things they enjoy (U.S. Department of Health and Human Services, 2018). Intervention approaches that are designed to create easier and more accessible opportunities to physical activity include street connectivity, sidewalk and trail infrastructure, bicycle infrastructure and public transit infrastructure and access (The Community Guide, 2016). As noted in the 2015 report "Step It Up! The Surgeon General's Call to Action to Promote Walking and Walkable Communities," in order to increase walking, and by proximity physical activity, across the United States, improved access to safe and convenient places is critical to create a culture that supports activities for people of all ages and abilities. As it relates to physical activity, two points from the aforementioned initiative are important – access and safety. Access to physical activity is shaped by the built environment.

The built environment can include, but is not limited to, geographic landmarks such as parks, trails, greenways (Community Preventive Services Task Force, 2021), and underdeveloped river fronts. Additionally, the built environment is composed of accessibility features to various parks, trails, greenways, and river fronts such as sidewalks, crosswalks, pedestrian cross walk signals, pedestrian walkways atop roadways and highways, safety hazard lights for pedestrian walkways, ramp access for those persons using wheeled assisted devices, and other similar features (Centers for Disease Control and Prevention, 2009). The built environment is in every aspect of our lives – the buildings we live in, the distribution systems

that provide us with water, electricity, and other utilities, and the roads, bridges, and transportation systems we use to get from place to place (Environmental Protection Agency, 2022).

Certain characteristics of the built environment suggest a connection between physical activity and a person's ability to be active (National Research Council, 2005; The Community Guide, 2016). Land use measures such as street pattern design and connectivity, density and diversity of use, accessibility, design features, and aspects of the infrastructure such as sidewalks influence a person's decision to be physically active (Omura et al., 2020). The conditions and accessibility of the built environment can either be a barrier or gateway to improved health conditions.

Racism

Although there have always been barriers keeping people from being physically active, whether they are individual or structural, one barrier that has always existed, but gained increased notoriety within the last ten years, is racism. Individual racism and discrimination can take the form of one person being biased towards another based on how they look. Structural racism and discrimination is a form of racism that is deeply embedded in systems, laws, policies, practices, and beliefs that spread the unfair treatment and malpractice of people of color, often times with adverse health consequences (P. A. Braveman et al., 2022).

Researchers and practitioners have discovered that racism results in conditions that unfairly disadvantage some, while simultaneously providing an advantage to others based on how a person looks or a group of people they identify with (American Public Health Association, 2021b). Racism is one factor that prevents some people the opportunity to attain their highest

level of health. People of color in the United States have historically been subjected to discrimination, racism, and social control that has compromised their sense of safety while outdoors in communities in which they live and belong. The extent to which this continues today, with implications for opportunities for physical activity, warrants investigation.

As recently as 2018, racism was first declared a public health crisis by the American Public Health Association (APHA) (American Public Health Association, 2021a). According to APHA Past-President, Dr. Camara Phyllis Jones, "*Racism is a system of structuring opportunity and assigning value based on the social interpretation of how one looks (which is what we call "race"), that unfairly disadvantages some individuals and communities, unfairly advantages other individuals and communities, and saps the strength of the whole society through the waste of human resources"* (American Public Health Association, 2021b). The result of racism as described above are situations where entire populations are disenfranchised, passed over for opportunities that they otherwise should be considered for, and rules being unequally and inequitably applied in their enforcement.

Racism as a public health crisis is directly tied to chronic diseases and physical activity because racial differences in experiences of discrimination are associated with racial differences in health (Siddiqi et al., 2017). Understanding and measuring the association between racism and health has been primarily done via self-reported experiences of discrimination. Most studies have used samples of Black Americans and White Americans in the United States, and have found that experiences of discrimination are associated with a range of chronic conditions and related risk factors, such as physical inactivity, that contribute to the major sources of

morbidity and mortality among those being discriminated against (CUNNINGHAM et al., 2013; Gilbert & Zemore, 2016; Lewis et al., 2015).

The APHA has called on states and localities to acknowledge racism as a public health crisis and to commit to meaningful action (American Public Health Association, 2022c). At this level, the primary driver to address racism as a meaningful public health issue is to make a declaration of racism as a public health crisis. While declarations and formal statements are not intended to be legally enforceable, "*they are an important first step in calling attention to racism and shifting the narrative in a way that can drive changes to policies, laws and resource allocation. These resolutions create the opportunity for strategic action to eliminate racist policies and practices and adopt those that advance racial equity*. (American Public Health Association, 2021a)" In 2018, Milwaukee County, Wisconsin became the first community to declare racism as a public health crisis (American Public Health Association, 2021a). Since, there have been 256 declarations passed at either the state, county, or city level across the nation (American Public Health Association, 2021a). Specifically in Georgia, however, only two of those declarations have been executed. The DeKalb County Board of Commissioners, in 2020, and South Fulton City Council, in 2021, are the only two entities within the state to take the step of declaring racism as a public health crisis (American Public Health Association, 2021a).

Racism, a fundamental cause of health inequities, must be identified and dismantled to ensure society's interest in a world where all people have an opportunity to be in good health (Rosario et al., 2022). From individual to structural racism, adverse health outcomes are often manifested in the form of contrasting rates between well-being benchmarks such as wealth, homeownership, and educational attainment (Salvador, 2022), lower life expectancies, higher

rates of infant mortality and chronic disease, and reduced quality of life due to state-sanctioned or community violence (Gee & Ford, 2011; Jones, 2000).

One strategy to identify racism is to examine the effect codified laws have on minorities, examining how they disproportionately have negative impacts that worsen racial inequities, and making a valiant effort to identify where laws affect groups of people differently. Once those laws have been identified, the "What now?" question has to be asked. Laws can be enforced through strategic plans, accountability measures, and enforcement in order to affect change (Rosario et al., 2022). Dismantling racism requires public health practitioners, community members, and relevant stakeholders to "critically examine our own identities and lived experience" (Belanoff et al., 2016) and question how our collective lived experiences are impacted. Lived experiences give researchers and practitioners an idea on how law and policy impact communities and can be a reliable and truthful voice in answering the "What now?" question and addressing the issues.

An example of striving to identify and dismantle racism to move the needle towards health equity can be found in redlining practices in Atlanta, Georgia. Historically, the term "redlining" originates from actual red lines being drawn on geographic maps that identified predominately Black neighborhoods as "hazardous" without just cause other than the demographic of people living in these spaces (Little, 2021). These redlined maps were used to intentionally exclude Blacks from federal and government sponsored loan programs. A 1931 redlining map of Atlanta, Georgia found in Figure 1 (*Redlining Map of Greater Atlanta, 1931*, n.d.) illustrates how the areas labeled as "definitely declining" and "hazardous" are in alignment with where Blacks were primarily located at the time. As time progressed in 1977,

with the completion of Interstate-75 in Atlanta, Georgia (Ayres Jr., 1977), the portion of Interstate-75 going through downtown Atlanta was placed directly through predominately Black neighborhoods, creating even more of a divide. As time progressed to a more modern period, practitioners, law and policy makers, and other vested stakeholders identified these foul practices and implemented opportunities to dismantle this systemic racism such as the Westside Future Fund (*About Westside Future Fund*, 2022). The Westside Future Fund's intent is to ultimately disrupt the cycle of resident displacement during the development of infrastructure along the westside of Atlanta. They are committed to creating and curating an eco-system that disrupts the cycle of poverty with a focus in four specific areas – safety and security, cradle-to-career education, health and wellness, and mixed-income communities (*About Westside Future Fund*, 2022).

Health Equity

Health equity is brought into question when barriers, such as racism, prevent individuals and communities from achieving their highest levels of health (American Public Health Association, 2022b) and engaging in healthy behaviors such as physical activity. The APHA defines health equity as "ensuring opportunities for everyone to attain their highest level of health." To achieve health equity, "Obstacles to health must be removed such as poverty, discrimination, and their consequences, such as powerlessness and lack of access to quality education (P. Braveman et al., 2017)." With health equity serving as the focal point of the ten essential public health services (Center for State Tribal Local and Territorial Support, 2022), it's important that practitioners and vested decision makers do what they can to center applied practice and research around improving health for all.

A key result of health inequities are the development of health disparities (Meghani & Gallagher, 2008). Health disparities are differences in health outcomes that are closely linked with social, economic, and environmental disadvantage that are driven by the social conditions in which people live, learn, work, and play (Department of Health and Human Services, 2011). Nationally, heart disease is the leading cause of death for men, women, and people of most racial and ethnic groups – with it being the leading cause of death for Blacks accounting for 22.6% of deaths (National Center for Health Statistics, 2022). Focusing on Georgia, the state is ranked 15th worst, relative to the rest of the country, in age adjusted death rates for heart disease mortality (Centers for Disease Control and Prevention, 2022b) with 183.7 deaths per 100,000 people. Cardiovascular disease (CVD) and its comorbidities are the leading causes of death (Centers for Disease Control and Prevention, 2022a). According to the latest Georgia Department of Public Health (GADPH) program and data summary regarding CVD, the disease accounted for 30% of deaths in Georgia. Racial and ethnic disparities are equally as prominent. CVD death rates were 1.3 times higher and stroke death rates were 1.4 times higher for Black Americans than White Americans (Georgia Department of Public Health, 2012). Between 1990 to 2015, Blacks in Georgia have seen higher mortality rates compared to other racial and ethnic groups in age adjusted diabetes, stroke, asthma, and CVD (O'Connor, 2015). Asthma emergency room visit rates for Black Americans have also been triple that of White Americans and double that of Georgia as a whole since 2002 (O'Connor, 2015). This data communicates that some health inequities have resulted in health disparities, and that health outcomes are not the same for Blacks across Georgia and their experience with health is different from that of their counterparts.

Health Policy

One of the goals of Healthy People 2030 is to use health policy to prevent disease and improve health (*Health Policy*, n.d.). Health policy is a strategy that can be used in conjunction with codified law to combat health disparities that are caused by health inequities. Effective policies require clear and contextually relevant operational definitions to support the development of objectives and specific targets, determine priorities for use of limited resources, and assess progress (P. A. Braveman et al., 2011). Considering that health disparities are often times systematic issues that are otherwise avoidable health differences (P. A. Braveman et al., 2011), targeted policies and laws that work to fill in the gaps of need are vital to ensuring the best health for all groups of people. Ideally, situating health policy solutions around targeted universalism, creates a situation where all groups of people get exactly what they need to be healthy. Within a targeted universalism framework, universal goals are established for all groups concerned – the strategies developed to achieve those goals are targeted, based upon how differed groups are situated within place, culture, and structure (Powell et al., 2022).

For example, a health policy that utilized a targeted universalism framework was the development of Seattle, Washington's pedestrian master plan (Powell et al., 2022). The planning for this pedestrian plan focused on communities that needed improved sidewalks. However, since there was an understanding that there could not be equal investments across the city, planners conduced city wide mapping that considered areas with the most need, income, auto ownership, disability, and disease. Planners used this information to specifically target areas that could benefit the most. Additionally, smoke-free policies and laws can help

prevent smoking initiation and increase quit attempts, policies and laws requiring community water systems to provide fluoridated water can improve oral health (*Health Policy*, n.d.), and policies and laws to enhance physical education and physical activity in schools at a young age will enable schools to improve opportunities for students to become physically active adults (Lee et al., 2007). Policies and laws can also be racist in the way they are written, regulated, or otherwise operationalized if they are measures that produce or sustain racial inequities between racial groups (Kendi, 2023).

When examining the implementation and implications of health policy and law, two types come to the forefront – people-based policy and law and place-based policy and law. People-based strategy focuses on investing in people and their education, skill-building, encouraging their mobility, with the hope that good things will come (Florida, 2019). This type of strategy has value placed on the individual, where if the individual is given the required support and the necessary resources, they can overcome hardship. Although there is value associated with people-based policy and law, this type of strategy has to be mindful of the systemic and structural barriers that can hinder its progress. An example of this can be seen with an individual who might be given a monthly stipend via their personal health insurance to participate in active living and healthy programs in the community they reside in. These active living and healthy programs could be exercise classes offered at a local YMCA, a sponsored walking group through a community park, or participation in a diabetes prevention course taught by a community health worker. On the surface, these types of programs would be advantageous to participate in. However, if the participant doesn't have access to a local YMCA because there isn't one, can't participate in a walking group because there are no safe parks

and recreation facilities, or can't be a member of a diabetes prevention course because the nearest one is farther than they can travel, then the stipend offered via their personal health insurance is of no value and may even worsen inequities.

Place-based strategies generally refer to government efforts to develop programming and to enhance the economic performance of an area within its jurisdiction, typically in the form of more job opportunities and higher wages (Neumark & Simpson, 2015). Using this definition, an example of a place-based strategy that has a health focus would be the Community Eligibility Provision of the Child Nutrition Programs offered through the USDA (U.S. Department of Agriculture Food and Nutrition Service, 2023). In this program, schools and school districts are able to get reimbursed for breakfast and lunch, at no cost to students, based on the percentage of students categorically eligible for free meals based on their participation in other programs such as the supplemental nutrition assistance program (SNAP) and temporary assistance for needy families (TANF). Using the example from the explanation of people-based strategies, a place-based alternative would be ensuring that communities in the zip codes that need them have fully staffed, operational, and functional recreation facilities, city and local governments earmarking funds to build and maintain park facilities, and diabetes prevention programs being offered in communities that need them so residents can remove transportation as a barrier to participation. People-based and place-based strategies cannot be mentioned without each other for the simple fact that there cannot be one without the other. A complete discussion of people-based strategy should always involve the places in which those people belong and place-based strategy should always involve discussion of the people being affected in those places. Both types of implementation should also be driven by need that is

found through relevant data. Successful policy and law intervention involves a combination of both types for successful and sustainable implementation that closes the health disparity gap.

Statement of the Problem

The combination of physical inactivity and unsupportive built environments are critical drivers of many health inequities experienced by Blacks, especially in Georgia. There are barriers that make it difficult for Blacks to be physically active in their communities. There are various other factors that drive the problem, including systemic racism, broader health inequities, and laws and policies that put people of color under threat for their safety and well-being.

The codified laws that create unsupportive built environments that have racism baked into them can be thought of as either de jure or de facto (The Demographic and Health Surveys Program, 2017). Racism that is de jure is in place because it is explicitly written into the laws. An example of de jure laws would be Jim Crow laws that followed the Reconstruction period in the south when segregation and disenfranchisement of people of color were codified into law (Metych, 2023). De facto refers to something that exists in practice without officially being established or codified. An example of de facto racist laws can be seen in redlining practices in Atlanta where the intention of having an interstate highway system was overshadowed by it displacing Blacks who lived where the highway was constructed.

Based on what is happening in Georgia, Blacks may be experiencing opportunities and barriers to physical activity differently in their communities relative to other racial and ethnic groups. The difference in experience is driven by laws that create health inequities and are causing health disparities. Given what is known about the problem, what can practitioners and

decision makers do to close the health disparity gap as it relates to the effects of physical inactivity for Blacks? These problems have persisted for as long as the data show and will continue to be an issue if not addressed directly and intentionally. Overcoming these challenges will not be possible without putting labels on and addressing any obstacles standing in the way of good health.

Purpose of this Project

The purpose of this study is to conduct an analysis using legal epidemiology to analyze the codified laws in Georgia that influence certain aspects of the built environment and Blacks' ability to be physically active in the communities they belong to. The goal of this project is to unearth the impact, whether intentional or unintended, that laws have on the built environment and Blacks' ability to be physically active where they live, work, and play. The outcome of this project will be an examination and discussion that names some inequities and their implications affecting African Americans and their ability to be physically active, and additionally, proposes solutions to close the inequity gap. To do this, some questions that will be specifically addressed are:

- Are there laws focused on parts of the built environment associated with Black peoples ability to be physically active in the communities they belong to in Georgia?
- What are some health equity issues related to these laws that can be addressed that will help close some health disparities for Black people in Georgia?

This project is significant because although there have been studies and research conducted with a similar purpose on a national level and in various individual states focusing on the aforementioned problems, none have specifically dealt with Georgia that result in a health

equity exploration that names the inequities creating health equity gaps. The findings of this project have the potential to inform and uncover those inequities for Blacks and provide a path to close the health equity gap. Additionally, what is learned in this project has the potential to inform and advance practice in the areas previously mentioned.

Assumptions and Delimitations

To be successful, this project will need to uncover the codified laws specific to the state of Georgia and local municipalities that include portions of the built environment, vehicular traffic regulations, and pedestrian safety that influence Black people's ability to be physically active in the communities they belong to. Additionally, the action steps identified throughout the project will need to advance practice and application within the state and have real world implications. The intention of this project is not to advance research, rather it is to advance public health practice, policy implications, and make strides to close health inequity and health disparity gaps for African Americans within the state.

Project Format

This entire project will follow the traditional dissertation format. This chapter has given a background of the problem, provided a statement of the problem, provided a purpose of this project, and stated the broad research questions. Chapter 2 will introduce the concept and framework of Arrested Mobility and serve as the formal review of the literature, Chapter 3 will serve as the methods, Chapter 4 will serve as the findings and results, and Chapter 5 will serve as the conclusions, recommendations, and equity centered implications. Following all five chapters, there will be a brief summary to conclude this project.

CHAPTER 2: REVIEW OF THE LITERATURE

Theoretical Framework

The intersection of physical inactivity, racism, health inequities, and codified laws that reflect structural and systemic racism lead to the concept of arrested mobility. “Arrested Mobility is the assertion that Black people and other minorities have been historically and presently denied by legal and illegal authority, the inalienable right to move, to be moved, to simply exist in public space. Unfortunately, this has resulted – and continues to result – in adverse social, political, economic, environmental and health effects that are widespread and intergenerational. But they are preventable, which is why we are here talking about it today” (Brown, 2021a). The Arrested Mobility framework was pioneered in 2021 by Charles T. Brown, a self-proclaimed “pracademic,” who is the founder and Chief Executive Officer of Equitable Cities, a transportation consulting firm. His work focuses on the intersection of transportation, health, and equity.

The Arrested Mobility framework Is only one component and scheme to help address systemic racism and inequality. Arrested mobility includes the impact of structural barriers to engaging in biking, walking, driving, taking public and private transit, using ridesharing services such as Uber or Lyft, and using micro-mobility devices such as an e-scooter. Although the broader concept of arrested mobility focuses on various forms of transportation, this project will focus on physical activity and active transportation. At its root, the lens of arrested mobility is a concept that aggregates three Ps: public policy and planning, for example zoning and urban design; policing, which is law enforcement; and polity, which includes groups of self-deputizing citizens (Brown, 2021b).

The Arrested Mobility framework, as shown in Figure 2, overlays the definition of arrested mobility on top of and within a spectrum that includes four realms of racism, over-policing and the means by which that can happen, the modes of travel that arrested mobility includes, a broad sense of where adverse outcomes can take place, and how this takes a toll on morality (Brown, 2021c). The Arrested Mobility framework, and its nested components, describe the avenues by which access and opportunity are limited for Blacks within their environments. Within racism, the four types provided for the Arrested Mobility framework are personal, interpersonal, institutional, and cultural. Personal racism can best be characterized as a set of privately held beliefs, prejudices, and ideas about the superiority of one race relative to that of another group. Interpersonal racism is the expression of racism between individuals where private beliefs affect their interactions. Institutional racism involves discriminatory treatment, unfair policies and practices, and inequitable opportunities and impacts within organizations and institutions that are based on race. Cultural racism is a system in which public policies, institutional practices, cultural representations and other norms work in various, often reinforcing ways, to perpetuate racial group inequality (*The Four Levels of Racism*, 2022).

Within over-policing, there are laws and regulations that can be enacted anywhere from the local, state, to national level. Self-deputization involves giving oneself the authority and ability to patrol and enforce laws at their discretion within the jurisdiction they are in at that given time. Law enforcement can over-police populations by spending too much time in a jurisdiction relative to the population there or by unequitable enforcement of laws from one population to the next. For example, in Tampa, Florida between 2003 to 2015, police issued

more than 10,000 bicycle tickets, of which 79% were issued to Blacks, even though only 20% of Tampa's population was Black (Brown, 2021b).

The adverse outcomes and effects of arrested mobility lead to negative social, political, economic, and health conditions for Blacks. Blacks are less likely to be physically active, have access to important resources and opportunities such as healthcare, supermarkets, education, and jobs, and have lower rates of upward mobility than Whites (Brown, 2021b). Disadvantages with many social determinants of health such as transportation and political influence make Blacks more vulnerable to disenfranchisement efforts that take the form of lower density of polling places in predominately Blacks neighborhoods, which leads to a lack of representation in government (Arias et al., 2021; Brown, 2021b; Centers for Disease Control and Prevention, 2022b; March of Dimes Peristats, 2022).

Historical Perspective

Historical Context

The historical origins of arrested mobility can be seen in many ways as far back as early redlining practices where Blacks were excluded from government and federal home loan programs to purchase homes and in early policing practices during slavery. The origins of modern day policing can be traced back to "Slave Patrols" that began in the Carolinas in the 1700's with one mission – to establish a system of terror and squash slave uprisings with the capacity to pursue, apprehend, and return runaway slaves to their owners (The National Association for the Advancement of Colored People, 2023). Slave patrols persisted through the Civil War until the passage of the 13th Amendment, which abolished legal slavery in the United States (Davis, 2015). During Reconstruction, slave patrols were replaced with militia-style

groups whose intentions were to control and deny access to equal rights for freed slaves. These militia-style groups routinely enforced “Black Codes,” which were strict local and state laws that regulated various social and political determinants such as labor, wages, voting rights, and general freedoms (The National Association for the Advancement of Colored People, 2023). With the ratification of the 14th Amendment in 1868, which granted equal protections to Black Americans – essentially doing away with “Black Codes” – Jim Crow laws and state and local statutes that legalized racial segregation took over. By the turn of the century, local jurisdictions began establishing police departments to enforce Jim Crow laws (The National Association for the Advancement of Colored People, 2023). Local jurisdictions leaned on police to enforce and exhibit brutality on Blacks who they deemed to be in violation of any Jim Crow law. This specific practice continued through the 1960’s coinciding with the Civil Rights Movement. Although the aforementioned incidents don’t deliberately target physical activity, they do provide an understanding to the historical context of the Arrested Mobility framework and how over time, laws and practices have targeted Blacks and their right to move and have freedom over their own existence.

Trayvon Martin

The Arrested Mobility framework and its application to physical activity is relatively young in the public health space, having only been called by name since its trademark in 2021. Although its official introduction into the public health space wasn’t until 2021, one of the first publicly recognized victims of the adverse effects of arrested mobility happened in 2012 with the murder of Trayvon Martin. On the evening of February 26th, 2012, Trayvon Martin, a Black male aged 17, was out walking, returning from a convenience store when he was noticed by

Georgia Zimmerman, a German and Peruvian adult male neighborhood watch volunteer in Sanford, Florida. Zimmerman contacted the nonemergency line of the Sanford Police Department, saying that there had been burglaries in the neighborhood he was a watch volunteer for and that he had observed a “real suspicious guy” who was “walking around, looking about” (Munro, 2022). While communicating with nonemergency personnel, the dispatcher told Zimmerman he did not need to follow Martin, however, Zimmerman followed Martin and left his vehicle, self-deputizing himself to take authority in any outcome that could have occurred. A violent confrontation happened, and Zimmerman discharged his weapon in close proximity to Martin, ultimately leading to his untimely death.

Following the altercation, the Sanford Police Department arrived and Zimmerman argued that he had been assaulted by Martin and discharged his weapon in self-defense. Sanford Police could not hold or detain Zimmerman because at the time no evidence contradicted his version of the event. Florida state law permits the use of deadly force in self-defense, so the police released him. Zimmerman remained free until a year later when the Governor of Florida at the time, Rick Scott, appointed a special prosecutor for the case, who brought the criminal charge of second-degree murder against Zimmerman (Munro, 2022). The amount of political and societal pressure was a key driver in getting to this point, as President Barack Obama made public comment about the ordeal as well as social media not letting the subject get buried underneath other news and forgotten with passing time.

Zimmerman’s trial, which started in 2013, was the focus of the news cycle for months, bringing to the forefront racial tensions and highlighting injustices within the American legal system. During the case, the prosecution argued that Martin’s death “resulted from

Zimmerman's profiling of him as a criminal and trying to take the law into his own hands" (Munro, 2022). The defense argued that evidence from the altercation corroborated Zimmerman's version of the event. During the trial, although the original charge brought against Zimmerman was second-degree murder, the judge allowed the jury to convict Zimmerman of a lesser charge of manslaughter. For the jury to find Zimmerman guilty of either charge, they not only had to find that he caused Martin's death but that he also did not do so in self-defense. The issue of self-defense was linked to Florida's law permitting the use of deadly force to defend oneself against a perceived threat – known as a "stand-your ground" law – which was central to debate over the shooting (Munro, 2022). After nearly a day of debate, the jury declared Zimmerman not guilty.

Manuel Ellis

Again in 2020, in Pierce County where Tacoma, Washington is located, Manuel Ellis, a 33 year old Black male, was killed by law enforcement when walking back from a store late one evening (Baker, 2020). The Pierce County Sheriff's Department initially claimed that Ellis attacked a police car and subsequently attacked police officers, which they state led to his initial arrest. The state prosecutors provided civilian eyewitness accounts disputing the Sheriff's Department, stating that Ellis did not engage with the police cars or officers first, rather, it was the officers who initiated the use of force after having a conversation with Ellis (Burke, 2021; Peiser, 2021).

During the conversation between Ellis and law enforcement that evening, video evidence shows the officers repeatedly punching Ellis, choking him, using a taser, and kneeling on him (Golden, 2020; Malone, 2020a). With video evidence and eyewitness statements,

prosecutors claimed that Ellis was not fighting back and that Ellis told officers “can’t breathe, sir” multiple times (Levenson, 2021). While on the ground and being kneeled on, Ellis was hogtied with an officer on him for at least six minutes and a spit hood was placed on his head while in this position (Levenson, 2021). Ellis died at the scene while being attended to by paramedics (Glenn, 2020).

Upon Ellis’ death, the county medical examiner ruled the cause of death as a homicide due to “hypoxia due to physical restraint” and “contributing conditions of methamphetamine intoxication and a dilated heart” (Baker, 2020; McCarty, 2020). In 2021, prosecutors introduced additional evidence after the autopsy was concluded stating that “Ellis’s death was not likely caused by methamphetamine intoxication” indicating that physical restraint was the cause of death (W. James et al., 2021). Initially, the four police officers involved in the incident were all placed on administrative leave. After an internal investigation by the Pierce County Sheriff’s Department revealed that an additional officer, a deputy, was also present during Ellis’s arrest (Malone, 2020b), the Governor ordered a new investigation by the Washington State Patrol. After the investigation, prosecutors charged two of the five police officers involved in the altercation with second degree murder while a third was charged with first degree manslaughter (Johnson, 2021).

Ahmaud Arbery

In Georgia, one of the most heinous murders related to the Arrested Mobility framework took place in 2020. On February 23, Ahmaud Arbery, a 25 year old Black male, was murdered by three White men while out jogging in a neighborhood in Brunswick, GA (Mckay, 2022). Wrongly assuming that Arbery was a burglar (Sharp, 2021), three White men–- Travis

McMichael, 36; his father, Gregory McMichael, 66; and their neighbor William Bryan, 52 (Fausset, 2022) pursued Arbery, as he was out being physically active, in their trucks for several minutes, using their vehicles to divert his path and eventually block him as he tried to run away. The McMichaels were armed in one vehicle while Bryan followed along in a separate vehicle recording the ordeal on a smartphone. While trying to defend himself, Arbery was first assaulted with a shotgun by the McMichaels, then fatally shot – all on video captured by Bryan.

After the incident, the Glynn County Police Department, the jurisdiction presiding over Brunswick, GA, arrived at the scene but no arrests were made then or within the following two months (Wiley & Parker, 2020). The Brunswick District Attorney first advised them to make no arrests, then the Waycross District Attorney advised them against making an arrest while announcing his intention to recuse himself from the case due to conflict of interest (Haney, 2020). Following both of these denials, the video from the altercation was provided to a local news station where it went viral on both YouTube and Twitter. Once the video was made public, the Georgia Bureau of Investigation arrested the McMichaels and Bryan, charging them with felony murder and other crimes (Winson et al., 2020).

The McMichaels and Bryan were tried in both state and federal court where they were all convicted of felony murder, aggravated assault, false imprisonment, and criminal attempt to commit false imprisonment. Travis McMichael, who was holding the shotgun that actually murdered Arbery was also convicted of malice murder (Fausset, 2022). At their sentencing in 2022, the McMichaels were each sentenced to life imprisonment without the possibility of parole plus an additional twenty years, while Bryan was sentenced to life imprisonment with the possibility of parole after thirty years. In federal court, the three men responsible were also

found guilty of attempted kidnapping and the hate crime of interference with rights. The former Brunswick District Attorney Jackie Johnson was also indicted in 2021 for "showing favor and affection" towards Gregory McMichael, who also happened to be her former subordinate, during the investigation and for obstructing law enforcement by directing that the McMichaels not be arrested (Mangan, 2021). Following everything that happened surrounding Arbery's murder, Georgia introduced hate crimes legislation in June 2020 (Donaghue, 2021), then repealed and replaced its citizen's arrest law in May 2021 (Hurt, 2021).

Current Conditions and Trends

Nationally, the impacts of arrested mobility are widespread. When looking at a five year window of pedestrian tickets issued to walkers and runners in Jacksonville, Florida, the data show that 55% of tickets issued were given to Blacks even though this demographic only makes up 29% of the population (Brown, 2021c). In this same county, Blacks were three times more likely to receive a ticket than Whites and residents of the city's three poorest zip codes were approximately six times more likely to receive a pedestrian citation (Brown, 2021c) compared to those living in more affluent communities. In 2011 in Georgia, while Raquel Nelson and her three children were crossing a dangerous intersection, her four year old son was killed in a hit and run crash by an intoxicated driver. Nelson was convicted of jaywalking and vehicular homicide. After outcries from the public, Nelson was given the option of either twelve months' probation or a retrial. During the retrial, the initial charges against her were dropped in exchange for a guilty plea of jaywalking and a fine in the amount of $200. The driver was only made to serve six months for the hit-and-run charge (Gao, 2011). Although the Nelson ordeal

happened outside of Jacksonville, the two situations both highlight the inequitable treatment of Blacks.

In the context of public transportation, the same type of inequities exist in New York. Although turnstile arrests, characterized as a person being arrested for not paying the fare on public transit such as a subway, bus, or train (Quinn, 2022), essentially jumping over the ticketing mechanism for public transit, have decreased, almost 90% of those who have been arrested are Black or Hispanic (Brown, 2021c). In 2019, a nineteen year old Black subway goer by the name of Adrian Napier was tackled and subdued by ten police officers for a fare evasion in the amount of $2.75 (Denney et al., 2020).

Looking at the method of bicycling to be physically active, an article published by the Chicago Tribune found that more than twice as many citations are being written in Black communities in Chicago than in White or Hispanic communities (Wisniewski, 2017). This review of police statistics took place in 2016 and found that even though Black communities are being ticketed more for cycling offenses, not a single majority White area ranked in the top ten in ticketing in Chicago despite there being more riders in those areas. Similar studies have been completed in Tampa, Florida; Oakland, California; and Austin, Texas. Between 2003 and 2015 Tampa police issued over 10,000 bike tickets (Brown, 2021c). 79% of those tickets issued by Tampa police were to Blacks, who only made up 20% of the population. In Oakland, 60% of all bicycle stops included Black cyclists despite only making up a quarter of the population (Brown, 2021c). In Austin, 321 bike tickets were issued in a low-income primarily Black community compared to only 5 tickets issued in Lincoln Park, a predominately wealthy White community (Brown, 2021c).

The data for Georgia are similar to the aforementioned studies. In an Open Records Request submitted by Propel ATL (Propel ATL, 2021) for data specific to Atlanta, they asked for race, gender, age, and location of tickets between 2015 and 2020 for things such as crossing the street outside the crosswalk, jaywalking, not walking on the sidewalk, soliciting a ride, and not using bike lights. As they explored the data, racial disparities surfaced in who was ticketed. Even though Atlanta's residential population is nearly 50% Black, 40% White, and other demographics filling in the gaps, nearly 90% of those ticketed for jaywalking and 81% of those ticketed for not using the sidewalk were Black. In Macon, where public transportation is limited and often inaccessible, there were fifteen pedestrian deaths in 2021 (Jett, 2021). Walk audits in Bibb County, where Macon is located, have communicated that safer, pedestrian friendly walkways are needed. There is currently an incomplete plan for a walking bridge along Gray Highway, one of the areas where a pedestrian has been killed. In the Georgia Department of Transportation (GDOT) Pedestrian Safety Action Plan 2018-2022 (Georgia Department of Transportation, n.d.), GDOT projects that pedestrian fatalities will continue to rise year over year, as seen in Figure 3. If something isn't done to address the inequities in policing as well as pedestrian safety, the projections will not only continue, but are likely to exceed expectations.

Urban and Rural Georgia

According to researchers within the Carl Vinson Institute of Government at the University of Georgia, there are 120 rural counties and 39 urban counties across Georgia as of 2020 (Tanner, 2021). Of the state's population, 79% of all state residents live in urban counties and the remaining 21% reside in rural counties. Over the past 10 years from 2010 – 2020, rural areas have been declining in population. Sixty-eight rural counties have lost population since

2010, while 10 primarily urban counties have accounted for 70% of the state's population growth since then. According to estimates as of 2022, the number of residents living in nonmetro or rural areas has decreased to just below 17% (*Georgia* , 2023). Racial demographics have also changed since 2010. There has been a -1.3% decline in Whites across the state since 2010. Simultaneously, Blacks, Hispanics, and Asians have all increased at 12%, 31%, and 51% respectively since that time. The trend of White's decreasing while Blacks, Hispanics, and others increasing is expected to continue through 2040 (Tanner, 2021). Assessing Georgia through the primary lens of urban and rural areas is important because these are the two main classifications of where Georgia residents live. Race, ethnicity, zip-code and other stratifying data points are all able to be viewed within and a part of the urban and rural context.

Growth of Arrested Mobility

Although not explicitly called by name, the Arrested Mobility framework has grown in popularity and use and is intertwined in various ways that are meant to protect the general public. Two ways that this framework has grown is through various Complete Streets and Vision Zero policies across the nation.

The goal of a Complete Streets policy is to help communities develop and implement policies and practices that ensure streets are safe for people of all ages and abilities, balance the needs of different modes, and support local land uses, economies, cultures, and natural environments (Smart Growth America, 2018). Since its inception, the Complete Streets movement has grown to focus on implementation and equity through ten policy strategies. Those ten strategies include establishing commitment and vision, prioritizing diverse users, being applicable to all projects and phases, allowing only clear exceptions, mandating

coordination, adopting excellent design guidance, requiring proactive land-use planning, measuring progress, setting criteria for choosing projects, and creating plans for implementation. Of the Complete Streets strategies, the three that most align with the Arrested Mobility framework are prioritizing diverse users, mandating coordination, and creating plans for implementation. Prioritizing diverse users calls for serving the most vulnerable people, the most underinvested communities, and underserved populations with the intent of improving equity (Smart Growth America, 2018). This aligns with the Arrested Mobility framework in that addressing those three areas, the health equity gap can likely be closed and adverse effects can likely be mitigated by being specific and targeting those experiencing health disparities. Mandating coordination as it relates to Complete Streets requires private developers to comply and interagency coordination between government departments and partner agencies (Smart Growth America, 2018). This ties into the Arrested Mobility framework because it models the interdisciplinary approach needed to address racism, over policing, adverse outcomes, and mortality issues. Creating plans for implementation calls for formal commitments that include specific steps for codifying law, policy development, and enactment in ways that will make and have measurable impact (Smart Growth America, 2018). This ties into the Arrested Mobility framework because to successfully close health equity gaps and address those most in need, benchmarks of success need to be created and adhered to.

Vision Zero is a strategy to eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, and equitable mobility for all (Vision Zero Network, 2022). Traditionally, pedestrian fatalities occurring while being physically active have been thought of as inevitable, placing the onus of responsibility on the individual, and were deemed to be too

expensive to address. However, under the Vision Zero strategy, the mindset has shifted to that of deaths being preventable, saving lives not being expensive, and adopting a systems approach to address issues. Doing this work through a systems thinking mindset allows one to see the relationship between structure and behavior, allowing for a better understanding of how systems work, what makes them produce poor results, and how to shift them into better behavior patterns (Meadows, 2008). The Vision Zero strategy implores a system thinking approach, which leans into the Arrested Mobility framework by looking upstream at systemic issues that are creating harm to people. The inclusion of Vision Zero strategies in practice allows for populations to have an equitable chance at being physically active in the communities they belong to.

Implications of the Problem

The implications of what happens as a result of arrested mobility have a direct impact on the social, political, economic, and health outcomes for Blacks. The inequitable application of laws and policies combined with systemic racism create an environment where Blacks are 54% less likely to be physically active than Whites regardless of neighborhood or income levels (Brown, 2021c), 46% less likely to be physically active than Whites regardless of racial composition of the neighborhood (Brown, 2021c), and where Black men living in predominately White neighborhoods are far less likely to be physically active in the areas surrounding their own homes (Brown, 2021c). While the inequitable application of laws and policies combined with systemic racism do not cause these disparities, this situation does not improve the conditions for Blacks to close these health disparity gaps.

As a result of the aforementioned statistics, some people began sharing their location with a loved one (Grantham-Philips, 2022) in an effort to mitigate any potential wrongdoings. The author here notes that sharing a location with a loved one should be thought of "as a solution to a problem," especially in the context of personal safety. Additionally, Black men often attempt to make themselves seem less threatening (Brown, 2021c) by using slouched posture, speaking in lower volumes, or even not making direct eye contact when speaking, in an attempt to thwart off any potential harm and to keep themselves safe.

The issues related to over policing and racist policing practices identified in the Arrested Mobility framework have been highlighted in recent analyses of policing practices. In an investigation by the United States Justice Department, evidence found patterns of discriminatory policing in Louisville, Kentucky where Breonna Taylor was killed in a botched raid in 2020 (Thrush, 2023). In this ninety page report, investigators described various instances of law enforcement misconduct ranging from excessive force to unlawful car stops to harassment of people during street sweeps to broad patterns of discrimination against Blacks and those with behavioral health disorders and problems (Thrush, 2023). Attorney General Merrick B. Garland said investigators "uncovered instances of blatant racism against Black residents, including the disproportionate use of traffic stops in Black neighborhoods" and the Assistant Attorney General for Civil Rights said that "the targeting of Black people for traffic stops and searches turned conventional law enforcement practices into 'weapons of oppression, submission, and fear'" (Thrush, 2023). Death and injury by excessive and lethal force by law enforcement and discriminatory police practices are topics gaining increased focus by researchers (Barajas, 2021; Buehler, 2017; DeGue et al., 2016; Park et al., 2020).

Areas with larger Black populations tend to have lower rates of upward social mobility (Brown, 2021c), which has its roots in redlining and other discriminatory policies and practices from years ago, which persist today. Upward mobility can take the form of career advancement, going from apartment living to home ownership, the size of a planned family, and everything in between. Racial residential segregation "discernibly" affects educational attainment for Blacks much more than for Whites (Brown, 2021c). According to the Pew Research Center, there are racial and ethnic differences in college graduation patterns as well as in reasons for not completing a degree. Among adults aged 25 and older, nearly 42% of White adults have completed a college degree compared to only 28% of Blacks (Schaeffer, 2022). First generation college students lag in income and wealth accumulation compared to those who have college educated parents (Schaeffer, 2022), and a disproportionate number of first generation college students are Black (Rivera, 2022). The aforementioned social outcomes link back to the Arrested Mobility framework because they describe the adverse conditions when Blacks are given inequitable opportunities to thrive compared to other racial and minority groups.

Racism and Health

Most notably, the downstream impacts of the Arrested Mobility framework can be seen in the health outcomes of Blacks. One way to characterize this downstream impact is by labeling it as "weathering," which hypothesizes that Blacks experience health deterioration as a consequence of the cumulative impact of repeated experience with social or economic adversity and political marginalization (Geronimus et al., 2006). The weathering hypothesis was originally coined by Dr. Arline T. Geronimus in 1992 as a way to describe and capture the

accumulation of racial stress over Black women's lives and how the observed pattern of racial disparities in maternal health and birth outcomes increase with maternal age (Forde et al., 2019). Dr. Geronimus hypothesized this while researching why White women experienced their highest point of fertility and lowest risk of complications in their 20's and 30's while Black women had this same window in their teens (Geronimus, 1996). Since then, this hypothesis has expanded to include other health metrics outside of maternal mortality and offers an explanation and reasoning behind why younger Blacks might experience morbidity and mortality typical of a White person who is significantly older (Geronimus et al., 2006).

Additionally, a downstream impact of the Arrested Mobility framework can be seen in the research done by Dr. David R. Williams. Dr. Williams is a leading researcher uncovering how racism makes people sick (David R. Williams, 2016). He developed three distinct scales to measure racism, one of which is the Everyday Discrimination Scale which "captures ways in which the dignity and the respect of people who society does not value is chipped away on a daily basis. (David R. Williams, 2016)" The Everyday Discrimination Scale captures nine items including experiences where a person might be treated with less courtesy than others, a person might receive poorer service than others in a restaurant or store, or if people act as if they are afraid of another person based on race (David R. Williams, 2016). His research has found that higher levels of discrimination are associated with an elevated risk of many chronic diseases including high blood pressure, abdominal obesity, and heart disease (D. R. Williams, 2005) – all of which are exacerbated by physical inactivity.

The weathering hypothesis and the work done by Dr. Williams with The Everyday Discrimination Scale are also both captured in a framework for the effects of residential

segregation on cardiovascular health, shown in Figure 4 (Essien & Youmans, 2022). This framework illustrates how segregation at the health system, socioeconomic, and structural and environmental level, including systemic racism, all contribute to cardiovascular risk factors such as obesity, physical inactivity, and hypertension, which lead to adverse cardiovascular outcomes such as stroke, heart failure, and premature mortality.

Across the United States, Blacks are more likely to be uninsured than Whites (Brown, 2021c). Being uninsured means having to pay more out of pocket at the time of an emergency, having to use the emergency room for primary care instead of having a primary care physician, and not having the luxury of taking risks in everyday life knowing that one mistake could lead to financial ruin. When Black families do have health insurance, they pay about twice as much of their average household income for healthcare costs compared to other groups (Brown, 2021c). Primarily in southern states, elected officials have failed to expand public health insurance programs, such as Medicaid, which would disproportionately help Blacks and other minority populations (Brown, 2021c). Looking specifically at Georgia, Medicaid expansion could provide affordable health coverage to 470,000 Georgians (Cover Georgia Coalition, 2020) that fall in the coverage gap. Of those in Georgia that fall in the coverage gap, 47% are Black (Center on Budget and Policy Priorities, 2021).

When considering the built environment, there are a number of factors related to arrested mobility that have downstream safety implications for Blacks. Unsafe sidewalks, too many vehicles on the road, and general lack of pedestrian concern all contribute to this. In the Dangerous By Design 2022 report completed by Smart Growth America, they labeled Georgia as the ninth most dangerous state for pedestrians between 2016 and 2020 (Smart Growth

America, 2022). Some data points contributing to this rating included average pedestrian deaths per 100,000 people per year, total pedestrian deaths, and long term trend in fatality rate when comparing 2011-15 to 2016-20. The pandemic change in fatality rate also contributed to this rating as there was a 0.29 point differential when comparing 2016-19 compared to 2020 data. The 0.29 point differential communicates that the fatality rate was higher during the first year of the pandemic in 2020 compared to the 2016-19 reporting period.

Theoretical Perspective

Socio-ecological Model

There are theories, that when applied to the Arrested Mobility framework, provide additional and supportive context of its reality. The socio-ecological model is a five-level nested model to better understand health promotion, practice, and the effect of potential prevention strategies (Health Resources and Services Administration, 2023; McLeroy et al., 1988). The five levels of this model include the individual inside of relationships inside of the community inside of the society inside of public policy (Scarneo et al., 2019). The individual level relates to personal and biological history factors such as age, education, and income that increase the likelihood of becoming a victim or perpetrator of violence. In this context, individuals are viewed in a silo, independent of anything that might influence them. The relationship level looks at close relationships such as social circles, partners, and family members that may increase the risk of experiencing violence as a victim or perpetrator. At this level, interpersonal relationships play a part in how people experience the events happening to them. At the community level, settings such as schools, workplaces, and neighborhoods, where interpersonal relationships occur, are looked at and how they influence how people become

victims or perpetrators of violence. The societal level takes a global, broader view of factors that help create or inhibit the conditions where violence is either encouraged or stopped. The policy level observes the federal, state, and local policies that influence societal behavior that affect everything else downstream.

As it relates to arrested mobility, the two levels that align most closely with its effects are the community and policy levels. Community is an appropriate fit because it takes cross-sector partners and settings such as residents, law enforcement, nonprofit agencies, public health, and local government to examine the barriers and facilitators to addressing and assessing community health and safety, to review existing solutions, to evaluate the acceptability and necessary adaptations of selected interventions, and to determine sustainability of initiatives (Stalker et al., 2020). Public policy and law are relevant because they can positively impact the health of community residents (Pepperdine University, 2022) by creating operational boundaries and guardrails for societies to follow. Communities are governed by the laws in that jurisdiction, so it's important to have laws that will help community members and help decrease health inequities.

Life Course Theory

Another major theory that has relation to the Arrested Mobility framework is the life course theory. This theory states that significant social and historical events shape the trajectories of birth cohorts and the individuals in them (Pearce, n.d.). This theory suggests that each life stage influences the next, and together the social, economic and physical environments in which we live have a profound influence on our health and the health of our community. Instead of focusing on one factor that affects health diseases or conditions, this

theory looks to social, economic, and environmental factors as underlying causes of persistent health inequalities (*The Life Course Theory*, 2022).

When looking at the birth cohort of people born between 1981 to 1996, most commonly known as Millennials (Nash, 2022), this group of individuals has lived through, and been shaped by, everything from the creation of the internet and its widespread adoption in the early 90's, the attacks on the World Trade Center in 2001, the Great Recession of 2008, and the extensive use and acceptance of social media present day. Living through these events has made Millennials behave a certain way because of the effects of these experiences. Similarly, living through the public deaths and murders of Trayvon Martin, Manuel Ellis, Ahmaud Arbery and many others leaves a lasting effect on how people operate and govern themselves after experiencing such events.

In relation to the life course theory and its application to arrested mobility, the people who have lived through these traumatic experiences have created the "I'm getting pulled over" shortcut to use on iPhones (Jacob, 2022). This shortcut was created as a means of self-preservation when faced with situations that might be life threatening. The use of this shortcut on an iPhone allows the user to verbally tell their iPhone "I'm getting pulled over" and the device will execute a series of commands that are meant to document the user if they are stopped or pulled over by law enforcement. The series of commands generally follow the sequence of sharing the users location with preselected contacts, such as an intimate partner, family, or other loved ones, sending an automated text message to those same contacts notifying them that the user has been stopped by the police, and opening a front-screen video to automatically record for documentation purposes. Given the users technological ability, they

can also modify the sequence of commands to execute other actions such as stopping the recording after a certain amount of time and sending it to a predetermined list of contacts, saving the video to a cloud based platform in case the physical iPhone is damaged, or automatically turning on one of the iPhone's "do not disturb" features so there are not any on-screen notifications during the interaction with law enforcement. As Apple does not record on-device data, it cannot be determined how many times this shortcut has been used to date.

At the individual level, there are various ways that people might internalize the downstream effects of the Arrested Mobility framework and how it directly impacts them. At its root, these are external forces outside of one's control and they must figure out how to respond accordingly as many of the situations dealing with the Arrested Mobility framework can be life or death ordeals. Within the realm of psychosocial theory, there are social cognition models and theories that are used by health behavior researchers (Newman & Newman, 2020) to help predict, explain, and change health behaviors. One such theory that intertwines with the Arrested Mobility framework is the protection motivation theory. The protection motivation theory proposes that people protect themselves based on two factors – threat appraisal and coping appraisal (Maddux & Rogers, 1983; Rogers, 1975). Threat appraisal is determined by how a person might view the situation being detrimental to their own health and well-being combined with the likelihood of the threat actually happening to them, while coping appraisal deals with how that person plans on dealing with the threat. Protection motivation theory is a theory that can be informative and solution oriented. The primary prevention strategy of protection motivation theory is to take measures that combat the risk, followed secondarily by taking steps to prevent a condition from becoming worse.

In the context of the Arrested Mobility framework, the primary prevention strategy to avoid undue harm at the hands of self-deputized citizens, law enforcement, or anybody else might be to simply avoid places where the threat might occur. For example, a Black male out jogging might avoid a neighborhood with low vehicular traffic that is somewhat secluded in favor of an environment that is more populated with higher visibility in the event that if something adverse does happen, there are people there as witnesses. In this same example, if they are out in a highly populated area and they are stopped by law enforcement or somebody else for questioning, this same Black male might make themselves seem less frightening, by comparison to a similarly sized White male (Sliwa, 2017), by slouching, talking in a higher pitched voice, or intentionally using language that might make them seem subservient to the person they are interacting with as a self-preservation tactic. These types of scenarios can contribute to the difficulty Blacks experience while being physically active, as there is always a perceived threat to their wellbeing, which exacerbates chronic health conditions for many.

Of the theories discussed here, the key concepts revolve around how the factors outside of the person influence their behaviors, how people change their behaviors because of what's happened to them, and how the downstream effects of the Arrested Mobility framework are internalized by those impacted. Furthermore, these theories and models prompt thought regarding Blacks equality relative to other demographics and whether or not laws and policies are equally and equitably enforced across demographics. Theory plays a large role in practice and application and there are many questions left unanswered.

Chapter summary and conclusion

At the intersection of physical activity and movement, racism, health inequities, and law lies the Arrested Mobility framework. It is one that is complex in nature, however, can be felt in the missing presence of Trayvon Martin, Manuel Ellis, Ahmaud Arbery, and countless others. Although the Arrested Mobility framework has broader implications in driving, public transit, ridesharing, and micro-mobility, some of the most notable impacts can be seen in the walking, jogging, and cycling components of active transportation, in crosswalks, highways, and roadways of the built environment, and how law enforcement interact with the communities they are serving. The laws and policies in place, or lack thereof, specifically pertaining to pedestrian activity, active transportation, the built environment, and law enforcement warrant further investigation to uncover whether or not they disproportionally impact one population of people relative to another. This chapter has provided important context in laying the foundation for how these issues manifest in everyday life. Moving forward, this project will look to analyze codified laws further to determine if there is a notable effect impacting Blacks differently compared to Whites.

Across the nation, health disparities exist for Blacks because of health inequities. The downstream effects of the Arrested Mobility framework in Georgia can be seen in racial disparities in ticketing offenses and Georgia being rated as the ninth worst state for pedestrian safety. All of these factors lead to the policies and laws that are focused on the built environment and their impact on Black people's ability to be physically active in the communities they belong to in Georgia. Additionally, the health equity differences in the way Blacks experience physical activity relative to other demographics cannot be disputed. There are differences and these differences need to be explored, discussed, and solved.

CHAPTER 3: METHODS

Research Method and Design Appropriateness

The research method that was used to execute this project is legal epidemiology, a component of public health law. Legal epidemiology, often referred to as the science of law, is "the scientific study and deployment of law as a factor in the cause, distribution, and prevention of disease and injury in a population" (Ramanathan et al., 2017). This area of public health practice and application was started within the Centers for Disease Control and Prevention's Public Health Law Program (PHLP) in 2000 (Barbero et al., 2020) and has since evolved, most notably through the work of the PHLP and the Center for Public Health Law Research at Temple University's Beasley School of Law (Burris et al., 2020). The Center has supported over eighty empirical studies of the impact of law on health, as well as LawAtlas, an innovative policy surveillance portal on scientific health law research methods (Temple University, 2022).

Within legal epidemiology, this project used a policy surveillance approach called a legal scan. Policy surveillance systems and methods, similar to epidemiology and public health surveillance systems, usually measure the current status of codified laws and policies at specific points in time for various measurement periods (Chriqui et al., 2016). Additionally, policy surveillance is meant to track laws over time and across multiple jurisdictions (The Policy Surveillance Program, 2016). The measurement periods and frequency are determined by the research protocol and the team of researchers. A legal scan differs from policy surveillance in that it tracks laws across multiple jurisdictions at one specific point in time, not over time (The Policy Surveillance Program, 2016). Legal scans are meant to be cross-sectional, where policy

surveillance is meant to be longitudinal. In this project, the legal scan method was used to assess codified laws that are focused on the walking, jogging, and cycling aspects of active transportation; the crosswalks, highways, and roadways of the built environment; and how law enforcement interact with the community they are serving–- and how each of these may affect populations in the state of Georgia.

This type of methodology is appropriate to the goals of this project for a number of reasons. Scientifically, policy surveillance and legal scans use systematic approaches, emphasize transparency, are replicable processes, and focus on delivering a highly accurate product through quality control (The Policy Surveillance Program, 2016). The systematic approach is one that has been standardized by researchers conducting various projects and uses a standard research protocol. The processes that policy surveillance and legal scans require have transparency to ensure quality control from start to finish. The policy surveillance process can be seen in more detail in Figure 5. Without methods to carefully monitor codified laws, and an understanding of whether or not they influence population health outcomes, practitioners would be unable to truly understand their impact and utility in advancing public health (Chriqui et al., 2011).

Legal epidemiology practices are also a proven strategy to assess and address racial health equity and how the downstream health disparities can be linked to arrested mobility. The need to integrate racial health equity considerations into policy-making, evaluation, and the practice of law were raised in an address to the World Justice Forum in 2017 by the judge of the High Court of Botswana, Justice Dingake (Huynh, 2022). In his address, Justice Dingake outlined four pathways through which law shapes racial health equity and why it is an

appropriate means to address equity issues. First, laws can create social conditions that physically and mentally affect individuals and populations. This can be seen through the socio-ecological model in how law influences society, which influences community, then influences relationships, and then the individual. Second, the law may foster or prohibit behaviors that skew distributions of well-being. This can be seen in the visible health disparities that plague Georgia and the rest of the United States. Third, haphazard and selective enforcement of law can lead to unequal health outcomes. This can be seen in cities like Atlanta, Georgia, where even though Blacks only make up 50% of the total population, 90% of tickets issued for jaywalking and 81% of tickets issued for not using sidewalks were given to Blacks. Finally, codified law and policy can directly address adverse factors such as impoverishment or shortage of affordable housing. This can be seen in the Georgia Systemic Change Alliance report that was submitted by the Racial Equity and Leadership Task Force to the mayor and City Council of Savannah, Georgia (The Racial Equity and Leadership Task Force, 2020). This report explored the six areas of criminal justice, economic empowerment and wealth development, education, environmental justice, health, and housing and provided guidance and discourse on how to address each area.

Research Questions

This project used legal scan methods to address the following research questions:

1. Are there codified laws focused on the walking, jogging, or cycling components of active transportation and the crosswalks, highways, and roadways of the built environment at the state and municipal level associated with Blacks and other racial

and ethnic minorities ability to be physically active in the communities they belong to in Georgia?

- To address this research question, the legal scan capturing this specific data as of 1 Jan 2022 was used.

2. Does law enforcement equitably distribute violations and citations for the relevant areas of active transportation and the built environment in the communities they serve that are associated with Blacks and other racial and ethnic minorities ability to be physically active in the communities they belong to?
    - To determine if law enforcement is equitable in their distribution of violations and citations, an open records request for the corresponding municipal police departments was filed requesting the total number of citations, the specific violation, race and ethnicity, age, sex, zip code, and citation/fine amount information on citations issued for violations of the walking, jogging, or cycling components of active transportation and the crosswalks, highways, and roadways of the built environment. Augusta and Macon have consolidated their municipal police departments into the county Sheriff's Office, so Richmond County Sheriff's Office and Bibb County Sheriff's Office, was used in their respective places. Data from research question 2 will be linked to data from research question 1 for analysis.
    - To analyze the data, the Analysis ToolPak within Microsoft Excel was used. Pivot tables were used to highlight the descriptive data because of their accuracy, versatility, and flexibility in the process. Additionally, one-way

ANOVA tests were used to analyze whether there were statistically significant differences between racial groups in each municipality and t-Tests were used to determine where in those racial groups the differences were. Regression models built in STATA were also used to tell statistical significance between groups of data. The analysis will provide researchers with linked data sets overlaying relevant codified laws and the violations of those laws.

- Per the Secretary of State (Office of Brad Raffensperger, 2023), all open records requests will be processed within three business days of receipt of request. Additionally, the cost to process an open records request is the time expenditure cost using the hourly salary of the lowest paid employee qualified to conduct the research of an open records request (Office of Brad Raffensperger, 2023). Funding to pay for this expense was covered by the Doctoral candidate.

3. What are some health equity issues that can be addressed that will help close some health disparities for Blacks and other racial and ethnic minorities in Georgia relevant to the data from research questions 1 and 2?
    - To address some health equity issues that can help close some of the health disparities for Blacks and other racial and ethnic minorities in Georgia, this required an examination of the types of codified laws and equitable enforcement of those laws discovered from the research. This health equity examination followed the guidelines set forth by Thomas et al. by laying out

third and fourth generation approaches to health equity, which entail providing solutions and ways to take action (S. B. Thomas et al., 2011).

Population

The jurisdictions that this project examined are the state of Georgia itself and the most populated municipality in each county within Georgia based on US Census estimates as of July 1, 2022 (Brinkhoff, 2022). The corresponding cities, counties, and population estimates can be found in Table 1. Application of codified laws pertaining to the walking, jogging, or cycling components of active transportation and the crosswalks, highways, and roadways of the built environment are subject to state-level preemption (CARR et al., 2020), in which case Georgia state law will be used in its place. For example, cities such as Warner Robins, GA do not have pedestrian laws outright mentioned, so Georgia state law would be used in its place. For clarity, Blacks, as this demographic relates to the open records requests, are defined as a person having origins in any of the Black racial groups of Africa (United States Census Bureau, 2022g).

Sampling Frame/Strategy

Municipalities within Georgia were examined and considered for all codified laws related to the walking, jogging, or cycling components of active transportation, the crosswalks, highways, and roadways of the built environment, and equitable enforcement of violations and citations by law enforcement that are in effect as of January 1, 2022. Any codified laws that expired before this date or took effect after this date were not considered in the legal scanning process. Legal search engines that were used are LexisNexis, Municode, and official municipal/city websites. The following keywords were used in the search process to identify and collect any applicable codified laws: ”walking,” “jogging,” “highway,” “roadway,” “activity,”

"exercise" "traffic," "bicycle," "jaywalking," "crosswalk," "pedestrian," and "active transportation." Given the context that this project is focused on, the abovementioned keywords cast a wide enough net so that any applicable codified laws related to the walking, jogging, or cycling components of active transportation and the crosswalks, highways, and roadways of the built environment were captured in the search. All captured policies and laws were coded using the software program "MonQcle" with the assistance of the Center for Public Health Law Research's Technical Assistance Program housed within the Temple University Beasley School of Law. This Center offers use of the MonQcle program for free through their technical assistance program along with free trainings, tutorials, and guidance.

MonQcle is a program that allows researchers to organize laws by tracking them in one central location. The program helps keep information up to date, makes it easy to sort and mark up, and allows the researchers to use tags and bookmarks for easy navigation. The program itself has built in quality control measures that catch process errors and allows the researchers to share and collaborate with others in the field for easy partnership. The platform also allows the user to display the collected law into spreadsheets and interactive maps. Information collected and produced on this platform can also be shared to help advance research, practice, and application (MonQcle, 2022). Following the analysis, the populations were compared by geographic location, language of the law, and intended and/or unintended outcome.

Research Protocol

This project used a phased approach to address each research question. To address research question 1, phase one of this research protocol followed the same format as outlined

by Temple University's Center for Public Health Law Research found in Appendix A. Each step of the research protocol is described in more detail below. The applicable laws for the most populated municipality in each county in Georgia were examined. The data uncovered were used to stratify each type of codified law and each law was categorized on its respective typology.

- Section I. Date(s) of Protocol: This section will articulate the time period that the collection of laws will fall within. For this project, in accordance with legal scan methodology, the date of this protocol will be those laws that were in effect as of 1 Jan 2022. Any laws that were not in effect prior to this date will not be considered. Any laws that take effect after this date will not be considered.
- Section II. Scope: The scope of this project was to examine codified laws that are relevant to the walking, jogging, or cycling components of active transportation, the crosswalks, highways, and roadways of the built environment, and equitable enforcement of violations and citations by law enforcement. Equitable enforcement of violations and citations by law enforcement was measured by comparing demographic and geographic information on citations issued for violations of the walking, jogging, or cycling components of active transportation and the crosswalks, highways, and roadways of the built environment to population demographics in those same areas. Anything beyond this will not be considered.
- Section III. Primary Data Collection: The data collection process involves six distinct sections –

- Project Dates: The dates of primary data collection began once the Prospectus of this project was completed.
- Dates Covered in the Dataset: This is the same as the dates of protocol from section I. Laws that are in effect as of 1 Jan 2022 will be considered.
- Data Collection Methods: The primary researcher who built this dataset was Doctor of Public Health candidate, Tony Price. He was assisted by the Technical Assistance provided by the Center for Public Health Law Research at the Beasley School of Law, Temple University.
- Databases Used: This project collected data from databases such as LexisNexis, Municode, and state and municipal/city specific government websites.
- Search Terms and Search Strategy: The following keywords were used in the initial search process to identify and collect any applicable policies and laws: ”walking,” “jogging,” “highway,” “roadway,” “activity,” “exercise” “traffic,” “bicycle,” “jaywalking,” “crosswalk,” “pedestrian,” and “active transportation.” During the discovery process, there were no additional keywords that were found to be useful.
- Initial Returns and Additional Inclusion or Exclusion Criteria: All laws that were returned using the specified keywords were logged into MonQcle for record keeping.

- Section IV. Coding: The coding scheme for this project was derived from the Question Development Table (QDT) found in Appendix B. Each specific law for each jurisdiction, including the state of Georgia, was independently coded through the QDT. The process

to develop this QDT was taken directly from the identified keywords to find the applicable laws. The inclusion and exclusion criteria were derived by whether or not the state or appropriate municipality regulated laws in the particular area of interest. In the instance where a municipality does not specifically mention a type of law being searched, state law was used in its place.

- Section V. Quality Control: Quality control was built into this process by secondary source cross validation. The MonQcle program also has quality control built into its database to account for redundancies in the coding and discovery process. If the applicable laws are discovered using Municode, the secondary source that they will be validated against are the municipal/city websites.
- Section VI. Update: Since this project is a legal scan and cross-sectional in nature, and not longitudinal, there will be no updates to the discovered laws once they have been accounted for.

During phase one of this project, a pilot study of ten municipalities was executed before moving forward with the entire sample to ensure the QDT was gleaning the correct information and to see if it needed to be modified in any way. This pilot study also allowed the researcher to see any potential variability in the codified laws.

To address research question 2, phase two of this research protocol entailed examining the various typologies of the codified laws discovered in phase one. For each typology of laws discovered in phase one, a corresponding open records request for a rural and urban municipality within that typology was conducted. The Office of Management and Budget in HRSA defines a rural area as an area with fewer than 49,999 people (Health Resources &

Services Administration, 2022). For example, if there were six different types of laws discovered during phase one, and each type of law had thirty corresponding municipalities, then two randomly selected municipalities, one rural and one urban, within that typology was contacted to conduct an open records request. If that municipality did not reply to the open records request, then another municipality within that same typology was randomly selected to conduct an open records request. Taking this approach allowed the researcher to be more intentional about how many open records requests were executed. Data from each open records request generated demographic and geographic information on citations issued for violations of the respective codified laws. The demographic and geographic information was compared against population level data to determine if there was equitable enforcement. The municipalities that were selected for the open records requests can be seen in Table 20. For the purposes of this project, Grovetown is being used as the second municipality within its typography because all of the urban municipalities within that typography were not able to be used. Grovetown was added as an additional municipality to maintain the focus of six municipalities. The urban municipalities designated within this typography were not able to be used because Valdosta did not include race identifiers for a significant portion of their data; Macon, Augusta, and Atlanta were all unresponsive; and Columbus could not include race identifiers in any report they generated.

To address research question 3, phase three of this research protocol lists solutions and ways to take action (S. B. Thomas et al., 2011) for each typology of laws and their enforcement. For example, if during phase one it is discovered that a typology of law is how a citizen might utilize a bicycle – as in many places individuals must ride bicycles in the street and are

prohibited from riding them on the sidewalk – and that during phase two it is found there are more bicycle citations issued for non-whites than whites in a predominately white area, then an example of a solution to this problem would be to install bike lanes on roads that don't have them already. An example of a way to take action to execute this solution would be to allocate funds in the corresponding budget to move forward with the implementation and execution of a Complete Streets project.

Summary

The project methodology of using a legal scan is appropriate for this project given the scope, timeline, and goals. The broader legal epidemiology method is also appropriate considering that public health law is a prime avenue to determine which laws shape racial health equity. This project specifically will examine the laws in the most populated municipalities in each county in Georgia that have the potential to affect racial health disparities for Blacks and other represented minorities by identifying the health inequities. There are differences in how laws are different at the city and state level – even differences in what is applied. A legal scan for the corresponding municipalities using the identified key words, has the potential to uncover more policies and laws relevant to the Arrested Mobility framework.

CHAPTER 4: FINDINGS AND RESULTS

Discovery Phase

The objective of the discovery phase of this project was to examine the largest municipality in each county in the state of Georgia, along with Georgia law, for all relevant traffic, bicycle, and pedestrian laws. Each municipality included would then have their laws cross-referenced with Georgia law for tracking purposes to see if their municipal law differed from Georgia law. With this approach, there would have been 159 municipalities examined plus Georgia, making 160 total records. There were nine municipalities that were the largest in two separate counties – Fitzgerald, Fort Oglethorpe, Atlanta, Warner Robins, Manchester, McRae-Helena, Vidalia, Waycross, and the unified government of Webster County – making 151 total records. The corresponding municipalities and the two counties that they are the largest city in can all be found in Table 1. Twenty-five municipalities did not have their own city ordinances, so county records were used in their place. One municipality, Homerville, only housed their municipal records in physical copies within their jurisdiction. They do not have an electronic interface for their records, making efficient data collection a challenge. As a result, Homerville was excluded – making a total of 150 records. Additionally, three municipalities – Savannah, Brunswick, and Macon all had Complete Streets Policies as 1 Jan 2022. It is worth noting that Athens did adopt a Complete Streets Policy, however, it did not take effect until 7 June 2022 which was after the time period that this project is examining.

Phase One

Georgia Laws

Phase one of this project addressed research question one. The first research question asked if there codified laws focused on the walking, jogging, or cycling components of active transportation and the crosswalks, highways, and roadways of the built environment at the state and municipal level associated with Blacks and other racial and ethnic minorities ability to be physically active in the communities they belong to in Georgia? Phase one of this project entailed the legal scan which incorporated codified laws for the state of Georgia and 149 municipalities. The relevant laws for the state of Georgia are housed in the Georgia General Assembly, Title 40 Motor Vehicles and Traffic, Chapter 6 Uniform Rules of the Road. This chapter consists of 15 different articles outlining rules for vehicular traffic, bicycle use, and pedestrian safety. All 15 articles include 397 sections of codified law.

Article 1 is the General Provisions and includes §40-6-1 — 40-6-17. Table 2 lists each section of Article 1 along with that section's title. This article provides guidance on violations that will be considered misdemeanors unless otherwise stated, maximum fines for speed violations, instructions for people riding animals or driving animal drawn vehicles, how to navigate traffic and highways when there are workers present, proper insurance requirements for motor vehicles and motorcycles, consequences of knowingly driving a motor vehicle on a suspended, canceled, or revoked registration, and the proper procedure for passing stationary vehicles and vehicles with active sanitation workers. Article 1 does not follow a pattern of consistency for outlining guidance, rather, provides a general overview of what most vehicle operators should be aware of.

Article 2 outlines regulations as they relate to Traffic Signs, Signals, and Markings and includes §40-6-20 – 40-6-28. Table 3 lists each section of Article 2 along with that section's title.

This article provides strict guidance on obedience to traffic-control devices such as traffic signals, flashing circular red or yellow signals, and pedestrian-control signals; red light cameras; and lane direction signals. Guidance is provided on the meanings and definitions of various traffic-controlled devices and what the consequences are for interfering with official traffic-control devices and certain signs. Instruction is also given for traveling within and on restricted access and managed access lanes. This article exclusively speaks to how those individuals on the road should obey, observe, and monitor traffic signs, signals, and markings.

Article 3 outlines regulations as they relate to Driving on the Right Side of Roadway, Overtaking and Passing, and Following too Closely and includes §40-6-40 – 40-6-56. Table 4 lists each section of Article 3 along with that section's title. This article gives clear guidance and rules on which side of the road to properly drive on, how to overtake another vehicle safely and without harm, where a driver can and cannot pass another vehicle, where some lanes of traffic are prohibited, which lanes certain vehicles such as buses, trucks, and motorcoaches can use, the proper procedure for yielding to and passing a bicyclist in a bicycle lane, and when and how to use high occupancy toll lanes. This article exclusively speaks on vehicular traffic, and while there is information on how vehicles should yield to and pass a bicyclist, this article does not speak on how bicyclists should govern themselves.

Article 4 outlines regulations as they relate to the Right of Way of traffic and includes §40-6-70 – 40-6-77. Table 5 lists each section of Article 4 along with that section's title. This article provides direction on the procedures of right of way for vehicles approaching and entering an intersection, yielding when turning left, stopping versus yielding, entering a crossing roadway, how to properly approach an authorized emergency, highway construction,

or maintenance vehicle on the road, how to proceed in a funeral procession, and the penalties for a collision which cause serious injury to any motorcyclist, pedestrian, bicyclist, or farmer transporting certain items. This article speaks to the order or operations a vehicle should follow when there might be multiple vehicles attempting to accomplish the same action.

Article 5 outlines regulations as they relate to Rights and Duties of Pedestrians and includes §40-6-90 – 40-6-101. Table 6 lists each section of Article 5 along with that section's title. This article includes how and when pedestrians should obey traffic-control devices and traffic regulations, their right of way in crosswalks, when and how pedestrians should cross a roadway outside of a cross walk if necessary, how vehicle drivers should interact with pedestrians on the road, pedestrians soliciting along a roadway, and pedestrians yielding to authorized emergency vehicles. Of the fifteen articles comprising the Uniform Rules of the Road, Article 5 is the only one specifically pertaining to pedestrians that outlines how they are to interact with vehicles on the road. This article is specific to pedestrians and does not include any other non-vehicle instructions or guidance.

Article 6 outlines regulations as they relate to Turning, Starting, and Signaling and includes §40-6-120 – 40-6-126. Table 7 lists each section of Article 6 along with that section's title. This article provides guidance for how vehicles and bicyclists should use proper turn signals at intersections, proper turning movements for turning, changing lanes, slowing, and stopping, as well as which hand signals are appropriate to turn which direction in the event that turn signals that would normally appear on a vehicle are unavailable. Additionally, instruction is given for vehicle users and bicyclists on how to use the center lane of traffic for turning. This article exclusively speaks on turning, starting, and signaling for vehicle and bicycle users.

Article 7 outlines regulations as they relate to Negotiating Railroad Crossings and Entering Highways from Private Driveways and includes §40-6-140 – 40-6-144. Table 8 lists each section of Article 7 along with that section's title. This article provides all direction and guidance on how motor vehicle users should approach and travel over railroad crossings, how to properly stop at a railroad crossing, which vehicles are to stop at railroad crossings regardless if there is a stop sign or not, and how to move heavy equipment such as tractor trailers over railroad crossings. Additionally, guidance is provided on how to safely and legally emerge from an alley, driveway, or building and that driving on a sidewalk is prohibited. This article is restricted to railroad instructions and the one section regarding vehicles emerging into traffic.

Article 8 outlines regulations as they relate to School Buses and includes §40-6-160 – 40-6-165. Table 9 lists each section of Article 8 along with that section's title. This article highlights specific instructions for school buses such as general operation rules for school buses, speed limits when transporting children, required communication equipment onboard school buses, using visual signals and headlights, the duty of a school bus driver when stopping the school bus and allowing passengers to depart, how drivers should govern themselves when attempting to overtake a school bus and if any violations occur, and how they should be reported. Similar to other articles in the Uniform Rules of the Road, this article is exclusive to school buses and how they should be interacted with.

Article 9 outlines the regulations as they relate to Speed Restrictions and includes §40-6-180 – 40-6-189. Table 10 lists each section of Article 9 with the section's title. This article provides immense detail as it relates to basic rules around speed restrictions, establishes maximum speed limits and speed zones for state highways and roads, gives local authorities the

ability to alter speed limits within their jurisdiction, enforces minimum speed limits, prohibits racing on highways and streets, and gives guidance on speed enforcement in highway work zones. This article also establishes and classifies what a super speeder is and if a person is found to be a super speeder what those fees are. Although this article provides instruction on speed restrictions at the state level, local jurisdictions do have the authority to modify speed limits and zones as they see fit.

Article 10 outlines regulations as they relate to Stopping, Standing, and Parking and includes two parts. Part one is the general provisions and includes §40-6-200 – 40-6-208 and part two is the section for parking for persons with disabilities which includes §40-6-220 – 40-6-228. Part one provides directions on how vehicles are supposed to be parked and grants powers to the Department of Transportation and local authorities to enforce those rules. Part one also gives guidance for stopping, standing, or parking in business and residential districts, obstructing intersections, when law enforcement has the authority to remove vehicles, and establishes liability to vehicle owners to correctly maintain and upkeep vehicle maintenance. Part two specifically establishes guidelines around parking for persons with disabilities. This includes definitions for persons with disabilities, granting the same authority to persons with disabilities from out of state as those who live in the state of Georgia, and details the offenses and penalties for anybody found to be in violation of this article. Everything in this article applies to both public and private property.

Article 11 outlines the Miscellaneous Provisions and includes §40-6-240 – 40-6-255. Table 12 lists each section of Article 11 along with that section's title. Everything included in the miscellaneous provisions is what's not included in the previous ten articles. All matters

concerning, but not limited to, distracted driving, obstructing a driver's view, driving through a canyon or mountain highway, crossing fire hoses, securing and covering loads on vehicles, littering on highways, wearing devices that impair hearing or vision, drag racing, transporting medical waste, and driving away without paying for gasoline is covered. There is no identifiable theme with what's covered in this article, rather, things that are necessary but didn't have a link to any other articles can be found here.

Article 12 outlines regulations as they relate to accidents and includes §40-6-270 – 40-6-279. Table 13 lists each section of Article 12 with that section's title. This article specifies what classifies as a hit and run, the duty the driver has when striking an unattended vehicle or permanent fixture, how a driver should report an accident resulting in injury, death, or property damage, what types of information should be exchanged in the event that two drivers are involved in an accident, how law enforcement should handle accidents when arriving at the scene, uniform motor vehicle accident reports and reporting procedures, and how to proceed with accidents involving the operation of fully autonomous vehicles. This article is extensive and thorough in its explanation and breakdown of accidents.

Article 13 outlines regulations as they relate to Special Provisions for certain vehicles and is separated into nine parts. Table 14 lists each section and part of Article 13 along with that section's title. Part 1 of Article 13 describes bicycles and play vehicles and includes §40-6-290 – 40-6-299. Part 1A of Article 13 is for electric assisted bicycles and includes §40-6-300 – 40-6-303. Part 1B of Article 13 is for the operation of farm use vehicles and includes §40-6-305 – 40-6-308. Part 2 of Article 13 addresses motorcycles and includes §40-6-310 – 40-6-316. Part 2A of Article 13 addresses electric personal assistive mobility devices and personal delivery

devices and includes §40-6-320 – 40-6-329.2. Part 3 of Article 13 addresses personal transportation vehicles and includes §40-6-330 – 40-6-331. Part 4 of Article 13 addresses mopeds and includes §40-6-350 – 40-6-354. Part 5 of Article 13 addresses low-speed and multipurpose off-highway vehicles and includes §40-6-359 – 40-6-362. Part 6 of Article 13 addresses the personal transportation vehicle transportation plan and includes §40-6-363 – 40-6-369.1. While other sections of the Uniform Rules of the Road do mention and include the use of bicycles, this article is the only one that has a clear and deliberate section pertaining to the use and operation of bicycles.

Article 14 outlines regulations as they relate to the effect of this chapter on powers of local authorities and includes §40-6-370 – 40-6-376. Table 15 lists each section of Article 14 along with that section's title. While it has been mentioned in certain previous sections of various articles, this articles grants explicit authority to local authorities in how they adopt the Uniform Rules of the Road, where state law takes precedence over local authority, and what the citations are for certain violations.

Article 15 outlines regulations as they relate to serious traffic offenses and includes §40-6-390 – 40-6-397. Table 16 lists each section of Article 15 along with that section's title. This article outlines the repercussions for offenses such as reckless stunt driving, driving under the influence of alcohol, drugs, or other intoxicating substances, homicide or feticide by vehicle, serious injury by vehicle, fleeing or attempting to elude a police officer, impersonating a police officer, homicide by interference with official traffic-control device or sign, and aggressive driving. This article assumes the worst case scenarios for some of the previously mentioned offenses.

Municipal Laws – Traffic

Of the 149 municipalities that were included in this project, 129 (87%) of them expressly adopt the Georgia Uniform Rules of the Road as their own and can be seen in Table 17. Six municipalities – Alma, Barnesville, Georgetown, Gibson, Augusta, and Macon – all have their own expressly written traffic laws in conjunction with the Uniform Rules of the Road. Outside of what is already included in the Uniform Rules of the Road, Alma declares that the maximum speed limits within their city, unless otherwise provided, will be 25 miles per hour. Additionally, Alma expressly prohibits any person from operating a motor vehicle without a valid chauffeur's or driver's license. Barnesville expressly states that the formations and all current locations of traffic control devices and markings that are in place within their municipality are ratified and approved by their board of commissioners. Georgetown expressly states specific speed zones in their municipality that are lower than what is required in the Uniform Rules of the Road. Heavy trucks, such as those with three or more axles, are also regulated to only perform vehicle maneuvers that do not impede traffic or cause others on the road additional harm. Georgetown also provides a minimum impound fee for impounded vehicles within that municipality. The minimum fee is $100 and is line with §16-13-30-32. Gibson also expressly states specific speed zones in their municipality that are lower than what is required in the Uniform Rules of the Road.

Augusta has five distinct articles that govern their traffic laws. Augusta's first article defines words and phrases as it applies to their municipality, similarly to how the Uniform Rules of the Road defines words and phrases as it applies to the state of Georgia. Augusta's second article discusses their traffic control devices as well as usage of traffic lanes and is in line with

Georgia's Uniform Rules of the Road. Augusta's third article specifies their speed regulations in their specific municipality. The only difference between Augusta's speed regulations and the Uniform Rules of the Road is that Augusta specifically outlines where in their municipality school zones are for reduced speeding and regulatory enforcement. Augusta's fourth article specifies turning movements and instead of listing the proper way, such as the Uniform Rules of the Road, lists the improper way for certain movements. Specifically mentioned is language around making an improper right turn, improper left turn, improper starting of a parked vehicle, improper turning by not being in proper position and/or using signals, improper use of signal lights while turning, improper use of signal lights while stopping or stopped, improper use of signal lights if flashed on one side only of parked vehicle or used as do pass signal, and improper use of hand signals. Augusta's fifth article outlines regulatory practices for driving in and along one way streets and alleys. Specific mention is made that vehicles should only be driven in the direction clearly marked in the alley and not in the opposite direction as to create potential accidents or collisions.

Macon specifically outlines their guidance as it relates to traffic control devices and speed regulations in their municipality. Macon specifically grants power and authorizes the traffic engineer to designate certain traffic control signs, markings, and devices for pedestrian crosswalks, safety zones for pedestrians, and other right of way opportunities for pedestrians. Speed regulations are specifically outlined for what is lower in their municipality relative to the Uniform Rules of the Road. The remaining 14 municipalities had no language at all regarding traffic regulations, therefore, the Uniform Rules of the Road are enacted in their absence.

Municipal Laws – Bicycles

Sixty (40%) of the 149 municipalities included in this project have written bicycle laws in their code of ordinances. Those municipalities can be found in Table 18. Of these 60 municipalities, 45 have expressly written language prohibiting bicycle riders from riding on sidewalks within the city. The only municipality that has express written language allowing bicycle users to ride on sidewalks is Watkinsville. Gibson and Nashville both expressly adopt §40-6-291-298, which is the section of the Uniform Rules of the Road that specifically apply to bicycles and their use. Hiawassee and Millen both have express written language that any person riding a bicycle must wear a helmet that meets or exceeds the impact standards set by the American National Standards Institute, the Snell Memorial Foundation, or the federal government. Clayton has language stating that a bicycle user must wear a helmet, but does not specify what criteria that helmet needs to meet. Tifton, West Point, Butler, Columbus, and Atlanta all have express language prohibiting bicycle users from clinging or holding on to other vehicles while either vehicle is in motion. West Point, Manchester, Hawkinsville, and Douglasville all have express language stating that bicycle users need to have lights equipped on the front and back that give at least 300 feet of visibility in both directions at night time.

Ten municipalities either have a specific article or chapter pertaining to bicycle use in their code of ordinances. Rome's article prohibits riding on sidewalks and has no additional language. Waycross prohibits riding on sidewalks and riding at unusual speeds or in a disorderly manner. Dahlonega prohibits bicycle users from riding on sidewalks, riding in a negligent manner, and instructs the bicycle user to yield the right of way to pedestrians in the event they are riding on the sidewalk. Both Columbus and Butler instruct all bicycle users to obey traffic regulations, not ride on sidewalks, prohibits clinging to moving vehicles, prohibits carrying any

more people on a bicycle than there are seats for, and prohibits any unusual speeds. In addition to what Columbus and Butler enforce, Atlanta also instructs bicycle users to obey traffic control devices and that all bicycles in use must have functioning brakes installed. Douglasville's article states that all rules of the road will apply to bicycle users, prohibits disorderly riding – specifically riding with both hands off the handlebars, prohibits bicycle users from riding on the sidewalks, prohibits bicycle users from riding more than two bicycles side by side in a single lane of traffic, and requires bicycle users to have lights installed. Grovetown and Augusta both state that traffic ordinances apply to bicycle users, bicycle users must obey traffic control devices, and if found in violation they will be charged with a misdemeanor. Athens' chapter states that all traffic ordinances apply to bicycle users, prohibits bicycle users from riding on sidewalks, and if they are riding on sidewalks bicycle users must yield the right of way to pedestrians. The bicycle ordinances pertaining to Savannah, Macon, and Brunswick are all found in their Complete Streets Policies.

Municipal Laws – Pedestrian

Of the 149 municipalities included in this project, only 12 (8%) have expressly written pedestrian laws. Those 12 municipalities can be found in Table 19. Crawfordville and Nashville specifically note that people are not allowed to prevent, obstruct, or otherwise interfere with pedestrian or vehicular traffic in any capacity. Additionally, Nashville has language instructing pedestrians to only cross streets whenever possible at intersections and at right angles. When crossing the street in crosswalks, they are given the right of way and oncoming vehicles must yield on their approach. Watkinsville designates sidewalks for use by pedestrians and non-prohibited users to include bicyclists and non-motorized scooter riders.

Cleveland has a specific article for Pedestrians' Rights and Duties. This article includes language giving pedestrians the right of way at intersections when there is a designated or unmarked crosswalk, stating that any vehicles approaching must yield for pedestrians to cross the roadway. Similarly to the Uniform Rules of the Road, at controlled intersections, pedestrians are not to cross the roadway when there is a red or stop signal and can only cross on a green or go signal. Crossing a street out of a crosswalk or crossing diagonally, otherwise known as jaywalking, is prohibited. Pedestrians are also prohibited from standing in the roadway for the purpose of soliciting a ride from the operator of any other vehicle, also known as hitchhiking.

Grovetown and Augusta also each have specific articles for Pedestrians' Rights and Duties that are identical to each other. Their articles instruct all pedestrians to cross streets at right angles except where otherwise indicated by a crosswalk or official traffic control device and to not pass through, around, or over any crossing gate at a railroad crossing. All vehicles should exercise extra caution as to not collide with children and pedestrians who might be intoxicated and must yield to any pedestrian who is on a sidewalk. Conversely, pedestrians are also prohibited from being intoxicated by liquor or any drug to any degree and to stay off roadways if they are. Pedestrians are also prohibited from soliciting rides from operators of other vehicles.

Valdosta specifically prohibits pedestrians from standing in the roadway for the purpose of soliciting a ride, employment, business, contributions, or handing out political literature to the occupant of any vehicle. Columbus has an article for Pedestrians' Rights and Duties and only includes language prohibiting pedestrians from crossing streets at any place other than a

crosswalk in the business district, on any street or parkway, or diagonally except when there is an official traffic control device pertaining to those crossing movements. Atlanta also has an article for pedestrians and prohibits them from standing in a street or roadway in any attempt to obstruct traffic and walking on a controlled access highway unless it is necessary to comply with police or repair, maintain, and clean that highway. It is unlawful for any pedestrian in Atlanta to stand in any roadway for the purpose of cleaning automobile windows for the purpose of soliciting funds. The pedestrian ordinances that are applicable to Brunswick, Macon, and Savannah are all part of their respective Complete Streets policies.

Municipal Law – Complete Streets Policies

As of January 1, 2022, Macon, Savannah, and Brunswick were the only cities with Complete Streets Policies that were codified into their city ordinances. Athens officially adopted their Complete Streets Policy in June 2022. As identified in the city ordinances, the purpose of the Complete Streets project in each municipality was to establish a livable community with enhanced mobility, equity, and vitality in all neighborhoods and for people of all ages and abilities, through the design, maintenance, and use of public rights of way. The objective of including an Article in the city ordinances around Complete Streets was to foster a routine part of everyday operations, working in coordination with other departments, agencies, and jurisdictions to maximize opportunities for connectivity and cooperation. Implementation of Complete Streets involves, but is not limited to, pavement markings and signs; sidewalks and pedestrian safety improvements such as medians, curb extensions, and crosswalks; American Disabilities Act (ADA) accessible curb ramps and accessible pedestrian signals; transit stops and signage; improved pedestrian and bicycle access to transit stops and stations; protected or

separated bike lanes or shared use lanes; bike lanes; bicycle activated street signals; bicycle parking facilities; and street trees, landscaping, street lighting and street furniture.

Design standards for implementation of Complete Streets can be derived from the manual on Uniform Traffic Control Devices for Streets and Highways; the United States Department of Transportation Federal Highway Administration Traffic Monitoring Guide, Small Town and Rural Multimodal Networks, and Separated Bike Lane Planning and Design Guide; the American Association of State Highway and Transportation Official's Policy on Geometric Design of Highways and Streets, Guide for Planning, Designing, and Operating Pedestrian Facilities, and Guide for Development of Bicycle Facilities; the National Association of City Transportation Officials Urban Street Design Guide, Urban Bikeway Design Guide, Don't Give Up at the Intersection, and Designing for All Ages and Abilities; the Georgia Department of Transportation Complete Streets Design Policy; Final Circulars and guidelines issued by the Federal Transit Administration including design requirements abiding by the Americans with Disabilities Act, Title VI, and Environmental Justice; and documents and plans created for and approved by each municipality including their respective comprehensive plans, Vision Zero Strategic Plan, Transportation Improvement Program, and the Long-Range Transportation Plan.

Complete Streets compliance committees are responsible for overseeing and ensuring the implementation of each respective municipality's Complete Streets project. Compliance committee members can consist of a combination of the executive director of that municipality's planning and zoning commission or their designee; that municipality's planning organization or their designee; a member of the engineering department; a member of the traffic engineering department; a member of the public works department; a member from the

Citizen's Advisor Committee; or a member of facility management. The committee also has the authority to have ad hoc members, which can consist of special interest groups or other groups in the municipality with special interests.

Annual reporting as it relates to Complete Streets projects involves reporting at the end of each fiscal year the mileage of sidewalks created, the number of ADA compliant curb cuts created, the mileage of on-street bicycle facilities created, the mileage of multi-use facilities created, the number of transit stops added, total transit ridership as applicable, percentage of projects completed with Complete Streets focus and compliance, safety and collision statistics across modes, and number of projects implemented in low-moderate income census-tracts. These annual reports are to be made public and submitted to each municipality's Mayor's office and Clerk of Commission.

Phase Two

Typography of Law

Based on the data acquired from the legal scan in Phase One, there are three types of law that are relevant to open records requests. Those types of law are – 1) municipalities that expressly adopt Georgia traffic law, the Uniform Rules of the Road, as their own, 2) municipalities that have their own pedestrian laws, and 3) municipalities that have their own bicycle laws separate from Georgia bicycle law. The randomly selected municipalities to be included in the open records requests can be found in Table 20. There were two municipalities from each typography included in the random selection. One rural and one urban municipality was to be included in the examination of each typography, however, Grovetown was used as an additional rural municipality because the urban municipalities within that typography were not

able to be included. The municipalities were randomly selected by assigning each municipality in each typography a number and using a random number generator to select a number. The municipalities selected were Watkinsville, Brunswick, Thomaston, Albany, Grovetown, and Athens, Georgia. The same data was requested from each municipality – which included the specific violation, race and ethnicity, age, sex, zip code, and fine amount for each citation issued related to pedestrian laws, traffic laws, and bicycle laws between the January 1, 2022 – December 31, 2022 time period. Codified laws and information that was not relevant were excluded from the findings.

Watkinsville, GA

Watkinsville, GA is a rural municipality within the typography of municipalities that expressly adopt Georgia traffic law as their own. It is located approximately ten miles south of Athens, GA. 2022 U.S. Census information (United States Census Bureau, 2022e) labels this municipality as 87.5% White, 5.9% Hispanic or Latino, 5.1% Black, 4.7% Asian, and American Indian and Pacific Islander making up the remainder of the demographic layout. When retrieving the open records request for this municipality, they were sourced through the City Clerk. The cost to retrieve the records was $16.44. Their records were delivered as a 30 page scanned Portable Document Format (PDF). The races reported were Asian, Black, Hispanic, White, and unknown. Although age and zip code information was requested, that information was not reported.

Within the 2022 calendar year, there were 676 total citations issued in the municipality. Of the 676 total citations, 675 were traffic citations, one was a pedestrian citation, and there were no citations for anything related to bicycle use. Table 21 lists the count including raw

numbers and percentage, average fine fee, and maximum fine fee by race and sex. Males accounted for over half of all citations with 377 in total, or 56%. Citations for Whites accounted for 50.7% of all citations while Blacks accounted for 17.9%, Hispanics accounted for 6.7%, and Asians accounted for 1%. 23.7% of all citations had no race identifier. This data communicates an inconsistency between the citations given and each demographic's prevalence in the community, particularly for Blacks and Whites. Blacks account for 17.9% of the citations while only representing 5.1% of the population and Whites account for 50.7% of the citations while representing 87.5% of the population. The average fine fee was higher for Hispanics and Blacks at $325.40 and $246.42, respectively, compared to Whites at $211.30. Table 22 demonstrates that when using the one-way ANOVA test, there was statistical difference between the average fine fees of the reported demographics. The corresponding t-tests determined that the difference in fine fees was statistically different between Whites and Hispanics. When looking at specific violations, vehicular speeding was the most cited violation for all demographics. There were 233 total citations for speeding for Whites, 78 total for Blacks, 27 total for Hispanics, 6 for Asians, and 69 for the unknown category. Specifically for Watkinsville, Blacks and Hispanics both have higher average fine fees relative to all other demographics, with Hispanics significantly higher than Whites, as well as having higher fine fees than the total average across all demographics for this municipality.

Albany, GA

Albany, GA is an urban municipality within the typography of municipalities that expressly adopt Georgia traffic law as their own. It is located in southwest Georgia approximately 60 miles east of the Georgia and Alabama border and approximately 70 miles

north of the Georgia and Florida border. 2022 U.S. Census information (United States Census Bureau, 2022a) describes Albany as 74.6% Black, 21.3% White, 2.4% Hispanic or Latino, and Asian, American Indian, and Native Hawaiian combining to represent the other 2%. When sourcing the open records for this municipality, the initial request was performed through a portal on the municipality's website and routed to an attorney. From there, the attorney for the municipality was the main point of contact for correspondence. The attorney gave an estimate of approximately $50 to source the open records, and the total came to $57.27 Their open records information were delivered as a 243 page scanned PDF that included individual ticket numbers, case numbers, race, sex, the specific violation, violation date, and fine fee for each citation in the 2022 calendar year. The race identifiers included were Asian, Black, Hispanic, White, and unknown. Although age and zip code for each citation were requested, that information was not provided.

The municipality of Albany provided their entire citation record for the 2022 calendar year, which included 7,588 citations. After removing irrelevant citations, and only including those specific to traffic, pedestrian, and bicycle violations, there were a total of 6,487 citations. Of those 6,487 citations, 6,473 were traffic citations, 13 were pedestrian citations, and only one was a bicycle citation. Table 23 provides the information as it relates to sex, average fine fee, and maximum fine fee stratified by race. The data communicates that Blacks accounted for 4,837, or 74.6%, of all relevant citations issued; Whites accounted for 1,423, or 21.9%, of all relevant citations issued; Asians accounted for 11, or 0.2%, of all relevant citations issued; and Hispanics accounted for five, or 0.1%, of all relevant citations issued, which is consistent with U.S. Census data. The unknown demographic accounted for 211, or 3.3%, of all relevant

citations issued. Blacks had an average fine fee of $159.83 and were the only demographic to have higher average fine fees than the total average. Table 24 demonstrates that when using the one-way ANOVA test, there was statistical difference between the average fine fees of the reported demographics. The corresponding t-tests determined that the difference in fine fees was statistically different between Whites and Blacks. The most common citation issued for Blacks, Whites, and Asians was following too closely, each with 338, 193, and one citations respectively. Driving without a license was the most common citation for Hispanics with two citations. Speeding as the first offense was the most common citation for those with an unknown demographic with 54 citations.

Brunswick, GA

Brunswick, GA is a rural municipality within the typography of municipalities that have their own pedestrian laws. It is located approximately 80 miles south of Savannah, GA. 2022 U.S. Census information (United States Census Bureau, 2022c), labels Brunswick as 60.4% Black, 33.6% White, 6.3% Hispanic, 1.8% Asian, and Native Hawaiian and American Indian making up the remainder of the demographics. This information was originally sourced through the City Clerk's Office and was delivered electronically as a scanned PDF file at no charge. The report included individual ticket numbers for each specific citation, the description for each specific citation, and the accompanying race, sex, and fine fee for each specific citation. The race identifiers were labeled as Black, Hispanic, White, and unknown. Although age and zip code were requested, that information was not provided.

Within the 2022 calendar year, there were 1,183 relevant citations issued for this municipality with all of them being for traffic violations. There were no pedestrian or bicycle

related violations. Table 25 highlights the count, average fine fee, and maximum fine fee stratified by race and gender. Blacks accounted for nearly 46.5% of all citations, Whites accounted for 29.8%, Hispanics accounted for 16.2%, and unknown accounted for 7.4%. This data communicates an inconsistency between the citations given and each demographic's prevalence in the community, particularly for Hispanics. Hispanics account for 16.2% of all relevant citations while only making up 6.3% of the municipality's population. According to the data, Hispanics had the highest average fine fee and were the only demographic to have an average fine fee higher than the total average for all demographics. Table 26 demonstrates that when using the one-way ANOVA test, there was statistical difference between the average fine fees of the reported demographics. The corresponding t-tests determined that the difference in fine fees was statistically different between Whites and Hispanics. When looking at specific citations, Whites, Blacks, and unknowns were all cited for speeding 71, 67, and 14 citations each, respectively. Hispanics were cited the most for driving without a license with 70 citations.

Grovetown, GA

Grovetown, GA is a rural municipality within the typography of municipalities that have their own pedestrian laws. It is located approximately 13 miles west of August, GA. 2022 U.S. Census information (United States Census Bureau, 2022d) labels the municipality of Grovetown as 58.8% White, 23.7% Black, 16.6% Hispanic or Latino, 1.3% American Indian or Alaska Native, 1.3% Asian, and Native Hawaiian making the up the remainder of their demographics. When sourcing this set of open records, the City Clerk's office provided the information at no charge. This set of records was delivered electronically as a Microsoft Excel file. Grovetown reported

the age, sex, race, zip code, fine amount, and specific violation for each citation issued. The race identifiers were Asian, Black, White, and unknown.

Within the 2022 calendar year, Grovetown issued 2,051 relevant citations within the municipality. Of the 2,051 total number of citations, 2,048 were traffic citations and only three were pedestrian related. There were no bicycle involved citations. Table 27 displays the count, including raw numbers and percentage, average age, maximum age, average fine amount, and maximum fine amount by race and gender. The data communicates that although Blacks make up only 23.7% of this municipality, they account for over half of all citations issued with a total of 1,056 total citations, or 51.5%. Whites account for 867 citations, or 42.3%; Asians account for 13 citations, or 0.6%; and the unknown demographic accounts for 115 citations, or 5.6%. Additionally, Blacks have a higher average fine amount at $323.60 relative to other demographics and higher than the average fine fee for all demographics. Table 28 demonstrates that when using the one-way ANOVA test, there was not a statistical difference between the average fine fees of the reported demographics.

Although there were over 100 distinct zip codes affiliated with all of the citations issued, within the zip code of 30813, specifically where Grovetown is located, Table 29 highlights the racial breakdown of the average fine amount. Within this zip code, there were 454 citations issued to Blacks, or 47.8%; 424 to Whites, or 44.7%; eight to Asians, or 0.84%; and 63 to unknown demographics, or 6.64%. The most common citations across all demographics were speeding and the GA hands free law, which is driving while holding a hand held electronic. Whites accounted for 146 hands free citations and 103 speeding citations; Blacks accounted for 159 speeding citations and 114 hands free citations; Asians accounted for three hands free

citations and two speeding citations; and the unknown demographic accounted 19 speeding citations and 17 hands free citations.

Thomaston, GA

Thomaston, GA is a rural municipality within the typography of municipalities that have their own bicycle laws separate from Georgia bicycle law. It is located approximately 50 miles west of Macon, GA. 2022 U.S. Census information (United States Census Bureau, 2022f) labels this municipality as 51.4% White, 44.5% Black, 1.9% Hispanic or Latino, 1.4% Native Hawaiian, and Asians and American Indian constituting the remaining demographics. When sourcing this set of open records, the City Clerk's office provided the information at no charge. This set of records was delivered electronically as a Microsoft Excel file. In their open records, Thomaston reported the age, sex, race, specific violation, zip code, and fine amount for reach citation. The races reported were categorized as Asian, Black, Hispanic, White, and unknown.

Within the Thomaston municipality, there were a total of 2,645 citations issued. Of the total number of citations given in Thomaston, 2,642 were for traffic violations, one was a pedestrian citation, and there were two bicycle related citations. Table 30 lists the count, including raw numbers and percentage, average age, maximum age, average fine amount, and maximum fine amount by race and gender. The data communicates that all of the reported demographics were given citations at a rate consistent with their presence in the population. Of the reported demographics, Whites were the only demographic to have a lower average fine fee than the average for all demographics. Table 31 demonstrates that when using the one-way ANOVA test, there was statistical difference between the average fine fees of the reported demographics. The corresponding t-tests determined that the difference in fine fees was

statistically different between Whites and Blacks and also Whites and Hispanics. Regarding specific citations, the most common citation amongst Blacks, Hispanics, and Asians were speeding with 134 citations, 15 citations, and two citations respectively. The most common citation for Whites was operating a vehicle without proper tags with 163 citations. The most common citation for the unknown demographic was the use of safety belts in passenger vehicles with 107 citations.

While there were over 100 distinct zip codes reported across all citations, when looking at the zip code that Thomaston is specifically listed in, which is 30286, Table 32 showcases the racial breakdown and average fine amount. Of the 2,645 total citations issued, 1,656, or 62.6%, have a zip code identifier specifically from Thomaston. Similarly to the entire sample of citations issued to this municipality, within the Thomaston zip code, all of the reported demographics were given citations at a rate consistent with their presence in the population. Whites accounted for 766 citations, or 46.3%; Blacks accounted for 651 citations, or 39.3%; Hispanics accounted for 24 citations, or 1.5%; Asians accounted for one citation, or 0.1%; and there were 214 citations with an unknown demographic, or 12.9%.

Athens, GA

Athens, GA is an urban municipality within the typography of municipalities that have their own bicycle laws separate from Georgia bicycle law. It is in northeast Georgia approximately 70 miles east of Atlanta, GA. 2022 U.S. Census Information (United States Census Bureau, 2022b) labels Athens as 60.5% White, 27.8% Black, 11% Hispanic, 4% Asian, and Native Hawaiian and American Indian making up the rest of the demographics. The information was originally sourced through a portal on the Athens-Clark County website, which routed to the

corresponding police department. The police department provided an estimate of approximately $3,500 to provide the information, however, the corresponding officer mentioned that the municipal court may be able to provide the information at a reduced rate. The county clerk was contacted with the same request and the information was provided at no charge. The information was provided as a Microsoft Excel document. The information included in the report for each specific citation was docket number, date and time of citation, statue and violation description, location as street names and cross streets, amount paid, race, sex, and year of birth and age. If a person was given multiple citations in the same scenario, then they were on the same docket number. Docket numbers were repeated throughout the report. The race identifiers were listed as Asian, Black, Hispanic, White, and unknown. Although zip codes for each citation were requested, only their location as street names and cross streets were provided.

Over the course of the 2022 calendar year, there were 18,437 relevant citations issued. Of that number, 18,295 were traffic citations, 137 were pedestrian related, and five were bicycle related. Table 33 highlights the count, average age, maximum age, average amount paid, and maximum amount paid stratified by race. Whites accounted for 8,878 citations, or 48%, of all citations; Blacks accounted for5,326 citations, or 28.9%; Hispanics accounted for 341 citations, or 1.9%; and Asians accounted for 306 citations, or 1.7%. The data reflects that all of the reported demographics were given citations at a rate consistent with their presence in the population. Those with unknown race identifiers accounted for 3,586 citations, or 19.5%. According to the data, Asians, Whites, and Hispanics all rank first, second, and third, respectively, in regard to the highest average amount paid. Blacks were the only reported

demographic to have a lower average fine fee than the average across all demographics. Table 34 demonstrates that when using the one-way ANOVA test, there were statistical differences between the average fine fees of the reported demographics. The corresponding t-tests determined that the difference in fine fees was statistically significant between Whites and Blacks.

When looking at specific citations, the most common citation for Whites and Asians was distracted driving/hands free and each group received 1,941 and 70 citations respectively. The most common citation for Blacks was speeding with 950 citations. The most common citation for Hispanics was driving without a license with 52 citations. The most common citation for those listed as unknown was a yellow curb violation with 1,042 citations.

Thematic Analysis

Considering the three types of citations this project examined, those being traffic citations, pedestrian related citations, and bicycle citations, 31,316 (99.48%) were traffic related, 155 (0.49%) were pedestrian related, and eight (0.03%) were bicycle related. Athens accounted for a large portion of all citations. The municipality of Athens accounted for 58.4% of all traffic citations, 88.4% of all pedestrian citations, and 62.5% of all bicycle related citations. Table 38 highlights the proportion of respective citations for each municipality. The range of relevant citations spanned from 676 in Watkinsville, the smallest rural municipality this project examined, to 18,437 in Athens, the largest urban municipality this project examined.

When stratifying by race across all municipalities, there were a total of 13,138 citations (41.74%) given to Whites, 12,856 citations (40.84%) given to Blacks, 651 citations (2.07%) given to Hispanics, and 341 citations (1.08%) given to Asians. A total of 4,493 citations (14.27%) did

not have a racial identifier associated with them. Table 39 illustrates the demographics of citations issued across all six municipalities. The average fine fee across all demographics was $133.98, with Whites, Blacks, and Hispanics all having higher average fine fees at $136.47, $149.26, and $242.75 respectively. Asians had a lower average fine fee than the total average at $122.82. The group of citations that had an unknown demographic had an average fine fee of $68.04. The most ticketed offense for Whites was “distracted driver/hands free” with 1,941 citations, or 14.77% of all citations for Whites. The most ticketed offense for Blacks was “speeding” with 1,949 citations, or 15.16% of all citations for Blacks. The most ticketed offense for Hispanics was “driving without a license” with 122 citations, or 18.74% of all citations for Hispanics. The most ticketed offense for Asians was “distracted driver/hands free” with 70 citations, or 20.53% of all citations for Asians.

Across all municipalities, the average fine amount for citations issued was $133.98. The average fine amount in Grovetown was $309.84, in Brunswick was $234.69, in Watkinsville was $220.66, in Thomaston was $179.63, in Albany was $154.24, and in Athens was $91.09. There were a total of 6,555 (21%) citations issued in rural municipalities and 24,924 (79%) citations issued in urban municipalities, as shown in Table 35. When looking at the citation data, three out of six municipalities reported higher citation rates for individuals in minority demographic categories than their representation in the municipality. In Watkinsville, Blacks account for nearly 18% of all relevant citations while only composing 5% of the municipality’s population. In Brunswick, Hispanics account for 16% of all relevant citations while only composing 6% of the municipality’s population. In Grovetown, Blacks account for 51% of all relevant citations while only composing 24% of the municipality’s population.

Across all municipalities, the average fine amount for citations issued was $133.98. The average fine fee for rural municipalities was $234.54 and the average fine fee for urban municipalities was $107.53. When stratifying average fine fees by race across rural and urban municipalities combined, Table 36 shows that average fine fees for Blacks and Hispanics, when compared to Whites, were significantly higher. When stratifying average fine fees by race, comparing rural municipalities to urban municipalities, Table 37 shows that each identified race has a higher average fine amount in rural municipalities compared to urban municipalities. Blacks in rural municipalities are fined 2 times the amount more than urban communities, Whites in rural municipalities are fined 1.9 times the amount more than urban municipalities, Hispanics in rural municipalities are fined 3.6 times the amount more than urban municipalities, and Asians in rural municipalities are fined 1.7 times the amount more than those in urban municipalities. The examined rural municipalities in Georgia are having an impact across all demographics.

Summary

This study utilized a legal scan to assess and ascertain if there were laws associated with people's ability to be physically active. The simple conclusion to that – is yes. Within Georgia, there are a considerably higher number of codified traffic laws compared to pedestrian and bicycle laws. In the municipalities assessed, the vast majority of citations issued are tied to traffic regulation, with very few being tied to pedestrian and bicycle laws. Following the legal scan, open records requests were conducted within six municipalities to determine if there was equitable enforcement of the previously discovered codified laws. Police enforcement data varies from municipality to municipality, especially within the rural and urban context. There

were numerous findings of interest. First, half of the municipalities examined in this project, all of which are rural, have higher citation rates for Blacks and/or Hispanics than their prevalence in the population. Second, all rural municipalities have higher average fine fees than their urban counterparts across all demographics. Finally, the data collected from Grovetown indicates that Blacks are cited more frequently than their prevalence in the community and the municipality has a higher average fine fee compared to other rural municipalities. These are all unique findings that merit further inquiry.

Chapter 4 of this project has addressed phases one and two and provided an exploration into the relevant policies and laws for Georgia and six municipalities, along with an examination of the average fine fees for citations when stratifying for race and whether they are rural or urban. Chapter 5 will discuss the significant findings presented in Chapter 4 and explore phase three by outlining health equity based solutions and recommendations for the discovered challenges the state and municipalities face.

CHAPTER 5: DISCUSSION AND RECOMMENDATIONS

The purpose of this project was to determine whether or not existing laws concerning traffic, pedestrians, or bicycle use may have an impact on the built environment and Blacks' and other minorities ability to be physically active where they live, work, and play. This project took a phased approach to address the three research questions. The results from Phase One of this project informed Phase Two, which is the focal point of the project. The specific research questions that this project addresses are

1) Are there codified laws focused on the walking, jogging, or cycling components of active transportation and the crosswalks, highways, and roadways of the built environment at the state and municipal level associated with Black people's and other racial and ethnic minorities ability to be physically active in the community they belong to in Georgia?;
2) Does law enforcement equitably distribute violations and citations for the relevant areas of active transportation and the built environment in the communities they serve that are associated with Black people's and racial and ethnic minorities ability to be physically active in the communities they belong to?; and
3) What are some health equity issues that can be addressed that will help close some health disparities for Blacks and racial and ethnic minorities in Georgia relevant to the data from research questions 1 and 2?

Discussion

Most of the codified laws discovered in Phase One are enacted at the state level, which is comprised of 15 articles housing 397 sections of codified law. These laws dictate how drivers

should normally behave, what is considered acceptable driving standards, what should happen in the event of an accident, and how these laws are to be enforced. Of the 15 total articles, only one is relevant to pedestrians, which houses 13 sections of codified law. Additionally, there is only one part of an article, with only 10 sections of codified law, that is relevant to bicycle use. There is even a lower number of Complete Streets policies across the state, with only three municipalities enacting these policies. Of all examined laws, only 5.8% are relevant to pedestrians or bicycle use. The data collected from this project are reflective of the relatively small proportion of laws focused on pedestrian and bicycle use, with only 0.52% of all citations examined pertaining to either pedestrian or bicycle use.

Nationally, there are 17 states, including Georgia, where there is statewide uniformity in bicycling laws (Gutierrez, n.d.). This report suggests that of these 17 states, only two, Arkansas and North Carolina, have what are deemed to be equitable traffic laws (Gutierrez, n.d.). Equitable traffic laws are described as not being discriminatory, restrictive, or problematic in nature. The absence of equitable traffic laws might suggest that if state laws are written poorly, then they will be regulated and enforced poorly throughout the state. Georgia is considered one of the 10 worst states as it pertains to pedestrian and crosswalk laws across the nation (Wickert et al., 2022). Instead of writing laws that speak to public safety, state legislators across the country have been scrambling to pass laws establishing who is at fault when a pedestrian is struck (Wickert et al., 2022). The lack of clearly defined bicycle and pedestrian laws, relative to traffic laws in Georgia, suggest that communities could stand to be safer if there were more targeted laws protecting bicyclists and pedestrians across the state.

Considering that pedestrian and bicyclist fatalities account for 19% of all traffic fatalities (U.S. Department of Transportation Federal Highway Administration, 2023), it would benefit Georgia to focus more on laws that are relevant and specific to pedestrian and bicycle safety, especially since Georgia is not recognized as a state that has a pedestrian and bicyclist focused approach to safety (U.S. Department of Transportation Federal Highway Administration, 2022). Per the Federal Highway Administration's Office of Safety, safety in these two areas depends on an integrated approach that involves engineering, enforcement, education, and emergency services (U.S. Department of Transportation Federal Highway Administration, 2023). Engineering could take the shape of Complete Streets policies, or similar mandates, where the roads are designed and constructed in such a way where vehicles, bicycles, and pedestrians all share the roads. Enforcement means holding violators accountable when there are infractions in the law, whether a person is a vehicle user, bicyclist, or pedestrian. Education is important because vehicle users should know that bicyclists and pedestrians have rights on the roads as well.

Bearing in mind that Article 14 of the Uniform Rules of the Road, titled the Effect of Chapter on Powers of Local Authorities, grants local authorities power to enact and adopt their own ordinances, a vast majority of municipalities have opted not to have their own traffic, pedestrian, or bicycle laws. A municipality creating their own ordinances could make for an administratively burdensome task, however, it would also give the opportunity to create codified laws that are unique and equitable to the residents of that municipality. Not all municipalities are the same – whether they have different resident demographics, built environment structures, or governmental make up – so all laws should not be the same either.

Municipal laws should be characteristic and representative of the community in which they are being enforced. Additionally, because there are more specific traffic laws than bicycle or pedestrian laws, there are also more avenues for members of the population to receive traffic citations relative to bicycle or pedestrian citations.

Phase two of this project addressed research question two, which was an exploration of whether or not law enforcement equitably distributes violations and citations for the relevant areas of active transportation and the built environment in the communities they serve that impact Black people's and other racial and ethnic minorities ability to be physically active in the communities they belong to. Considering that there are more specific traffic laws than bicycle or pedestrian laws in Georgia, it makes sense that 99.48% of all recorded citations in Phase two of this project are traffic citations.

Phase two examined six municipalities in total from Georgia, with four of them being rural and two of them being urban. Of the four rural communities, it was discovered that three of them – Watkinsville, Brunswick, and Grovetown – all had issued citations to minorities at a higher rate than their prevalence in the community. Blacks in Watkinsville make up 5.1% of the population but accounted for 17.9% of all citations, Hispanics in Brunswick make up 6.3% of the population but accounted for 16.23% of all citations, and in Grovetown, Blacks make up 23.7% of the population but accounted for 51.49% of all citations. These finding suggest possible discriminatory behavior towards the minorities in these municipalities specifically mentioned here.

The aforementioned findings from the municipalities assessed appear similar to what has been observed in some other states, such as North Carolina (Baumgartner et al., 2018;

Horn, 2020) and Connecticut (Courant, 2018). Additionally, this has been observed in reports conducting multi-jurisdiction and multi-state reviews. Across many urban jurisdictions where Blacks are not the majority of the driving population, they are more likely to be ticketed than Whites (R. A. Dunn, 2009). A review of multiple jurisdictions in California found that Blacks were more than twice as likely to be searched as Whites, at 20% and 8%, respectively (Lofstrom et al., 2021). A multi-state review between 2011 - 2018 of 21 state patrol agencies and 35 municipal police departments by The Sentencing Project found that Blacks were more likely to be pulled over, compared to Whites, during traffic stops (Ghandnoosh & Barry, 2023). The researchers found the state-patrol stop rate for Blacks to be 10% and for Whites to be 7% and the municipal-police stop rate for Blacks to be 20% and for Whites to be 14%.

Blacks, Hispanics, and other minorities getting pulled over for traffic and other mobility violations at higher rates than Whites, despite their prevalence being lower in their respective municipality, is a cause for concern as it may lead such individuals to feel restricted in their personal day to day operations, comings and goings, and their ability to move about society freely (Brown et al., 2023; Geier et al., 2023). Not being able to move about freely may create perceived restrictions in movement among minority groups that may lead to minimizing non-essential travel, such as going to parks, gyms, or other recreational facilities where they could be physically active. Additionally, the interaction between a police officer and the person being pulled over during a traffic stop could be considered a gateway for discriminatory behavior if the reason for the traffic stop is not clearly articulated (Geier et al., 2023). The possibility of this being true in Georgia could be high as it is not a state that requires law enforcement officers to state the reason for the violation during a traffic stop prior to requesting a driver's license,

registration, insurance, or other documents that might be requested (*Traffic Stops: What To Do*, 2024a; *Traffic Stops: What To Do*, 2024b). The ambiguity of the reason for the traffic stop could lead to inappropriate behavior by the law enforcement officer or the person being pulled over if there is a reason for concern or a lack of trust from the onset.

In addition to the higher citation rates for minorities in three of four rural municipalities examined in Georgia, Tables 35 and 37 show that all demographics have higher average fine fees in rural municipalities when compared to urban municipalities. When looking at fines by race across all geographic areas, Blacks and Hispanics have significantly higher average fine fees when compared to Whites. This is concerning because not only are Blacks and Hispanics less prevalent than Whites, they are fined more on average. There is, however, variation across the municipalities. Blacks in Thomaston and Albany have significantly higher fine fees when compared to Whites. In Athens, Blacks have significantly lower fine fees when compared to Whites. Hispanics in Watkinsville, Brunswick, and Thomaston have significantly higher fine fees compared to Whites. This, once again, could suggest discriminatory behavior towards minorities in those communities – even when in one municipality Blacks have an average fine significantly less than Whites.

Rural municipalities having higher average fine fees is not a novel phenomenon. A special report, *The Governing,* found that hundreds of small cities and towns throughout the country rely on fines and fees to fund their budgets (Maciag, 2019a). The issue of smaller municipalities generating revenue from fines and fees first gained national attention in 2014 following the civil unrest in Ferguson, Missouri. Many residents suspected that St. Louis, Missouri area municipalities prioritized generating revenues from their courts (Maciag, 2019a).

The Governing conducted an analysis of hundreds of smaller cities and towns and found that fines and fees are a major source of funding, constituting more than half of all general revenues in some areas.

In Georgia, towns in south Georgia have suffered decades of slow economic decline that has left them without a substantial tax base (Maciag, 2019b). In many smaller municipalities, there is enough vehicular traffic from semi-trucks and travelers going to and from Florida that these municipalities have grown reliant on issuing citations to meet their expenses (Maciag, 2019b). According to Lisa Foster, co-director of the Fines and Fees Justice Center, "Georgia is a classic example of a place where you have these inextricable ties between the police, the town and the court…Any city that's short on revenue is going to be tempted to use the judicial system." In smaller towns, income generated from speed traps where the speed limit might drop excessively in such a short distance, parking patrols where parking attendants monitor parking meters and might provide citations if a parked vehicle is one-minute over their paid time, inefficient signage traps that might be perceived as some to be confusing language giving multiple and conflicting directions, and other traffic devices can help prop up budgets, which often include police departments that are responsible for catching drivers (S. Dunn, 2020). According to the National Motorists Association, in 284 of 600 examined jurisdictions, fines and fees account for at least 20% of general fund revenues compared to 10% in larger governments (S. Dunn, 2020). Additionally, many smaller governments could view traffic fines as a revenue source to offset tax revenue loss, even though traffic fines are not a revenue stabilizer (Su, 2020).

According to the Georgia State Office of Rural Health, although the average per capita income for Georgia residents was $55,786, the rural per capita income was $43,273 – more than a $12,000 difference (*Georgia* , 2023). The data suggesting that people living in rural municipalities have higher average fine fees relative to urban municipalities, despite earning more than $12,000 less on average, is concerning because it might suggest that those living in rural areas have less buying power, less income earning potential, and experience more severe consequences from fine fees than people living in urban areas (Menendez et al., 2019). According to researchers at the Brennan Center for Justice, the consequences of debt associated with fines and fees detrimentally impacts various social determinants of health (Menendez et al., 2019). For example, when a person already has an income below the median for the state and that is combined with debt from judicial fines and fees, this might impact their ability to have reliable transportation, secure housing, or even afford to pay child support. Researchers here suggest that fines and fees are an inefficient source of government revenue, resources devoted to collecting and enforcing fines and fees could be better spent on efforts that actually improve public safety, and that the burden of fines and fees largely falls on the poor, essentially acting as a regressive tax (Menendez et al., 2019).

The data analyzed on Grovetown in this study were of particular concern. Across all rural municipalities, the average fine amount is $234.54, and for Blacks in rural municipalities, the average fine fee is $248.43. In addition to Grovetown issuing citations to Blacks at a higher rate, the average fine amount for Blacks in Grovetown is also higher than the average fine amount for Blacks across all municipalities at $323.60. The average fine fee for Grovetown

which is $309.84, and includes all demographics, is also higher than the average for all rural municipalities at $234.54.

When looking at the Fiscal Year End 2022 report for Grovetown, their single most significant governmental expense was public safety, defined as police and fire rescue, at $4,691,088 (City of Grovetown, Georgia Financial Report For the Fiscal Year Ended June 30, 2022, 2022). Within their revenues category, they expected to generate $460,000 in fines and forfeitures. However, they generated $241,457, missing the mark by over $218,000. Within their budget, the only line item where they failed to meet revenue projections more than fines and forfeitures was in property taxes. The data presented in Grovetown are concerning because they suggests that having such a high average fine is intentional as a source of revenue. Depending on fines and forfeitures as a source of revenue could be considered less than ideal for the community because it might be harmful to the residents. However, falling short of the target revenue mark by more than $218,000 might lead those who live in the municipality to question whether or not this behavior should continue so the municipality can generate its target revenue amount in fines and forfeitures next fiscal year. Additionally, Grovetown sits along Interstate-20, which is the only major interstate in and out of Augusta, Georgia. Their geographical location might suggest that they are in a prime location to take advantage of travelers going to and from the nearby major city.

Based on the information discovered in phases one and two of this project, phase three will address related health equity based solutions and provide recommendations that can help close some health disparities for Blacks and other minorities living in Georgia. The findings discussed so far all paint a vivid picture of how laws and their enforcement suggest that they

disproportionately and inequitably affect Blacks and other minorities across the state. Considering that nearly all of the relevant citations examined are traffic citations, the recommendations provided in phase three are rooted in this information and reflect accordingly.

Recommendations

Based on the information collected in phases one and two of this project, there are several recommendations that can advance health equity and help to eliminate some health disparities for Blacks and other racial and ethnic minorities living in Georgia. The disparities to be addressed are law enforcement giving an inequitable and disproportionate number of citations to minorities in their respective communities and all groups in rural communities having significantly higher average fine fees relative to urban communities – all of which may create barriers to mobility and physical activity for Blacks and other minorities in Georgia.

The first recommendation is for all law enforcement agency personnel in the state of Georgia and consists of three parts. The three parts address the behavior of law enforcement officers with modified implicit bias training, document any behavior changes with reporting requirements, and layer these with an accountability mechanism. Implicit bias can be characterized as attitudes, subliminal priming, unconscious evidence accumulation in decision making, unconscious learning, perceptual adaption from invisible stimuli, and voluntary actions and choices triggered by non-conscious brain signals (Koenig-Robert et al., 2023). To address the behavior of law enforcement personnel, the duration of implicit bias trainings currently in the police academy curriculum should be modified to be in alignment with the national average length of other implicit bias trainings.

An environmental scan of implicit bias trainings conducted by the Department of Health and Human Services found that the average duration of an implicit bias training is usually one to two hours and delivered in an online format (Henniger & Doelger, 2021). Of the 408 hour basic law enforcement training course offered in Georgia, implicit bias training is only one of five parts of a larger two hour "Cultural Awareness" training program offered virtually ("Cultural Awareness ," 2017). When dividing each section of the "Cultural Awareness" training into equal parts, the implicit bias section might only be 24 minutes in length, well short of the national average. Bringing the implicit bias training to the average length of other implicit bias trainings has the possibility to do more benefit than harm. Having a more substantial implicit bias training to pair with the newly passed Georgia House Bill 1105, which grants law enforcement the ability to arrest anyone suspected of being in the United States illegally (Irwin, 2024), could possibly protect those who could bear the burden of this bill. This bill was passed in direct response to the murder of Laken Riley, a White nursing student at the University of Georgia, whose suspected murderer was in the country illegally. Officers in Georgia being subjected to longer mandatory implicit bias training could help them understand why, if at all, their citation records are skewed in any one direction relative to the population they are serving. Officers understanding why they are making the decisions they are making can have long lasting equity impacts for those affected and possibly address their own personal behaviors.

There is data that suggests implicit bias trainings are less than ideal. The top five reasons why these types of trainings may not work include that it is difficult to change people's attitudes and behaviors with short-term educational interventions, implicit bias training can

reinforce harmful stereotypes, some diversity programs lead to complacency by artificially inflating confidence in cultural change, diversity training doesn't put the responsibility for change on those who hold the most positions of power, and people tend to respond negatively when they feel their autonomy is being taken away to change attitudes (Roy, 2020, 2023). However, researchers at Washington State University have found a "small but significant" effect from training to counter implicit bias in law enforcement (L. James et al., 2023; Sadiq, 2023). These researchers randomly selected 50 officers to participate in an anti-bias intervention. Discrimination-based community member complaints were collected pre- and post-intervention. Following the intervention, recorded citation records and police worn body camera footage validated a reduced number of discrimination-based complaints for the control group officers.

The second part of the first recommendation, which assesses if the behavior change was effective, is requiring law enforcement officers to have citation reporting requirements disaggregated by race and ethnicity. Citation reporting requirements are important for proper record keeping and to assess the impact of implicit bias training. Valdosta, GA is an example of a municipality where due to the lack of reported race and ethnicity reporting, the majority of their data were unusable for this project. Specifically for Valdosta, when an officer makes a traffic stop, they are required to report over the radio the vehicle make/model, tag number, and race/sex as perceived by the officer for the vehicle being stopped. If there is a citation issued, they are required to indicate the gender, but not required to list the race. For other municipalities where race and ethnicity are not reported, it is unclear as to whether or not this lack of reporting is due to officers not capturing the data, the reporting system not logging it, or

some other factor. However, requiring all police officers to report that information and having it properly documented can add a layer of accountability to the entire process.

There could be serious visibility and answerability questions raised in a possible scenario where a police officer doesn't include specified race and ethnicity data in their citation reports. Additionally, in a scenario where police are required to report race and ethnicity data for their citations, inquiries based on citation reporting could prove to be beneficial. For example, if at the end of the year a police officer's citation race and ethnicity records are skewed in any direction away from the population's demographics, there should be cause for investigation.

The third part of the first recommendation, which couples behavior change and proper documentation with a measure of accountability, is a mandate for all law enforcement officers in Georgia to wear active body-worn cameras while on duty. Since the onset of high profile incidents between law enforcement and minority communities, there has been an ongoing debate as to whether or not body-worn cameras are effective at reducing the claims of excessive use of force by law enforcement. In California, a randomized controlled trial of 988 officers found that for those law enforcement officers wearing a body-worn camera, the number of complaints filed against them dropped from 0.7 complaints per 1,000 contacts to 0.07 per 1,000 contacts (Ariel et al., 2015). A Campbell systematic review that examined 30 studies suggests that although there is uncertainty about whether or not body-worn cameras reduce officer use of force, the variation in effects may indicate conditions where they could be effective (Lum et al., 2020). Researchers based out of New York suggest the possible benefit of a decrease in complaints alleging law enforcement's abuse of authority and a reduction in arrests (Zamoff et al., 2021).

While there is information to suggest the positive utility of their use, there is conflicting evidence that suggests that body-worn cameras can be ineffective. When examining large police departments across the country, researchers suggest that body-worn cameras can have a mitigating effect on excessive use of force, but more research is needed on as many issues as possible with as many jurisdictions as possible (Ariel, 2017). An organizational analysis of United States police agencies suggests that departments that utilize more technology are more likely to adopt body-worn cameras and that agencies represented by collective bargaining units are less likely to utilize body-worn cameras (Nowacki & Willits, 2018). The conflicting evidence on the utility of body-worn cameras is not without scrutiny. Researchers from Ariel, 2017 acknowledge their inability to randomly allocate shifts, officers, cases, or vehicles for data acquisition and Nowacki & Willits, 2018 used the Law Enforcement Management and Administrative Survey to collect their data, which is a survey tool that is over 10 years old. The evidence surrounding body-worn cameras and their effectiveness is divergent, however, in the right context and circumstances, the possibility for them to be beneficial is present.

All parts of the first recommendation are geared towards improving the conditions around traffic and driving, however, also have benefits for those being physically active in their communities. The extended implicit bias training attempts to put safeguards in place for people who belong to the community from being stopped while exercising for what some might deem as suspicious activity. The citation reporting requirements act as a documentation lever to address any inequitable targeting of those who might be physically active in their communities. The mandate for body-worn cameras while on duty attempts to document the exchange

between law enforcement and community members, if there is one, so similar events like what happened to Manuel Ellis do not happen to anyone else.

If there is data and evidence showing that Blacks and other racial and ethnic minority groups are cited for moving violations at a level that is beyond their representation in the population or well above the average, it may serve as an indicator that Blacks and others may be unjustly targeted by law enforcement. This may serve to make those who feel they are being targeted fearful of law enforcement and to avoid being out in view of law enforcement during any number of typical activities outside of the household, including physical activity. The fear that excessive citations creates has the potential to arrest mobility, as its definition implies.

A second recommendation, to help prevent racial profiling and inequitable fine fees based on geographic region, is for Georgia to adopt a similar law to what has been enacted in California that requires police to state the reason for their traffic stop before questioning (Copitch, 2023). California Assembly Bill 2773 was passed and signed by Governor Gavin Newsom in 2022 and went into effect on January 1, 2024. This bill aims to end vehicle and pedestrian stops where police use a minor traffic violation to investigate other crimes (Copitch, 2023). This law requires that police officers document their stops, meaning that they can no longer ask “Do you know why I pulled you over?” There is an exception to this law where an officer can not disclose the reason for the stop if it’s necessary to protect life or property from imminent threat.

During a bill hearing in 2022, the author and Assembly Member Chris Holden said he is hopeful that this law promotes equity and accountability across the state. “I believe that the confrontation between the law enforcement and the public begins because people of color are

being asked to surrender their civil rights and they do not even know why they are being stopped. But they are forced to comply," said Holden (Copitch, 2023). Adopting a bill similar to this in Georgia has the potential to drastically reduce the number of citations and violations for those who are stopped and found to be in violation of multiple offenses at once.

Enacting a bill similar to California House Bill 2773 in Georgia could be beneficial because it falls in line with a report by National Public Radio stating that for Black drivers, a police officer's first 45 words are an image of what's to come (Greenfieldboyce, 2023). This report, based on research done by Rho and colleagues (Rho et al., 2023) indicates that the first 45 words spoken by a law enforcement officer during a car stop to a Black driver can be quite telling about the encounter itself. Their analysis of police body-worn cameras suggests that stops resulting in escalation, such as an arrest, differ in their conversational structure in the earliest moments of the encounter (Rho et al., 2023). Rho and colleagues suggest that in stops that result in escalation, officers are more likely to issue commands as their opening words to the driver instead of telling the drivers the reason for the traffic stop. The study itself examined body-camera footage of 577 routine car stops involving Blacks. Eighty-one of those 577 stops involved searches, handcuffing those involved, or arrests.

Using a series of focus groups in Alabama, researchers there suggest that negative interactions with police during a traffic stop that result in what some might perceive as intimidation, verbal abuse, or other forms of mistreatment cause fear of the police in Black families (Kincade & Fox, 2022). Interactions like these provide support to why for many Blacks, there is a fear of the police resulting in psychological impacts such as depression, anxiety, and posttraumatic stress disorder (Alang et al., 2021, 2023; Bor et al., 2018) not only for

themselves, but also for others such as family members and friends (Pickett et al., 2022). Those types of outcomes were reduced when a police officer's first words provided a reason for the stop (Greenfieldboyce, 2023; Rho et al., 2023), which directly supports and gives credence to California House Bill 2773.

Similarly to the extended implicit bias training part of the first recommendation, the second recommendation is helpful to those who are driving or being physically active because it attempts to create a mandatory reason for the stop in the first place. If a person is out being physically active and gets stopped by law enforcement, there has to be just cause on the part of the law enforcement officer for stopping the person being physically active. Georgia adopting this law would hopefully reduce the amount of stops for any type of suspected suspicious activity. For a person who might be out jogging, this could be beneficial as long as they are on a sidewalk or off the main road and for a person riding a bicycle, this could be beneficial as long as they are not on the sidewalk and using the main road.

The third recommendation, which addresses the disparities between rural and urban average fine differences, is to address and provide support for the ways rural communities generate revenue. According to the Georgia Municipal Association, the primary revenue sources for municipalities in Georgia are taxes and non-tax revenues such as fees (Georgia Municipal Association, 2018). Taxes come in the form of property tax, inventory tax, sales tax, and excise and special use tax. These types of taxes account for the majority of the generated revenue in all municipalities. Non-tax revenue accounts for franchise fees, fines, forfeitures, court fees, and costs and is dictated by the occurrence of those things. If a municipality is less populated, as is the case in most rural areas, then there are fewer ways to generate tax

revenue because there are less people to tax. In this instance, a rural community could generate revenue by ticketing and issuing citations more, such as was seen in all of the rural municipalities of this project relative to urban municipalities, despite the effects it might have on the inhabitants of that community. In a report done by the *Atlanta Journal-Constitution,* they found that many rural communities across the state do police for profit (Simmons, 2014). When interviewing City Councilman Ronnie Fennell of Warwick, Georgia, he mentioned that "We had the opportunity to generate revenue on Highway 300…And that's what we did." (Simmons, 2014)

Instead of relying on citations to their community as a substantial form of revenue, rural communities in Georgia could take action in one of two ways. First, rural municipalities could increase their efforts in economic development by deploying strategies that bring in new businesses and residents to their respective areas. Bringing in new businesses and residents could allow them to further leverage property tax revenue (County Revenues, 2022), which could lead to lessening the burden on fines and fees as a source of revenue. Additionally, attracting more residents has the potential for them to spend more in the local economy, which would increase their sales tax revenue from purchased goods. The Columbus, Georgia Chamber of Commerce has started an economic development initiative, titled "Columbus 2025," with the hopes of attracting new residents to the Muscogee county area by offering residential incentives such as relocation cash and a six-month membership to a co-working space in the local area (*Columbus, GA 2025*, 2023; C. Williams, 2024). While this program offers incentives, there are application requirements such as applicants relocating their primary residence to the local area and being a full-time employee where the employer allows remote work.

Second, rural communities could apply for and use grants and loans specifically as they relate to special projects (Federal Funding Guide for Towns and Townships, n.d.; Imo, 2020). The One Georgia Authority has resources that are specifically designated for Georgia's rural areas to assist in economic development (Georgia Department of Community Affairs, 2018). The primary goal of the One Georgia Authority is economic vitality in rural Georgia. Local governments, local government authorities, joint or multi-county development authorities, lending institutions, and airport authorities are all qualified applicants (Georgia Department of Community Affairs, 2018). Additionally, the Georgia Department of Natural Resources provides grants for recreational trails and historic preservation (Georgia Municipal Association, 2018). This is another good resource for rural communities as many recreational trails and historic landmarks in the state are native to rural areas. Rural communities taking advantage of funding and resources for special projects might prove to be beneficial because if specific grants are used, these projects could then be taken out of municipal budget plans. Instead of a municipality generating revenue via fines and fees to fund a special project, that special project would then be funded by a grant. Grants are not guaranteed, so any special project funded by this mechanism would likely need to be a non-essential project. Generating revenue in any rural community is a burdensome task, regardless of approach, that would warrant special attention.

The third recommendation could prove to be beneficial because that is one way to reduce the municipalities' reliance on revenue from citations. Simultaneously, the same grants could prove to be beneficial to those who are physically active because grants utilized for non-essential projects could be used to build parks, trails, and other places to be physically active in these communities. Having designated spaces for physical activity has the opportunity to

increase the overall number of people who are being physically active while simultaneously taking those people away from areas where it might be hazardous for them to be physically active. For example, creating a trail in a community that doesn't have designated bicycle lanes and forces bicycle users to illegally use the sidewalk takes bicycle users out of the environment that would likely have given them a citation.

The fourth recommendation, as already seen in Macon, Savannah, Brunswick, and most recently Athens, is for any new construction in any municipality to have Complete Streets Policies codified into their city ordinances, which addresses the environments and systems that people operate within. While this recommendation is targeting municipalities in Georgia, it can be expanded to any municipality nationally because it is rooted in policy that has already been implemented in various areas throughout the country. The city of St. Paul, Minnesota utilized a grant to develop a street design manual that implemented Complete Streets Policies (Saint Paul Minnesota, 2023). St. Paul started off their Complete Streets Policies with multiple pilot projects. However, the pilot project that they found to be most beneficial for generating community buy-in and support was their "Better Block" event. For this event, the municipality completely shut down a city block and temporarily transformed it into a Complete Street with walkable and bikeable amenities, pop-up businesses, and street art. Municipalities in Georgia could take this same approach to showcase and highlight how beneficial the implementation of Complete Streets Policies could be.

While there are numerous benefits to implementing Complete Streets Policies, the most relevant to enhancing physical activity efforts are improved safety for pedestrians and bicycle users, an increase in physical activity, potential decreases in population level chronic diseases

such as obesity, diabetes, and heart disease, and the reduction of motor vehicle related injuries and fatalities (U.S. Department of Transportation, 2015). Improved safety for pedestrians and bicycle users happens because Complete Streets Policies have designated street lanes and areas built into the plans for implementation. Having designated areas for pedestrians and bicycle users leads to an increase in physical activity because there is now a specific place to be physically active. Having designated areas to be physically active likely creates an environment where people want to engage in physical activity, leading them to do more of it, which can lead to decreases in certain chronic diseases and their comorbidities. Finally, by separating the areas where pedestrians, bicycle users, and motor vehicle drivers exist, that can help reduce injuries and fatalities since vehicles are separated physically from pedestrians and bicycle users.

To help communities, particularly those in the southeast United States, implement Complete Streets Policies, the Association of Retired Persons (AARP) has created the *Complete Streets in the Southeast: A Tool Kit* (AARP Livable Communities, n.d.). This toolkit is a partnership between AARP Government Affairs, Smart Growth America, and the National Complete Streets Coalition that is based on the implementation of Complete Streets Policies in several southern communities including Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North and South Carolina, and Tennessee. The tool-kit serves as a research report and how-to guide. The research component of the tool-kit provides an overview of what Complete Streets is followed by an explanation of its benefits. The how-to component explains the policy process and how to garner community support.

The fifth recommendation is to decriminalize and automate certain traffic, pedestrian, and bicycle laws across the state of Georgia. Moving away from criminal enforcement of

violations of traffic, pedestrian, and bicycle laws and policies eliminates opportunities for racial discrimination in policing and reduces possible situations where non-safety violations have an impact on Blacks and other minorities lives (Brown et al., 2023). Automating certain violations has the potential to remove interactions between law enforcement and the population entirely, while allowing law enforcement to focus on other duties outside of non-violent crimes being committed. Nationally, there are examples for Georgia to follow where the data shows they are effective.

In 2020 in Philadelphia, Pennsylvania, councilman Isiah Thomas introduced the Driving Equality Act which reclassified eight minor traffic violations to promote a safer city (I. Thomas, n.d.). The primary goal of the Driving Equality Act was to reduce the negative interactions between police and community members. Prior to the bill being passed in 2021, its contents were negotiated with the police, Defender Association, Mayor's Administration, and others. The Mayor of Philadelphia signed it into effect in November 2021. Prior to its enforcement beginning in March 2022, there was a police training and education period between November 2021 and February 2022. The approach sought to redirect police time and resources toward keeping Philadelphia residents safe while reducing negative interactions. The eight violations that this Act brought forth to no longer be enforced with a traffic stop are late registration with a sixty-day grace period, relocation of temporary registration, hanging license plate, missing a single headlight or taillight, items hanging from a rearview mirror, minor bumper damage, driving with an expired or missing inspection sticker, and driving with an expired or missing emission sticker. Data collection around its enforcement is ongoing to ensure that the Driving Equality Act curbs racial disparities in traffic stops without compromising safety.

In 2023, the Denver City Council passed the Freedom to Walk or Roll bill (Rubino, 2023) which sought to decriminalize jaywalking throughout the city. While its intention is to protect pedestrians and bicycle users throughout the city, there is language to stating that vehicles still have the right-of-way anywhere outside of a crosswalk under both state and city law. After being signed by the mayor, the bill instructed the Denver Police Department to make jaywalking the agency's "lowest enforcement priority." (Rubino, 2023) "The goal of this bill was to replace criminalization with language that advises safe crossing of roads rather than requiring it…It encourages law enforcement to make enforcing state-level jaywalking laws their lowest priority." stated Councilwoman Candi CdeBaca, who was one of the cosponsors of the legislation. CdeBaca also went on to mention that one of the biggest things reforming the city's jaywalking laws does is limit the need for unnecessary interactions between residents and police.

As recently as 2024 in cities such as Los Angeles, Glendale, and Long Beach, California, they are starting to implement a five-year pilot program that involves automating speed enforcement by using speed cameras where people are likely to drive too fast, such as school zones (Chiriguayo, 2024). During its introductory period, drivers going eleven miles-per-hour or more over the speed limit will receive a warning. Afterwards, the fine will be a minimum of $50. Miriam Pinski, a research analyst at the Shared-Use Mobility Center states that "By not having automated traffic enforcement, we rely on just hoping that there will be a law enforcement officer there to catch, and then prevent, future speeding. A speed camera removes that unpredictability out of the equation." (Chiriguayo, 2024)

A similar speed camera automated system is being used in Warner Robins, Georgia at various school zones within the city limits (McConnell, 2024). In Warner Robins, the same enforcement strategy is being used where any driver over eleven miles-per-hour will be given a violation, however, the speed cameras there are only operational from 7am to noon on weekdays and never on the weekends. While there are some critics of an automated system's potential privacy violations, supporters argue that the cameras that are part of the automated system only take pictures of a vehicles license plate and nothing more. Extending the decriminalization and automation of certain traffic, pedestrian, and bicycle violations has the potential to reduce interactions between law enforcement and community members throughout the state, while simultaneously improving safety for all.

Limitations

Throughout this project, there were several limitations. This project was limited in the sense that it is specifically looking at Georgia as it relates to arrested mobility and the relevant keywords and phrases in the search. Considering that not every municipality had an open records request executed, the findings cannot be generalizable beyond these specific municipalities. However, the findings raise critical questions for similar cities with a similar typology of laws. As with any legal epidemiology project, online databases may not contain the entirety of existing codified laws, so it is possible that search results were not all inclusive. However, all avenues were used to exhaust search efforts and criteria to ensure that all results were as inclusive as possible.

In phase one while completing the legal scan, the laws included were narrowed to the traffic, pedestrian, and bicycle related laws. In phase two, most notably, the high number of

citations for which race and ethnicity data were missing across the municipalities where open records requests were placed limited the complete visibility of what is happening in those municipalities. Of the 31,479 total citations issued in the examined municipalities, 4,493 of them didn't have a specific race identifier. In municipalities where requested zip-code information for each citation was not provided, there was a lack of data on proportion of police stops that accounted for pass through traffic in the municipalities assessed. Finally, this project had a limited number of urban municipalities.

Translation and Dissemination of Findings

Communities impacted by the downstream outcomes of the Arrested Mobility framework have the right to know there is a problem. Bringing awareness to the concept of Arrested Mobility is a great first step in helping affected communities. Including this body of work alongside and within any future literature produced on the topic, will help to create more real life examples of where Arrested Mobility shows up in the lives of those who live it. Bringing awareness of the concept of Arrested Mobility to entities such as the Centers for Disease Control and Prevention, state health departments, and state and local governments where policy and practice combine can begin shifting the mindsets of the researchers and practitioners who sit in seats to make change. Additionally, communicating this concept to special interest groups such as the Physical Activity Policy Research and Evaluation Network (PAPREN) and America Walks gets this into the hands of practitioners who can continue to make change. These audiences can be reached via publication, conference networking and presentations, professional organization committee workgroups, and various other ways. Finally, operationalizing the results from this body of work and those similar into meaningful

recommendations that can be easily handed to those previously mentioned are easy leverage points to problem solve where Arrested Mobility might show up.

Future Research

For future practitioners and researchers who choose to study this topic, there are some important areas to consider to expand the scope and understanding of what has been started with this project and the concept of Arrested Mobility. First, more municipalities overall should be included in the examination. Of the large number of municipalities in the state of Georgia, only six were assessed in this project. Researching this topic with a larger sample of municipalities throughout the state could lead to a better understanding of its presence than what is currently understood. Additionally, Albany, GA and Athens, GA were the only urban municipalities included and even so, Athens, GA accounted for 74% of all the urban data. Including more urban municipalities will create a more representative and inclusive understanding of the problem. Finally, assessing citations associated with laws that are not related to active transportation, but might also be discriminatory in nature, such as sagging or spitting on sidewalks, has the potential to uncover more disparities than already present.

Conclusion

The concept of Arrested Mobility is a subject that warrants further investigation in Georgia. The municipalities assessed in this project suggest that the laws centered around traffic, pedestrians, and bicycle use and their enforcement warrant further and deeper examination. As it relates to research question one, there are codified laws at the state and municipal level that impact Blacks' and other minorities ability to be physically active. The way these laws are written, how they are interpreted, and how they are enforced warrant further

investigation. Regarding research question two, there is evidence to suggest that there are some municipalities where minorities are given citations at a higher rate than their prevalence in communities, especially in rural municipalities. Findings also suggest that rural municipalities have higher average fine fees than their urban counterparts in the places examined as part of this project. There are municipalities, such as Grovetown, where the data suggests that the average fine fees in the municipality exceed the geographical average and where the average fine fees for minorities are above that of the same minority in other geographical areas. These findings warrant further investigation outside of the six municipalities included in this project and should include other areas from around the state. The findings from this project suggest that the lived experiences of Blacks and other racial and ethnic minorities, as indicated by the citations records from the municipalities assessed, give credence to the validity of Arrested Mobility in the state of Georgia.

To address these findings, health equity based solutions such as longer mandatory implicit bias training, citation reporting requirements, and body-worn cameras while on duty for all law enforcement personnel, Georgia adopting a bill similar to California House Bill 2773, and local municipalities diversifying their revenue and income streams have the potential to reshape behavior. By creating awareness and layering that with accountability mechanisms, the potential for real change is possible. If the state were to adopt some of these recommendations, not only could people and communities thrive in a better way, but human resources and capital could be better utilized for more directed and intentional public safety efforts. This project has only opened the door of what the possibilities are and how health

equity issues as it relates to community relations and law enforcement could be improved in Georgia.

Figures

Figure 1 – 1931 Redlining Map of Atlanta, Georgia (*Redlining Map of Greater Atlanta, 1931*, n.d.)

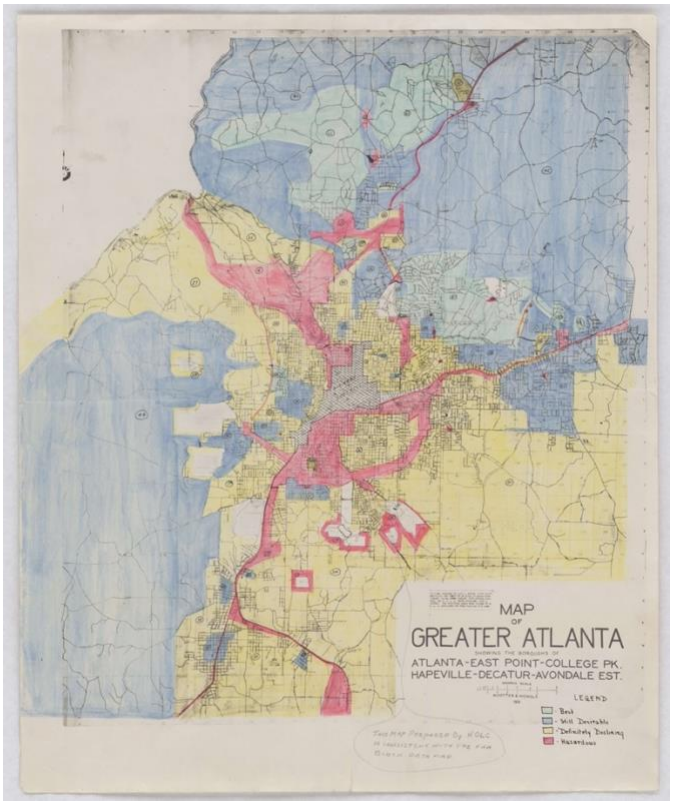

Figure 2 – Arrested Mobility Framework (Brown, 2021c)

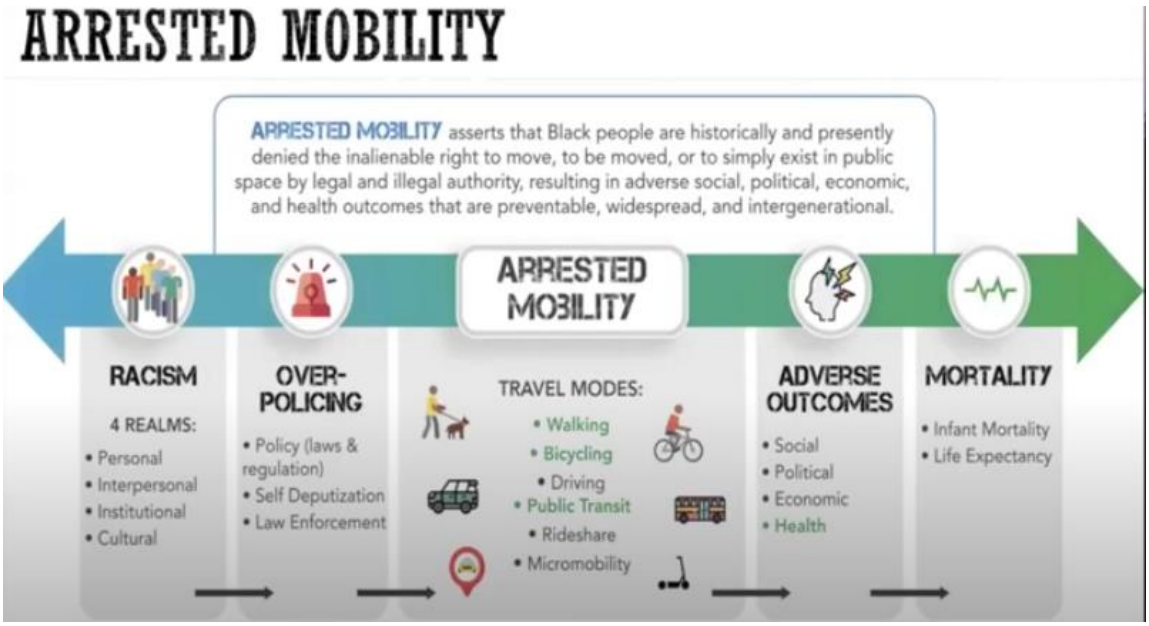

Figure 3 – GDOT Pedestrian Fatalities, Projections through 2018 (Georgia Department of Transportation, n.d.)

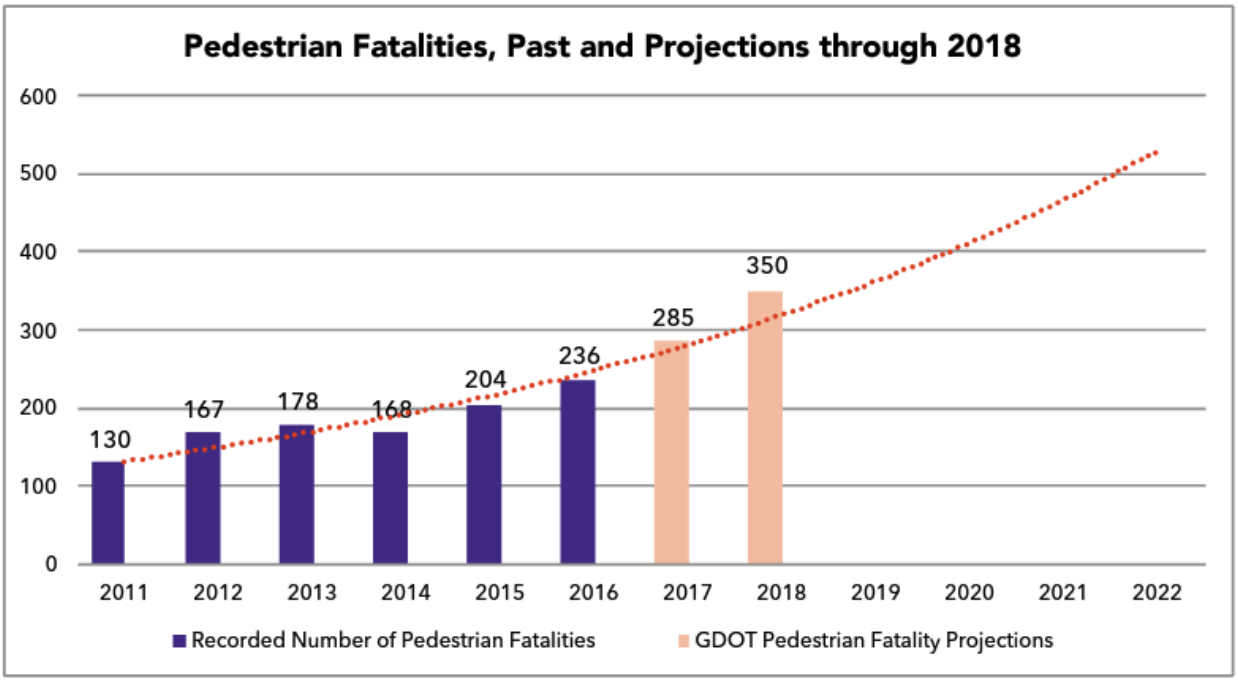

Figure 4 – A framework for the effects of residential segregation on cardiovascular health (Essien & Youmans, 2022)

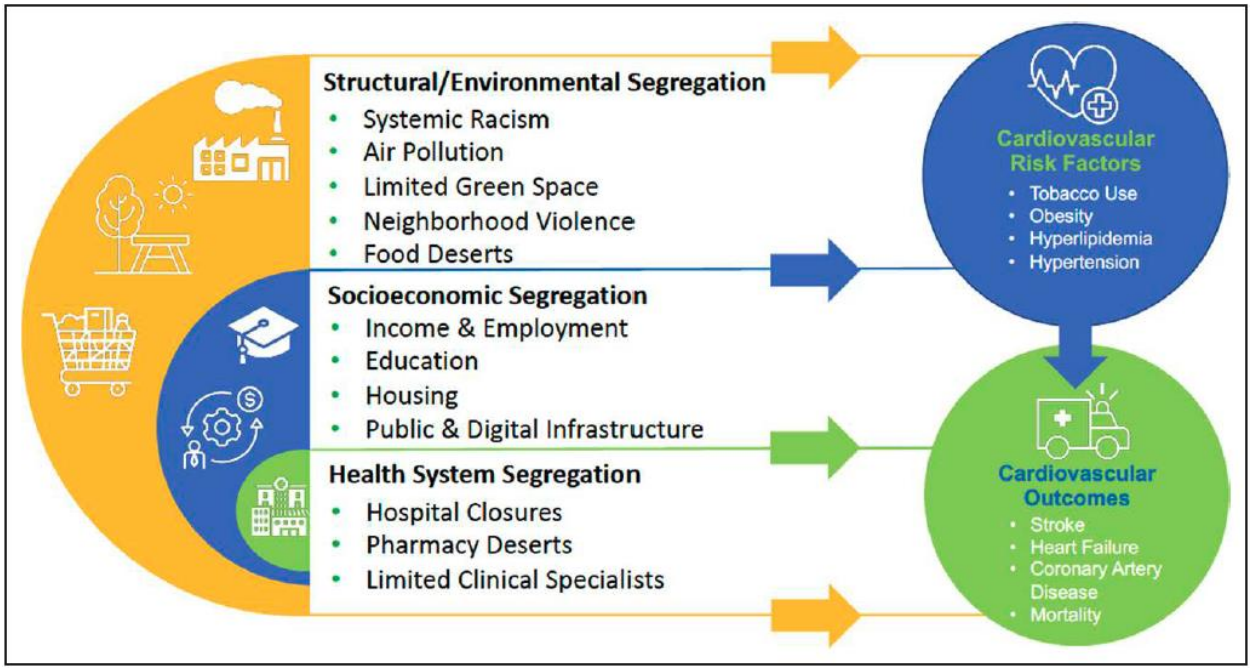

Figure 5 – The Policy Surveillance Process (The Policy Surveillance Program, 2016)

Tables

Table 1: Most Populated Municipality in Each County in Georgia

Name	**Status**	**County**	**Population (July 1, 2022 Population Estimate)**
Baxley	City	Appling	4,960
Pearson	City	Atkinson	1,799
Alma	City	Bacon	3,461
Newton	City	Baker	579
Milledgeville	City	Baldwin	16,837
Winder	City	Barrow	19,400
Cartersville	City	Bartow	23,904
Fitzgerald	City	Ben Hill / Irwin	8,900
Nashville	City	Berrien	4,886
Macon (Macon-Bibb County)	Consolidated Government	Bibb	156,197
Cochran	City	Bleckley	4,647
Nahunta	City	Brantley	1,015
Quitman	City	Brooks	4,054
Richmond Hill	City	Bryan	18,091
Statesboro	City	Bulloch	34,353
Waynesboro	City	Burke	5,635
Jackson	City	Butts	5,693
Morgan	City	Calhoun	1,806
Kingsland	City	Camden	19,896
Metter	City	Candler	3,969
Carrollton	City	Carroll	27,262
Fort Oglethorpe	City	Catoosa / Walker	10,537
Folkston	City	Charlton	4,631
Savannah	City	Chatham	148,004
Cusseta (Cusseta-Chattahoochee County)	Unified Government	Chattahoochee	8,819
Summerville	City	Chattooga	4,389
Woodstock	City	Cherokee	37,350

Athens (Athens-Clarke County)	Unified Government	Clarke	128,561
Fort Gaines	City	Clay	986
Forest Park	City	Clayton	19,400
Homerville	City	Clinch	2,295
Marietta	City	Cobb	62,602
Douglas	City	Coffee	11,685
Moultrie	City	Colquitt	14,494
Grovetown	City	Columbia	17,148
Adel	City	Cook	5,617
Newnan	City	Coweta	44,485
Roberta	City	Crawford	778
Cordele	City	Crisp	9,914
Trenton	City	Dade	2,199
Dawsonville	City	Dawson	4,489
Bainbridge	City	Decatur	14,242
Eastman	City	Dodge	5,616
Vienna	City	Dooly	2,815
Albany	City	Dougherty	67,192
Douglasville	City	Douglas	37,948
Blakely	City	Early	5,238
Echols County (incl. Statenville)	Consolidated Government	Echols	3,686
Rincon	City	Effingham	11,248
Elberton	City	Elbert	4,789
Swainsboro	City	Emanuel	7,583
Claxton	City	Evans	2,501
Blue Ridge	City	Fannin	1,226
Peachtree City	City	Fayette	39,562
Rome	City	Floyd	37,913
Cumming	City	Forsyth	7,672
Royston	City	Franklin	2,645
Atlanta	City	Fulton / DeKalb	499,127
Ellijay	City	Gilmer	1,927
Gibson	City	Glascock	622
Brunswick	City	Glynn	15,159
Calhoun	City	Gordon	17,976
Cairo	City	Grady	10,027

Greensboro	City	Greene	3,603
Peachtree Corners	City	Gwinnett	42,133
Cornelia	City	Habersham	5,004
Baldwin	City	Banks	3,866
Gainesville	City	Hall	45,282
Sparta	City	Hancock	1,306
Bremen	City	Haralson	7,746
Hartwell	City	Hart	4,526
Franklin	City	Heard	962
McDonough	City	Henry	30,340
Warner Robins	City	Houston / Peach	82,175
Jefferson	City	Jackson	15,286
Monticello	City	Jasper	2,751
Hazlehurst	City	Jeff Davis	4,077
Louisville	City	Jefferson	2,318
Millen	City	Jenkins	2,957
Wrightsville	City	Johnson	3,518
Gray	City	Jones	3,427
Barnesville	City	Lamar	6,181
Lakeland	City	Lanier	2,953
Dublin	City	Laurens	15,946
Leesburg	City	Lee	3,527
Hinesville	City	Liberty	35,441
Lincolnton	City	Lincoln	1,448
Ludowici	City	Long	1,730
Valdosta	City	Lowndes	55,074
Dahlonega	City	Lumpkin	7,461
Montezuma	City	Macon	2,958
Comer	City	Madison	1,565
Thomson	City	McDuffie	6,858
Darien	City	McIntosh	1,558
Manchester	City	Meriwether / Talbot	3,551
Colquitt	City	Miller	1,919
Camilla	City	Mitchell	5,152
Forsyth	City	Monroe	4,733
Madison	City	Morgan	4,917

Chatsworth	City	Murray	4,871
Columbus	City	Muscogee	202,616
Covington	City	Newton	14,381
Watkinsville	City	Oconee	3,385
Crawford	City	Oglethorpe	857
Dallas	City	Paulding	14,763
Jasper	City	Pickens	4,520
Zebulon	City	Pike	1,297
Cedartown	City	Polk	10,278
Hawkinsville	City	Pulaski	4,046
Eatonton	City	Putnam	6,545
Georgetown (Georgetown-Quitman County)	Unified Government	Quitman	2,249
Clayton	City	Rabun	2,020
Cuthbert	City	Randolph	2,939
Augusta (Augusta-Richmond County)	Consolidated Government	Richmond	202,096
Conyers	City	Rockdale	17,926
Ellaville	City	Schley	1,546
Sylvania	City	Screven	2,602
Donalsonville	City	Seminole	2,828
Griffin	City	Spalding	23,693
Toccoa	City	Stephens	9,146
Richland	City	Stewart	1,418
Americus	City	Sumter	15,642
Crawfordville	City	Taliaferro	490
Glennville	City	Tattnall	5,049
Butler	City	Taylor	1,827
McRae-Helena	City	Telfair / Wheeler	6,211
Dawson	City	Terrell	4,218
Thomasville	City	Thomas	18,460
Tifton	City	Tift	17,253
Vidalia	City	Toombs / Montgomery	10,668
Hiawassee	City	Towns	1,017
Soperton	City	Treutlen	2,907
LaGrange	City	Troup	31,773

West Point	City	Harris	3,632
Ashburn	City	Turner	4,174
Jeffersonville	City	Twiggs	930
Blairsville	City	Union	760
Thomaston	City	Upson	9,858
Monroe	City	Walton	15,673
Waycross	City	Ware / Pierce	13,741
Warrenton	City	Warren	1,806
Sandersville	City	Washington	5,538
Jesup	City	Wayne	9,958
Webster County	Unified Government	Webster / Marion	2,328
Cleveland	City	White	3,548
Dalton	City	Whitfield	34,366
Abbeville	City	Wilcox	2,757
Washington	City	Wilkes	3,693
Gordon	City	Wilkinson	1,736
Sylvester	City	Worth	5,501

- Cities with two corresponding counties are the largest municipality in each county.

Table 2: Article 1 – General Provisions

Section	Title
40-6-1	Violations of chapter a misdemeanor unless otherwise stated; maximum fines for speed limit violations.
40-6-2	Obedience to authorized persons directing traffic.
40-6-3	Chapter refers to operation of vehicles on highways; exceptions; vehicle accident reports and private property.
40-6-4	Persons riding animals or driving animal drawn vehicles.
40-6-5	Persons working on highways.
40-6-6	Authorized emergency vehicles; pursuit of fleeing suspects.
40-6-7	Operation of motor vehicles in parades.
40-6-8	Rights of owners of real property.
40-6-9	Challenges to speed limits and other traffic regulations established or enforced by local governing authorities.
40-6-10	Insurance requirements for operation of motor vehicles generally.
40-6-10.1	Financial responsibility requirements of the Federal Motor Carrier Safety Administration.

40-6-11	Insurance requirements for operation of motorcycles.
40-6-12	Subsequent violation; proof of financial responsibility.
40-6-13	Courts having jurisdiction to try offenses.
40-6-14	Sound volume limitations from within the motor vehicle.
40-6-15	Knowingly driving motor vehicle on suspended, canceled, or revoked registration.
40-6-16	Procedure for passing certain stationary vehicles.
40-6-16.1	Procedure for passing vehicle with active sanitation workers.
40-6-17	Prohibited use of traffic-control device preemption emitter; penalty.

Table 3: Article 2 – Traffic Signs, Signals, and Markings

Section	Title
40-6-20	Obedience to traffic-control devices required; presumptions; red light cameras.
40-6-21	Meaning of traffic signals.
40-6-22	Pedestrian-control signals.
40-6-23	Flashing circular red or yellow signals.
40-6-24	Lane direction control signals.
40-6-25	Display of unauthorized signs, signals, or markings.
40-6-26	Interference with official traffic-control devices or certain signs; travel on closed highway prohibited.
40-6-27	Installation of blue retroreflective raised pavement markers.
40-6-28	Restricted access/managed lanes.

Table 4: Article 3 – Driving on Right Side of Roadway, Overtaking and Passing, Following too Closely

Section	Title
40-6-40	Vehicles to drive on right side of roadway; exceptions; impeding traffic.
40-6-41	Passing vehicles proceeding in opposite directions.
40-6-42	Overtaking and passing generally.
40-6-43	When overtaking and passing on the right permitted.
40-6-44	Limitations on overtaking and passing on the left.
40-6-45	Further limitations on driving on left of center of roadway.
40-6-46	No-passing zones.
40-6-47	One-way roadways and rotary traffic islands.
40-6-48	Driving on roadways laned for traffic.
40-6-49	Following too closely.
40-6-50	Driving on divided highway, controlled-access roadways, and emergency lanes.

40-6-51	Restrictions on type of vehicle that may travel on certain major interstates and highways inside the Interstate 285 perimeter.
40-6-52	Prohibited lane usage by trucks using multilane highways.
40-6-53	Prohibited lane usage by buses and motorcoaches using multilane highways; HOV lane usage by a bus or motorcoach.
40-6-54	Designation of travel lanes for exclusive use of certain vehicles; penalty; presumption; establishment of high occupancy toll (HOT)lanes.
40-6-55	Obligation of drivers to yield to bicyclist in a bicycle lane.
40-6-56	Procedure for passing a bicyclist.

Table 5: Article 4 – Right of Way

Section	Title
40-6-70	Right of way rule for vehicles approaching or entering intersection.
40-6-71	Yield when turning left.
40-6-72	Stopping and yielding.
40-6-73	Entering or crossing roadway.
40-6-74	Operation of vehicles on approach of authorized emergency vehicles.
40-6-75	Highway construction and maintenance personnel and vehicles.
40-6-76	Funeral processions.
40-6-77	Penalties for collision which causes serious injury to motorcyclist, pedestrian, bicyclist, or farmer transporting certain items.

Table 6: Article 5 – Rights and Duties of Pedestrians

Section	Title
40-6-90	Pedestrians to obey traffic-control devices and traffic regulations.
40-6-91	Right of way in crosswalks.
40-6-92	Crossing roadway elsewhere than at crosswalk.
40-6-93	Drivers to exercise due care in relation to pedestrians.
40-6-94	Right of way of blind pedestrian.
40-6-95	Pedestrian under influence of alcohol or drug.
40-6-96	Pedestrians on or along roadway.
40-6-97	Pedestrians soliciting.
40-6-97.1	Solicitation permits for charitable organizations.
40-6-98	Driving through safety zone prohibited.
40-6-99	Pedestrians to yield to authorized emergency vehicles.
40-6-100	[Repealed] Right of way on sidewalks.
40-6-101	Redesignated.

Table 7: Article 6 – Turning, Starting, Signaling

Section	Title
40-6-120	Methods of turning at intersections.
40-6-121	U-turns.
40-6-122	Starting parked vehicle.
40-6-123	Turning movements; signals required on turning, changing lanes, slowing, or stopping.
40-6-124	Signals by hand and arm or signal lights.
40-6-125	Method of giving hand and arm signals.
40-6-126	Central lane for turning.

Table 8: Article 7 – Negotiating Railroad Crossings, Entering Highways from Private Driveways

Section	Title
40-6-140	Approaching and travel over railroad grade crossing.
40-6-141	Erection and observance of stop signs at railroad grade crossings.
40-6-142	Certain vehicles to stop at all railroad crossings.
40-6-143	Moving heavy equipment at railroad grade crossings.
40-6-144	Emerging from alley, driveway, or building; driving upon a sidewalk prohibited.

Table 9: Article 8 – School Buses

Section	Title
40-6-160	Speed limits when transporting children.
40-6-161	Headlights to be lit when transporting children; communication equipment required.
40-6-162	Use of visual signals.
40-6-163	Duty of driver of vehicle meeting or overtaking school bus; reporting of violations; civil monetary penalty for violations captured by school bus camera.
40-6-164	Duty of school bus driver stopping to allow children to disembark.
40-6-165	Operation of school buses.

Table 10: Article 9 – Speed Restrictions

Section	Title
40-6-180	Basic rules.
40-6-181	Maximum limits.
40-6-182	Establishment of state speed zones.
40-6-183	Alteration of speed limits by local authorities.

40-6-184	Impeding traffic flow; minimum speed limits; slower driving in a passing lane.
40-6-185	Speed limits on bridges and other elevated structures.
40-6-186	Racing on highways or streets.
40-6-187	Charging violations; sentence to specify amount by which speed limit exceeded.
40-6-188	Highway work zones; reduction in speed; signage.
40-6-189	Classification as super speeder; fees.

Table 11: Article 10 – Stopping, Standing Parking

Section	Title
Part 1 – General Provisions	
40-6-200	How vehicles to be parked; powers of Department of Transportation and local authorities.
40-6-201	[Reserved] Leaving motor vehicle unattended.
40-6-202	Stopping, standing, or parking outside of business or residential districts.
40-6-203	Stopping, standing, or parking prohibited in specified places; stopping or standing for collecting municipal solid waste or recovered materials.
40-6-204	Exception as to disabled vehicles.
40-6-205	Obstructing intersection.
40-6-206	When police officers may remove vehicles; uninsured vehicles.
40-6-207	Liability of owner for traffic or parking violations occurring while vehicle leased to another; duty of owner to attend hearing on the offense; improper vehicle maintenance.
40-6-208	Parking areas for passengers of rapid rail or public transit buses; violations.
Part 2 – Parking for Persons with Disabilities	
40-6-220	Short title.
40-6-221	Definitions.
40-6-222	[Reserved] Permits.
40-6-223	[Reserved] Fees.
40-6-224	Out-of-state handicapped or persons with disabilities license plates or permits.
40-6-224.1	[Repealed] Handicapped parking places for the nonambulatory.
40-6-225	Parking places for persons with disabilities for the nonambulatory.
40-6-226	Offenses and penalties.
40-6-227	Application to both public and private property.
40-6-228	Enforcement.

Table 12: Article 11 – Miscellaneous Provisions

Section	Title
40-6-240	Backing.

40-6-241	Distracted driving; restrictions on operation of wireless telecommunications devices and stand-alone electronic devices; penalty; exceptions.
40-6-241.1	[Repealed] Definitions; prohibition on certain persons operating motor vehicle while engaging in wireless communications; exceptions; penalties.
40-6-241.2	[Repealed] Writing, sending, or reading text based communication while operating motor vehicle prohibited; prohibited uses of wireless telecommunications devices by drivers of commercial vehicles; exceptions; penalties for violation.
40-6-242	Obstruction of driver's view or interference with control of vehicle.
40-6-243	Opening and closing vehicle doors.
40-6-244	Riding in house trailer.
40-6-245	Driving through canyon or on mountain highway.
40-6-246	Coasting.
40-6-247	Following fire apparatus or emergency vehicle.
40-6-248	Crossing fire hose.
40-6-248.1	Securing and covering loads on vehicles.
40-6-249	Littering highway.
40-6-250	Wearing device which impairs hearing or vision.
40-6-251	Driving in circular or zigzag course; "laying drags."
40-6-252	Parking, standing, or driving vehicle in private parking area after request not to do so.
40-6-253	Consumption of alcoholic beverage or possession of open container of alcoholic beverage in passenger area.
40-6-253.1	Transportation of medical waste; exception; penalty for violation.
40-6-254	Operating vehicle without adequately securing load.
40-6-255	Driving away without paying for gasoline.

Table 13: Article 12 – Accidents

Section	Title
40-6-270	Hit and run; duty of driver to stop at or return to scene of accident.
40-6-271	Duty upon striking unattended vehicle.
40-6-272	Duty upon striking fixture.
40-6-273	Duty to report accident resulting in injury, death, or property damage.
40-6-273.1	Instruction to drivers to provide certain information to other parties.
40-6-274	Exemption from duty to stop at scene or report accident.
40-6-275	Duty to remove vehicle from public roads; removal of incapacitated vehicle from state highway.
40-6-276	Duty of driver of wrecker/tow truck.
40-6-277	Sheriffs and chief executive officers of law enforcement agencies to report traffic accident deaths.

40-6-278	Uniform motor vehicle accident reports and reporting procedures.
40-6-279	Accidents involving operation of fully autonomous vehicles.

Table 14: Article 13 – Special Provisions

Section	Title
Part 1 – Bicycles and Play Vehicles	
40-6-290	Application of part regarding bicycles.
40-6-291	Traffic laws applicable to bicycles; operation upon paved shoulder; signaling of right hand turns.
40-6-292	Manner of riding bicycle; passengers.
40-6-293	Clinging to vehicles.
40-6-294	Riding on roadways and bicycle paths.
40-6-295	Carrying articles.
40-6-296	Lights and other equipment on bicycles.
40-6-297	Violation of part a misdemeanor; duty of parents and guardians.
40-6-298	Rules and regulations.
40-6-299	Redesignated.
Part 1A – Electric Assisted Bicycles	
40-6-300	Definitions.
40-6-301	Rights and duties of electric assisted bicycle operators.
40-6-302	Labeling of bicycles; required equipment.
40-6-303	Location of operation; age limitations; required safety equipment.
Part 1B – Operation of Farm Use Vehicles	
40-6-305	Purpose of farm use vehicle.
40-6-306	Rights and duties of operator.
40-6-307	Local restrictions on public roads and highways.
40-6-308	Operation of farm tractors upon certain highways; yielding of right of way.
Part 2–- Motorcycles	
40-6-310	Traffic laws applicable to persons operating motorcycles.
40-6-311	Manner of riding motorcycle generally.
40-6-312	Operating motorcycle on roadway laned for traffic.
40-6-313	Clinging to other vehicles.
40-6-314	Footrests and handlebars.
40-6-315	Headgear and eye-protective devices for riders.
40-6-316	Rules and regulations.
Part 2A – Electric Personal Assistive Mobility Devices and Personal Delivery Devices	
40-6-320	Operation on highways and sidewalks; direction of travel.
40-6-321	Avoiding collisions; yielding the right of way; warning of approach.

40-6-322	Speed of travel restricted.
40-6-323	Parking.
40-6-324	Transportation of hazardous materials; medical oxygen excluded.
40-6-325	Required equipment; minimum age for operation; exception to age requirement.
40-6-326	Operation while intoxicated.
40-6-327	Monitoring of personal delivery devices; general liability coverage.
40-6-328	Requirement in the event of an accident.
40-6-329	Penalty for violations; judicial jurisdiction.
40-6-329.1	Local ordinances or resolutions; limitations; authority; requirements.
40-6-329.2	Operation of personal delivery device within surface transportation project prohibited.
Part 3 – Personal Transportation Vehicles	
40-6-330	Standards for operating personal transportation vehicles.
40-6-330.1	Required equipment for personal transportation vehicles; grandfather clause.
40-6-331	Designated areas of operation; PTV licensing requirements and operating standards; signage; use by a commercial delivery company.
Part 4–- Mopeds	
40-6-350	Traffic laws applicable to persons operating mopeds.
40-6-351	Driver's license or permit required for certain operators.
40-6-352	Protective headgear.
40-6-353	Operation over certain roads may be prohibited.
40-6-354	Rules and regulations.
Part 5 – Low-speed or Multipurpose off-highway Vehicles	
40-6-359	Required equipment for multipurpose off-highway vehicles.
40-6-360	Rights of persons operating low-speed or multipurpose off-highway vehicles.
40-6-361	Traffic laws applicable to low-speed or multipurpose off-highway vehicles.
40-6-362	Operating low-speed and multipurpose off-highway vehicles on highways.
Part 6 – Personal Transportation Vehicle Transportation Plan	
40-6-363	Legislative intent.
40-6-364	Definitions.
40-6-365	Standards for local authorities to establish personal transportation vehicle transportation plans.
40-6-366	Acquisition of property for PTV lanes.
40-6-367	Part inapplicable to certain localities with prior ordinances governing PTV use.
40-6-368	Requirements for streets or highways on which joint use by regular vehicle traffic and PTVs permitted.
40-6-369	Manner in which PTVs may be driven.
40-6-369.1	Speed limits on streets authorized for PTV use.

Table 15: Article 14 – Effect of Chapter on Powers of Local Authorities

Section	Title
40-6-370	Uniform state-wide application of chapter.
40-6-371	Powers of local authorities generally.
40-6-372	Adoption of chapter by local authorities.
40-6-373	Effect of future changes in chapter.
40-6-374	Form of adopting ordinance.
40-6-375	Citations for violations.
40-6-376	Prosecution under this chapter or local ordinance; transfer of charge to state tribunal; double jeopardy.

Table 16: Article 15 – Serious Traffic Offenses

Section	Title
40-6-390	Reckless driving.
40-6-390.1	Reckless stunt driving.
40-6-391	Driving under the influence of alcohol, drugs, or other intoxicating substances; penalties; publication of notice of conviction for persons convicted for second time; endangering a child.
40-6-391.1	Entry and acceptance of plea of nolo contendere.
40-6-391.2	Seizure and civil forfeiture of motor vehicle operated by habitual violator.
40-6-391.3	Penalty for conviction for driving under influence of alcohol or drugs while driving school bus.
40-6-392	Chemical tests for alcohol or drugs.
40-6-393	Homicide by vehicle.
40-6-393.1	Feticide by vehicle.
40-6-394	Serious injury by vehicle.
40-6-395	Fleeing or attempting to elude police officer; impersonating law enforcement officer.
40-6-396	Homicide by interference with official traffic-control device or railroad sign or signal; serious injury by interference with official traffic-control device or railroad sign or signal.
40-6-397	Aggressive driving.

Table 17: Georgia Municipalities that adopt the Georgia Uniform Rules of the Road

Crawfordville, Georgia
Crawford, Georgia
Franklin, Georgia
Fort Gaines, Georgia

Nahunta, Georgia
Hiawassee, Georgia
Blue Ridge, Georgia
Sparta, Georgia
Lincolnton, Georgia
Ellaville, Georgia
Darien, Georgia
Comer, Georgia
Pearson, Georgia
Warrenton, Georgia
Butler, Georgia
Colquitt, Georgia
Ellijay, Georgia
Clayton, Georgia
Trenton, Georgia
Louisville, Georgia
Webster County, Georgia
Claxton, Georgia
Sylvania, Georgia
Royston, Georgia
Monticello, Georgia
Vienna, Georgia
Donalsonville, Georgia
Lakeland, Georgia
Millen, Georgia
Montezuma, Georgia
Watkinsville, Georgia
Gray, Georgia
Wrightsville, Georgia
Leesburg, Georgia
Cleveland, Georgia
Manchester, Georgia
Greensboro, Georgia
West Point, Georgia
Echols County, Georgia
Washington, Georgia
Banks County, Georgia
Metter, Georgia
Hawkinsville, Georgia
Quitman, Georgia
Hazlehurst, Georgia
Ashburn, Georgia

Dawson, Georgia
Summerville, Georgia
Dawsonville, Georgia
Jasper, Georgia
Hartwell, Georgia
Folkston, Georgia
Cochran, Georgia
Forsyth, Georgia
Elberton, Georgia
Chatsworth, Georgia
Nashville, Georgia
Madison, Georgia
Cornelia, Georgia
Glennville, Georgia
Camilla, Georgia
Blakely, Georgia
Sylvester, Georgia
Sandersville, Georgia
Eastman, Georgia
Adel, Georgia
Waynesboro, Georgia
Jackson, Georgia
McRae–Helena, Georgia
Eatonton, Georgia
Thomson, Georgia
Dahlonega, Georgia
Swainsboro, Georgia
Cumming, Georgia
Bremen, Georgia
Cusseta, Georgia
Fitzgerald, Georgia
Toccoa, Georgia
Thomaston, Georgia
Cordele, Georgia
Jesup, Georgia
Cairo, Georgia
Cedartown, Georgia
Fort Oglethorpe, Georgia
Vidalia, Georgia
Rincon, Georgia
Douglas, Georgia
Waycross, Georgia

Bainbridge, Georgia
Covington, Georgia
Moultrie, Georgia
Dallas, Georgia
Brunswick, Georgia
Jefferson, Georgia
Americus, Georgia
Monroe, Georgia
Dublin, Georgia
Milledgeville, Georgia
Grovetown, Georgia
Tifton, Georgia
Conyers, Georgia
Calhoun, Georgia
Richmond Hill, Georgia
Thomasville, Georgia
Forest Park, Georgia
Winder, Georgia
Kingsland, Georgia
Griffin, Georgia
Cartersville, Georgia
Carrollton, Georgia
McDonough, Georgia
LaGrange, Georgia
Statesboro, Georgia
Dalton, Georgia
Hinesville, Georgia
Woodstock, Georgia
Rome, Georgia
Douglasville, Georgia
Peachtree City, Georgia
Newnan, Georgia
Gainesville, Georgia
Valdosta, Georgia
Marietta, Georgia
Albany, Georgia
Warner Robins, Georgia
Athens-Clarke County Unified Government, Georgia
Savannah, Georgia
Columbus, Georgia
Atlanta, Georgia

Table 18 – Georgia Municipalities with their own bicycle laws

Gibson, Georgia
Crawfordville, Georgia
Hiawassee, Georgia
Ellaville, Georgia
Darien, Georgia
Warrenton, Georgia
Butler, Georgia
Clayton, Georgia
Claxton, Georgia
Vienna, Georgia
Millen, Georgia
Montezuma, Georgia
Watkinsville, Georgia
Cleveland, Georgia
Manchester, Georgia
West Point, Georgia
Washington, Georgia
Hawkinsville, Georgia
Dawson, Georgia
Cochran, Georgia
Elberton, Georgia
Chatsworth, Georgia
Nashville, Georgia
Madison, Georgia
Camilla, Georgia
Sylvester, Georgia
Eastman, Georgia
Dahlonega, Georgia
Bremen, Georgia
Thomaston, Georgia
Cordele, Georgia
Douglas, Georgia
Waycross, Georgia
Moultrie, Georgia
Dallas, Georgia
Brunswick, Georgia
Monroe, Georgia
Dublin, Georgia
Grovetown, Georgia
Tifton, Georgia

Conyers, Georgia
Calhoun, Georgia
Thomasville, Georgia
Forest Park, Georgia
Winder, Georgia
Griffin, Georgia
Cartersville, Georgia
Carrollton, Georgia
Dalton, Georgia
Rome, Georgia
Douglasville, Georgia
Peachtree City, Georgia
Newnan, Georgia
Valdosta, Georgia
Athens-Clarke County Unified Government, Georgia
Savannah, Georgia
Macon, Georgia
Augusta, Georgia
Columbus, Georgia
Atlanta, Georgia

Table 19 – Georgia Municipalities with their own pedestrian laws

Crawfordville, Georgia
Watkinsville, Georgia
Cleveland, Georgia
Nashville, Georgia
Brunswick, Georgia
Grovetown, Georgia
Valdosta, Georgia
Macon, Georgia
Augusta, Georgia
Columbus, Georgia
Atlanta, Georgia
Savannah, Georgia

Table 20 – Municipalities that were selected for an Open Records Request

Typography	Municipality Selected

Municipalities that expressly adopt Georgia traffic law, the Uniform Rules of the Road, as their own.	Watkinsville, GA (rural)	Albany, GA (urban)
Municipalities that have their own pedestrian laws.	Brunswick, GA (rural)	Grovetown, GA (rural)
Municipalities that have their own bicycle laws separate from Georgia bicycle law.	Thomaston, GA (rural)	Athens, GA (urban)

Table 21 – Watkinsville, GA – Citation Information

Race & Gender	Count of Race	% of Race	Average Fine Fees	Max Fine Fees
Asian	**7**	**1.04%**	**$193.86**	**$280.00**
Female	5	0.74%	$211.00	$280.00
Male	2	0.30%	$151.00	$167.00
Black	**121**	**17.90%**	**$246.42**	**$1,320.00**
Female	54	7.99%	$296.28	$1,320.00
Male	67	9.91%	$206.24	$900.00
Hispanic	**45**	**6.66%**	**$325.40**	**$1,320.00**
Female	14	2.07%	$308.57	$711.00
Male	31	4.59%	$333.00	$1,320.00
Unknown	**160**	**23.67%**	**$192.97**	**$1,320.00**
Female	73	10.80%	$169.18	$750.00
Male	87	12.87%	$212.93	$1,320.00
White	**343**	**50.74%**	**$211.30**	**$1,320.00**
Female	153	22.63%	$209.74	$1,320.00
Male	190	28.11%	$212.56	$1,320.00
Grand Total	**676**	**100.00%**	**$220.66**	**$1,320.00**

Table 22: Watkinsville, GA – Average Fine Fee Analysis

ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	570939.62	3	190313.207	4.63278532	0.00330222	2.62231531
Within Groups	21032781.6	512	41079.6516			

Total	21603721.2	515				
t-Tests: Two-Sample Assuming Unequal Variances						
	White	*Black*	*White*	*Asian*	*White*	*Hispanic*
Mean	$211.30	$246.42	$211.30	$193.86	$211.30	$325.40
Variance	34215.5979	51635.7459	34215.5979	2312.47619	34215.5979	70929.1545
Observations	343	121	343	7	343	45
Hypothesized Mean Difference	0		0		0	
df	179		10		50	
t Stat	-1.5305089		0.84121861		-2.787032	
P(T<=t) one-tail	0.0638280 7		0.20994312		0.00374979	
t Critical one-tail	1.6534108		1.81246112		1.67590503	
P(T<=t) two-tail	0.12765615		0.41988623		0.00749958	
t Critical two-tail	1.97330543		2.22813885		2.00855911	

Table 23 – Albany, GA – Citation Information

Race & Gender	Count of Race	% of Race	Average Fine Fees	Max Fine Fees
Asian	**11**	**0.17%**	**$114.04**	**$205.10**
Female	9	0.14%	$120.13	$205.10
Male	2	0.03%	$86.60	$123.20
Black	**4837**	**74.56%**	**$159.83**	**$1,496.68**
Female	2387	36.80%	$146.35	$1,496.68
Male	2450	37.77%	$172.97	$1,496.68
Hispanic	**5**	**0.08%**	**$118.45**	**$150.00**
Female	2	0.03%	$103.07	$112.93
Male	3	0.05%	$128.71	$150.00
Unknown	**211**	**3.25%**	**$126.39**	**$1,000.00**
Female	81	1.25%	$113.22	$496.16
Male	108	1.66%	$143.09	$1,000.00

Unknown	22	0.34%	$92.87	$350.63
White	**1423**	**21.94%**	**$139.82**	**$2,000.00**
Female	681	10.50%	$142.01	$2,000.00
Male	742	11.44%	$137.81	$1,290.00
Grand Total	**6487**	**100.00%**	**$154.24**	**$2,000.00**

Table 24 – Albany, GA – Average Fine Fee Analysis

ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	465759.026	3	155253.009	3.820292	0.009519	2.606324
Within Groups	254888051	6272	40639.0387			
Total	255353810	6275				
t-Tests: Two-Sample Assuming Unequal Variances						
	White	*Black*	*White*	*Asian*	*White*	*Hispanic*
Mean	$139.82	$159.83	$139.82	$114.04	$139.82	$118.45
Variance	28798.8354	44230.8732	28798.8354	3388.72455	28798.8354	429.11707
Observations	1423	4837	1423	11	1423	5
Hypothesized Mean Difference	0		0		0	
df	2828		11		6	
t Stat	-3.6918329		1.42290927		2.07467505	
P(T<=t) one-tail	0.00011343		0.09124922		0.04167328	
t Critical one-tail	1.64539262		1.79588482		1.94318028	
P(T<=t) two-tail	0.00022685		0.18249845		0.08334655	
t Critical two-tail	1.96080319		2.20098516		2.44691185	

Table 25 – Brunswick, GA – Citation Information

Race & Gender	**Count of Race**	**% of Race**	**Average Fine Fees**	**Max Fine Fees**

Black	**550**	**46.49%**	**$202.39**	**$1,513.50**
Female	252	21.30%	$173.67	$1,513.50
Male	296	25.02%	$226.51	$1,513.50
Unknown	2	0.17%	$250.00	$500.00
Hispanic	**192**	**16.23%**	**$419.91**	**$1,913.00**
Female	43	3.63%	$413.40	$1,913.00
Male	149	12.60%	$421.79	$1,689.00
Unknown	**88**	**7.44%**	**$152.97**	**$1,000.00**
Female	11	0.93%	$118.18	$350.00
Male	16	1.35%	$237.06	$650.00
Unknown	61	5.16%	$137.19	$1,000.00
White	**353**	**29.84%**	**$204.66**	**$2,004.00**
Female	158	13.36%	$193.38	$1,513.50
Male	194	16.40%	$213.90	$2,004.00
Unknown	1	0.08%	$195.00	$195.00
Grand Total	**1183**	**100.00%**	**$234.69**	**$2,004.00**

Table 26 – Brunswick, GA – Average Fine Fee Analysis

ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	7431637.38	2	3715818.69	45.8164314	0	3.00396565
Within Groups	88563728.8	1092	81102.3158			
Total	95995366.2	1094				
t-Tests: Two-Sample Assuming Unequal Variances						
	White	*Black*	*White*	*Hispanic*		
Mean	$204.66	$202.39	$204.66	$419.91		
Variance	69743.9146	67063.553	69743.9146	142387.331		
Observations	353	550	353	192		
Hypothesized Mean Difference	0		0			
df	740		295			
t Stat	0.12721634		-7.0236586			

P(T<=t) one-tail	0.44940187		7.4789E-12			
t Critical one-tail	1.64691537		1.6500353			
P(T<=t) two-tail	0.89880373		1.4958E-11			
t Critical two-tail	1.96317492		1.96803811			

Table 27 – Grovetown, GA – Citation Information

Race & Gender	Count of Race	% of Race	Average Age	Max Age	Average Fine Amount	Max Fine Amount
Asian	**13**	**0.63%**	**30**	**45**	**$198.46**	**$1,122.00**
Female	8	0.39%	35	45	$230.25	$1,122.00
Male	5	0.24%	23	26	$147.60	$270.00
Black	**1056**	**51.49%**	**32**	**96**	**$323.60**	**$1,866.00**
Female	461	22.48%	31	79	$302.94	$1,334.00
Male	595	29.01%	32	96	$339.61	$1,866.00
Unknown	**115**	**5.61%**	**33**	**70**	**$265.38**	**$1,334.00**
Female	50	2.44%	32	70	$271.98	$1,200.00
Male	65	3.17%	34	65	$260.31	$1,334.00
White	**867**	**42.27%**	**35**	**81**	**$300.66**	**$1,866.00**
Female	324	15.80%	37	81	$227.82	$1,200.00
Male	543	26.47%	34	70	$344.12	$1,866.00
Grand Total	**2051**	**100.00%**	**33**	**96**	**$309.84**	**$1,866.00**

Table 28 – Grovetown, GA – Average Fine Fee Analysis

ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	420752.942	2	210376.471	1.4579339	0.2329723	3.0003798
Within Groups	278927405	1933	144297.674			
Total	279348158	1935				

Table 29 – Grovetown, GA – Citation Information by Zip Code 30813

Race & Gender	Count of Race	% of Race	Average Fine Amount
Asian	**8**	**0.84%**	**$249.88**
Female	7	0.74%	$256.00
Male	1	0.11%	$207.00
Black	**454**	**47.84%**	**$319.79**
Female	216	22.76%	$297.80
Male	238	25.08%	$339.74
Unknown	**63**	**6.64%**	**$281.21**
Female	28	2.95%	$220.68
Male	35	3.69%	$329.63
White	**424**	**44.68%**	**$293.25**
Female	173	18.23%	$251.41
Male	251	26.45%	$322.08
Grand Total	**949**	**100.00%**	**$304.78**

Table 30 – Thomaston, GA – Citation Information

Race & Gender	Count of race	% of Race	Average Age	Max Age	Average Fine Amount	Max Fine Amount
Asian	**4**	**0.15%**	**43**	**57**	**$212.81**	**$381.50**
Female	2	0.08%	54	57	$248.75	$381.50
Male	2	0.08%	32	42	$176.88	$204.75
Black	**966**	**36.52%**	**34**	**82**	**$192.73**	**$1,570.93**
Female	428	16.18%	33	82	$161.49	$1,570.93
Male	534	20.19%	36	81	$218.48	$1,408.00
Unknown	4	0.15%	19	20	$97.63	$145.25
Hispanic	**68**	**2.57%**	**40**	**67**	**$371.82**	**$1,394.00**
Female	15	0.57%	45	60	$204.05	$1,031.50
Male	53	2.00%	39	67	$419.30	$1,394.00
Unknown	**333**	**12.59%**	**37**	**82**	**$160.61**	**$1,969.00**
Female	99	3.74%	36	74	$132.34	$1,394.00
Male	229	8.66%	38	82	$165.57	$1,570.93
Unknown	5	0.19%	42	58	$492.85	$1,969.00
White	**1274**	**48.17%**	**41**	**123**	**$164.30**	**$1,969.00**
Female	484	18.30%	41	85	$160.35	$1,408.00
Male	782	29.57%	40	123	$167.84	$1,969.00
Unknown	8	0.30%	19	20	$57.28	$149.00
Grand Total	**2645**	**100.00%**	**38**	**123**	**$179.63**	**$1,969.00**

Table 31 – Thomaston, GA – Average Fine Fee Analysis

ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	2963851.23	3	987950.412	12.594294	3.63283E-08	2.60875845
Within Groups	18104940 4	2308	78444.2826			
Total	18401325 5	2311				
t-Tests: Two-Sample Assuming Unequal Variances						
	White	*Black*	*White*	*Asian*	*White*	*Hispanic*
Mean	$164.30	$192.73	$164.30	$212.81	$164.30	$371.82
Variance	66068.0532	83609.1535	66068.0532	13988.3906	66068.05324	242089.166
Observations	1274	966	1274	4	1274	68
Hypothesized Mean Difference	0		0		0	
df	1940		3		69	
t Stat	-2.416534		-0.8143047		-3.45283052	
P(T<=t) one-tail	0.0078804 1		0.2375505 2		0.0004759 51	
t Critical one-tail	1.6456394 5		2.3533634 3		1.6672385 49	
P(T<=t) two-tail	0.0157608 3		0.4751010 5		0.0009519 03	
t Critical two-tail	1.9611875 6		3.1824463 1		1.9949454 15	

Table 32 – Thomaston, GA – Citation Information by Zip Code 30286

Race & Gender	**Count of race**	**% of Race**	**Average Fine Amount**
Asian	**1**	**0.06%**	**$149.00**
Male	1	0.06%	$149.00
Black	**651**	**39.31%**	**$186.07**
Female	302	18.24%	$150.76
Male	346	20.89%	$217.80

Unknown	3	0.18%	$81.75
Hispanic	**24**	**1.45%**	**$344.04**
Female	6	0.36%	$183.71
Male	18	1.09%	$397.48
Unknown	**214**	**12.92%**	**$137.21**
Female	67	4.05%	$129.94
Male	144	8.70%	$128.77
Unknown	3	0.18%	$704.75
White	**766**	**46.26%**	**$164.49**
Female	304	18.36%	$156.54
Male	459	27.72%	$170.51
Unknown	3	0.18%	$49.67
Grand Total	**1656**	**100.00%**	**$172.04**

Table 33 – Athens, GA – Citation Information

Race & Gender	Count of Race	% of Race	Average Age	Max Age	Average Fine Fee	Max Fine Fee
Asian	**306**	**1.66%**	**26**	**84**	**$117.12**	**$1,013.00**
Female	128	0.69%	26	80	$103.25	$753.00
Male	178	0.97%	26	84	$127.09	$1,013.00
Black	**5326**	**28.89%**	**34**	**99**	**$89.51**	**$1,013.00**
Female	2292	12.43%	33	93	$95.05	$852.00
Male	3031	16.44%	35	99	$85.35	$1,013.00
Unknown	3	0.02%	21	22	$61.67	$185.00
Hispanic	**341**	**1.85%**	**30**	**76**	**$108.17**	**$1,360.00**
Female	95	0.52%	31	74	$148.27	$1,360.00
Male	246	1.33%	30	76	$92.69	$852.00
Unknown	**3586**	**19.45%**	**10**	**99**	**$42.03**	**$1,013.00**
Female	354	1.92%	32	79	$86.57	$580.00
Male	644	3.49%	34	99	$87.90	$1,013.00
Unknown	2588	14.04%	1	74	$24.52	$1,000.00
White	**8878**	**48.15%**	**31**	**97**	**$110.31**	**$1,360.00**
Female	3691	20.02%	30	97	$104.93	$1,013.00
Male	5176	28.07%	31	94	$114.17	$1,360.00
Unknown	11	0.06%	24	30	$101.45	$210.00
Grand Total	**18437**	**100.00%**	**28**	**99**	**$91.09**	**$1,360.00**

Table 34 – Athens, GA – Average Fine Fee Analysis

ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	1513578.79	3	504526.263	28.5562633	2.10295E-18	2.60550721
Within Groups	262313781.8	14847	17667.797			
Total	263827360.6	14850				
t-Tests: Two-Sample Assuming Unequal Variances						
	White	*Black*	*White*	*Asian*	*White*	*Hispanic*
Mean	$110.31	$89.51	$110.31	$117.12	$110.31	$108.17
Variance	17774.23347	16880.9649	17774.2335	18197.5155	17774.23347	26736.8553
Observations	8878	5326	8878	306	8878	341
Hypothesized Mean Difference	0		0		0	
df	11439		326		358	
t Stat	9.146003626		-0.8685384		0.238235906	
P(T<=t) one-tail	3.45197E-20		0.1928693		0.405917215	
t Critical one-tail	1.644986846		1.649541 16		1.649121068	
P(T<=t) two-tail	6.90394E-20		0.38573859		0.81183443	
t Critical two-tail	1.960171391		1.96726752		1.966612519	

Table 35 – Georgia Rural vs. Urban Citation Information

Municipality	**Count of Race**	**% of Race**	**Average Fine Fee**	**Max Fine Fee**
Rural	**6555**	**20.82%**	**$234.54**	**$2,004.00**
Brunswick	1183	3.76%	$234.69	$2,004.00
Grovetown	2051	6.52%	$309.84	$1,866.00
Thomaston	2645	8.40%	$179.63	$1,969.00
Watkinsville	676	2.15%	$220.66	$1,320.00
Urban	**24924**	**79.18%**	**$107.53**	**$2,000.00**

Albany	6487	20.61%	$154.24	$2,000.00
Athens	18437	58.57%	$91.09	$1,360.00
Grand Total	**31479**	**100.00%**	**$133.98**	**$2,004.00**

Table 36 – Regression of Average Fine Amount by Race

Race	Coefficient	Std. Error	t	P > |t|	95% conf. Interval	
Asian	-13.65597	11.52325	-1.19	0.236	-36.24213	8.9302
Black	12.78352	2.606195	4.91	0.000	7.675238	17.89179
Hispanic	106.2723	8.435274	12.6	0.000	89.73875	122.8059
White	136.4743	1.832835	74.46	0.000	132.8818	140.0667

Table 37- Two Sample t-Test for Average Fine Fee in Rural vs. Urban by Race

	Asian		Black		Hispanic		White	
	Rural	*Urban*	*Rural*	*Urban*	*Rural*	*Urban*	*Rural*	*Urban*
Mean	$199.51	$117.01	$248.43	$122.98	$395.24	$108.32	$216.68	$114.39
Variance	49235.1765	17671.6151	106754.945	31128.34524	154310.7567	26355.849	89675.9144	19398.2291
Observations	24	317	2693	10163	305	346	2837	10301
Hypothesized Mean Difference	0		0		0		0	
df	24		3119		395		3181	
t Stat	1.7971799		19.1976372		11.89210957		17.6751504	
P(T<=t) one-tail	0.0425		0.0000		0.0000		0.0000	
t Critical one-tail	1.71088208		1.64534232		1.648720389		1.64533279	
P(T<=t) two-tail	0.0849		0.0000		0.0000		0.0000	
t Critical two-tail	2.06389856		1.96072486		1.965987866		1.96071003	

Table 38 – Proportion of Respective Citations for each Municipality

	Pedestrian	% Ped Citations	Traffic	% Traffic Citations	Bicycle	% Bicycle Citations	TOTAL
Brunswick	0	0	1183	3.8%	0	0.0%	**1183**
Grovetown	3	1.9%	2048	6.5%	0	0.0%	**2051**
Thomaston	1	0.6%	2642	8.4%	2	25.0%	**2645**
Watkinsville	1	0.6%	675	2.2%	0	0.0%	**676**
Albany	13	8.4%	6473	20.7%	1	12.5%	**6487**
Athens	137	88.4%	18295	58.4%	5	62.5%	**18437**
TOTAL	**155**		**31316**		**8**		**31479**

Table 39 – Demographics of Citations Issued Across All Examined Municipalities

Municipality	Count of Race	% of Race	Average Fine Fee	Max Fine Fee
Rural	**6555**	**20.82%**	**$234.54**	**$2,004.00**
Brunswick	**1183**	**3.76%**	**$234.69**	**$2,004.00**
Black	550	1.75%	$202.39	$1,513.50
White	353	1.12%	$204.66	$2,004.00
Hispanic	192	0.61%	$419.91	$1,913.00
Unknown	88	0.28%	$152.97	$1,000.00
Grovetown	**2051**	**6.52%**	**$309.84**	**$1,866.00**
Black	1056	3.35%	$323.60	$1,866.00
White	867	2.75%	$300.66	$1,866.00
Unknown	115	0.37%	$265.38	$1,334.00
Asian	13	0.04%	$198.46	$1,122.00
Thomaston	**2645**	**8.40%**	**$179.63**	**$1,969.00**
White	1274	4.05%	$164.30	$1,969.00
Black	966	3.07%	$192.73	$1,570.93
Unknown	333	1.06%	$160.61	$1,969.00
Hispanic	68	0.22%	$371.82	$1,394.00
Asian	4	0.01%	$212.81	$381.50
Watkinsville	**676**	**2.15%**	**$220.66**	**$1,320.00**
White	343	1.09%	$211.30	$1,320.00
Unknown	160	0.51%	$192.97	$1,320.00
Black	121	0.38%	$246.42	$1,320.00
Hispanic	45	0.14%	$325.40	$1,320.00
Asian	7	0.02%	$193.86	$280.00
Urban	**24924**	**79.18%**	**$107.53**	**$2,000.00**
Albany	**6487**	**20.61%**	**$154.24**	**$2,000.00**
Black	4837	15.37%	$159.83	$1,496.68
White	1423	4.52%	$139.82	$2,000.00
Unknown	211	0.67%	$126.39	$1,000.00
Asian	11	0.03%	$114.04	$205.10
Hispanic	5	0.02%	$118.45	$150.00
Athens	**18437**	**58.57%**	**$91.09**	**$1,360.00**
White	8878	28.20%	$110.31	$1,360.00
Black	5326	16.92%	$89.51	$1,013.00
Unknown	3586	11.39%	$42.03	$1,013.00
Hispanic	341	1.08%	$108.17	$1,360.00
Asian	306	0.97%	$117.12	$1,013.00
Grand Total	**31479**	**100.00%**	**$133.98**	**$2,004.00**

Appendices

Appendix A – Research Protocol Template

Project title:
Prepared by:

I. Date(s) of Protocol:

II. Scope:

III. Primary Data Collection

a. **Project Dates**:
b. **Dates Covered in the Dataset**:
c. **Data Collection Methods**: The team building this dataset consisted of ____ legal researchers ("Researcher #1" and "Researcher #2" or "Researchers") and [X]_____ supervisors ("Supervisor #1" and "Supervisor #2" or "Supervisors").

_____
_____

d. **Databases Used**: Research was conducted using [insert databases] and [insert alternative sources of law]. Full text versions of the laws collected were pulled from [insert sources].

e. **Search Terms and Search Strategy**:

f. **Initial Returns and Additional Inclusion or Exclusion Criteria**:

IV. Coding

a. **Development of Coding Scheme**: [Describe process that was used to develop coding scheme]
    i. Dataset terminology: [Include definitions of terms of art here]

b. **Coding methods:** [Describe coding methods, how certain questions and/or responses were coded, clarify coding scheme decisions]

V. Quality Control:

a. [Describe quality control measures implemented for original and redundant research, and original, redundant and naïve coding]

Appendix B – Question Development Table

LawAtlas℠
The Policy Surveillance Portal

Arrested Mobility Law Analysis Question Development Table

Order	Variable Name	Question	Possible Answers	Internal Notes**	Question Type
1 (P)		Does Georgia regulate pedestrian safety?	Yes No		Binary – Mutually Exclusive
2 (P)		Does the city regulate pedestrian safety?	Yes No		Binary – Mutually Exclusive
3 (P)		Does the law define pedestrian safety?	Yes No		Binary – Mutually Exclusive
4 (C)		What is included in the definition of pedestrian safety?	Safe Roads Crosswalks Vehicle Right of way Reasonable person standard Other		Categorical – Check-all-that-apply
5 (C)		Does definition of pedestrian safety explicitly distinguish pedestrian safety from other types of safety?	Yes, personal safety Yes, other No		Categorical – Check-all-that-apply
6 (P)		What kind of harms does the law specify?	physical harm vehicle harm road safety The law does not specify Other	Additional answer choices will be added as we code this batch.	Categorical – Check-all-that-apply
7 (P)		Which types of persons are included in pedestrian safety laws?	Pedestrians Vehicle drivers Not explicitly stated in the law	Additional answer choices will be added as we code this batch.	Categorical – Check-all-that-apply

			Other		
8 (P)		Where do pedestrian laws apply?	Urban/City areas Suburban areas Rural areas Location is not explicitly stated Other	Additional answer choices will be added as we code this batch.	Categorical – Check-all-that-apply
9 (C)		Does the law delineate between highways and roadways?	Yes No		Binary – Mutually Exclusive
10 (P)		Does Georgia regulate traffic safety?	Yes No		Binary – Mutually Exclusive
11 (C)		Does the city regulate traffic safety?	Yes No		Binary – Mutually Exclusive
12 (P)		Does the law define traffic safety?	Yes No		Binary – Mutually Exclusive
13 (C)		What is included in the definition of traffic safety?	Safe Roads Crosswalks Vehicle Right of way Reasonable person standard Pedestrian Other		Categorical – Check-all-that-apply
14 (C)		Does the definition of traffic safety explicitly distinguish traffic safety from other types of safety?	Yes, pedestrian safety Yes, vehicular safety Yes, other No		Categorical – Check-all-that-apply
15 (P)		Does the law recognize the link between traffic safety and adverse outcomes?	Yes, physical harm Yes, vehicle harm Yes, road safety No Other	Additional answer choices will be added as we code this batch.	Categorical – Check-all-that-apply

16 (P)		Which types of persons are included in traffic safety laws?	Pedestrians Vehicle drivers Not explicitly stated in the law Other	Additional answer choices will be added as we code this batch.	Categorical – Check-all-that-apply
17 (P)		Where do traffic laws apply?	Urban/City areas Suburban areas Rural areas Location is not explicitly stated Other	Additional answer choices will be added as we code this batch.	Categorical – Check-all-that-apply
18 (P)		Does Georgia regulate bicycle safety?	Yes No		Binary – Mutually Exclusive
19 (C)		Does each city regulate bicycle safety?	Yes No		Binary – Mutually Exclusive
20 (P)		Does the law define bicycle safety?	Yes No		Binary – Mutually Exclusive
21 (C)		What is included in the definition of bicycle safety?	Safe Roads Crosswalks Vehicle Right of way Reasonable person standard Other		Categorical – Check-all-that-apply
22 (C)		Does definition of bicycle safety explicitly distinguish bicycle safety from other types of safety?	Yes, personal safety Yes, other No		Categorical – Check-all-that-apply
23 (P)		Does the law recognize the link between bicycle safety and adverse outcomes?	Yes, physical harm Yes, vehicle harm Yes, other property (bike) harm Yes, road safety No Other	Additional answer choices will be added as we code this batch.	Categorical – Check-all-that-apply

24 (P)		Which types of persons are included in bicycle safety laws?	Pedestrians Vehicle drivers Bicycle users Not explicitly stated in the law Other	Additional answer choices will be added as we code this batch.	Categorical – Check-all-that-apply
25 (P)		Where do bicycle laws apply?	Urban/City areas Suburban areas Rural areas Location is not explicitly stated Other	Additional answer choices will be added as we code this batch.	Categorical – Check-all-that-apply

Key:

P = Parent Question

C = Child Question. The question appearance is conditioned on the response to the parent question.

G = Grandchild Question. The question appearance is conditioned on the response to the child questions.

*This field must be completed in order to save the question.

**Optional.

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