Routes of Health Appendix A: Atlanta, Georgia

I.   Background Information and Key Demographics

Atlanta is the capital and largest city of Georgia. It is an essential logistics and transportation hub of the southeastern United States. The city has 500,000 residents, but nearly 6 million people live in the larger Metropolitan area, which includes several cities like Sandy Springs, Alpharetta, and Marietta. In addition to financial and business services, the city's most important function is as a distribution center for the region. It is also home to Hartsfield International Airport, one of the busiest airports in the world.

Atlanta is part of a growing metro area with an increasing population and shifting demographics. The city has a population of over 506,811 based on the 2019 American Community Survey and encompasses 136.8 square miles of land. The Atlanta metro region, consisting of 10 counties, projects an increase of 2.5 million people by 2040. The regional land mass, spreading across 8,376 square miles, is roughly the size of Massachusetts. Atlanta is 51% Black or African American, 40.9% White Non-Hispanic, 4.4% Asian, 4.3% Hispanic or Latino, and 0.3% American Indian and Alaska Native. The median household income is $65,345 and the poverty rate is 21.6%. Atlanta is attracting new residents due to its lower cost of living and employment opportunities. New residents are diverse, higher income wage earners. As a growing city, Atlanta is looking for ways to accommodate the needs of a growing population while still serving current residents. This include addressing new demands in transportation and housing.

II.   Programs, Plans and Policies

Transportation around Atlanta has typically centered on car use. Over the past few years, City of Atlanta has sought to create a transportation landscape that is not as reliant on cars and driving. In 2019, the Atlanta opened its first Department of Transportation tasked with providing safe and convenient transportation options. In 2020, Atlanta City Council adopted legislation to establish Atlanta as a Vision Zero City. Traffic interventions include a 25 mph default speed limit as a part of Atlanta's Vision Zero adoption. These moves emphasize a renewed focus on equity outlined in Atlanta Mayor Keisha Lance Bottoms' One Atlanta Strategic Transportation Plan. Atlanta also has a traffic calming policy created in 1999. The Traffic Calming Device Implementation Guidebook provides guidelines for road design and traffic engineering studies. Researches have noted how the traffic calming policy is older and needs revising[1].

Atlanta's transportation plan is part of a larger strategy to improve transportation safety, equity, and mobility across the metro region. Atlanta's Regional Plan has a goal of developing and maintaining world class infrastructure in and around the city. This includes investments in transit and commuter alternative programs to decrease the amount of cars on the road. Atlanta's Bike-Pedestrian Plan outlines additional investments in bike and pedestrian infrastructure with improvements to the city's bike share program and a goal of connecting 70 miles of the regional trail network. These initiatives are championed by groups like the Atlanta Bicycle Coalition, a local organization that seeks to make biking a part of everyday life in Atlanta, along with local colleges

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[1] Ederer, Dave, MPH. *Atlanta needs to bring its traffic calming policy in the 21st Century.* May 10, 2019. Accessed July 13, 2021. https://www.daveederer.com/post/atlanta-needs-to-bring-it-s-traffic-calming-policy-into-the-21st-century

and universities. The city also seeks to create a Safe Routes to School program in collaboration with Safe Routes to School Georgia.

Despite heavy car use in the region, Metropolitan Atlanta Rapid Transit Authority (MARTA) operates one of the country's largest transit systems. MARTA serves 1.7 million residents across the Atlanta metro including 3.1 percent of commuters. According to Atlanta's Bike-Pedestrian Plan, non-white workers are more likely to take transit, walk, or bike to work as compared to other groups. Atlanta residents are also more likely to spend a higher percentage (19%) of their household income on transportation compared to other major US cities. Atlanta aims to increase mobility options by creating more connectivity between transit and bike share, maintaining and developing local trails, and incentivizing commute alternative programs.

While Atlanta is growing, 22.4% of residents live in poverty and concerns about gentrification are rising among residents of color. Atlanta is a majority Black city with many neighborhoods that have experienced systemic disinvestment. This disinvestment has led to unsafe infrastructure, making these neighborhoods more dangerous for cyclists and pedestrians, many of whom are people of color. The City's One Atlanta Strategic Transportation Plan seeks to implement initiatives that benefit low-income neighborhoods in need of safer infrastructure. This includes building and repairing sidewalk networks that allow residents better access to schools, jobs, and commercial centers. The plan also calls for more frequent and accurate bus service and improved connections to MARTA. Atlanta Department of Transportation hopes to ramp up its engagement efforts by hiring community transportation ambassadors to interface with the public.

III.   Community Engagement Summary – Cascade Neighborhood

Safe Routes Partnership selected Atlanta as a project partner due to their diverse coalition of community partners, transportation advocates, city agency officials, schools, and residents. This coalition works to advance safe, equitable transportation, especially in communities of color. Key project stakeholders include representatives from:

- Atlanta Department of Transportation
- Georgia Commute Schools
- Atlanta Bicycle Coalition
- Safe Routes to School Georgia
- Tuskegee Airmen Global Academy (TAG)
- Community advocates and residents
- Atlanta Students Advocating for Pedestrians (ASAP) – Grady High School students

Safe Routes Partnership prioritized equity when selecting a focus area in Atlanta. Our community stakeholders suggested the Cascade neighborhood located on the city's west side. This area is also home to the Tuskegee Airmen Global Academy (TAG). TAG is a public elementary school and part of the U.S. Department of Education's Promise Neighborhood Program. Promise Neighborhood Schools are located in communities that have been impacted by economic disinvestment. The program aims to provide support services to help students succeed in school and beyond. The Promise Neighborhood strategy also aims to address issues around unemployment, housing, and crime.

Cascade is currently experiencing increasing densification, leading to traffic issues along Cascade Avenue SW and Cascade Road. According to the 2008 Connect Atlanta Plan, Cascade was slated for a road diet that would add a two-way left turn lane. A major point of concern is around the TAG campus. Residents and community partners attribute cut through traffic due to road closures re-routing drivers through the Cascade neighborhood. There is also an increase in traffic due to new residents moving to the area, not only sparking safety issues, but concerns about gentrification and displacement. Atlanta Department of Transportation and community stakeholders believe the use of navigation apps might be contributing to traffic safety problems in Cascade. They have not been able to connect with navigation app companies to discuss these concerns. The City has engaged schools in the Cascade neighborhood to address other safety challenges. TAG implemented a walking school bus program in collaboration with Safe Routes to School, parents/caregivers, and school staff.

Safe Routes Partnership held four stakeholder meetings to discuss navigation app challenges around TAG. We also distributed a questionnaire to TAG staff and families to get their feedback on navigation app challenges and changes to student travel patterns. The neighborhood around TAG is undergoing rapid gentrification. As a result, many students who used to live in the neighborhood and walk to school are now taking the bus or being driven to school because their families can no longer afford to live in the area. Navigation apps might factor into school travel as more parents who drive their children are looking to find the fastest routes and avoid traffic on the highway.

Fourteen TAG staff members completed a questionnaire about how navigation apps have impacted the school community. 92.9% of staff reported that they drive themselves to and from work each day. They noted an increase in traffic and travel times compared to previous years. A majority of staff reported using Waze to get around town. One responder says that using navigation apps allows them to be a more confident driver. A few others said that navigation apps are distracting. A few responders also said that their primary reason for using navigation apps is to avoid traffic delays.

Staff members noticed more students traveling to school by bus or car, which aligns with stakeholder observations about TAG families moving out of the neighborhood. These observations also align with an analysis done by the University of North Carolina Highway Safety Research Center which looked at CO_2 emissions from school travel. According to their analysis, school travel shifted away from car use and other modes towards walking between 2017 – 2020. However, while walking did increase from 14.5% to 16.7%, the number of students traveling to and from school by bus rose even more from 72.9% to 84.2%. This shift could account for families that have been displaced by gentrification, yet still have students attending TAG.

We also reached out to a youth-led traffic safety group called Atlanta Students Advocating for Pedestrians (ASAP). The group is run by students at Grady High School. They formed this group in response to a former classmate being struck by a car and killed at an intersection outside their school. The student group advocates for road safety all around the city, including partnering with TAG on joint initiatives. Out of the three students who participating on our listening session, one was a recent driver and the other two did not drive yet. The student who recently started driving said that she was never taught how to drive while using navigation apps and that the topic was not covered in driver's education courses. As a new driver, she found navigation apps to be distracting because they gave her one more thing to be worried about behind the wheel. This student also said that as a driver, her main concern is keeping pedestrians safe. She wished there was a way for

navigation apps to alert drivers to high-pedestrian traffic so that she could avoid those areas while driving.

Another student, who does not drive yet, said that she and her family are Waze users. They all noticed an uptick in crash incident notifications during the pandemic, something that other members of the Atlanta project team noted as well. This student also said that she wished there was a way for Waze to alert drivers to high pedestrian areas, similar to the way navigation apps show high traffic areas. She said that during the pandemic, there was an increase in pedestrian traffic in places like parks, shopping centers, and other outdoor spaces. If navigation apps could divert drivers from these spaces, it would increase pedestrian safety. The other students in the listening session agreed with this suggestion. One other student, who is not a driver but who uses navigation apps to walk around town, suggested that navigation apps include road features like sidewalks and crosswalks. This alerts would help people who are walking or rolling know which routes have bike and pedestrian-friendly infrastructure and which routes to avoid.
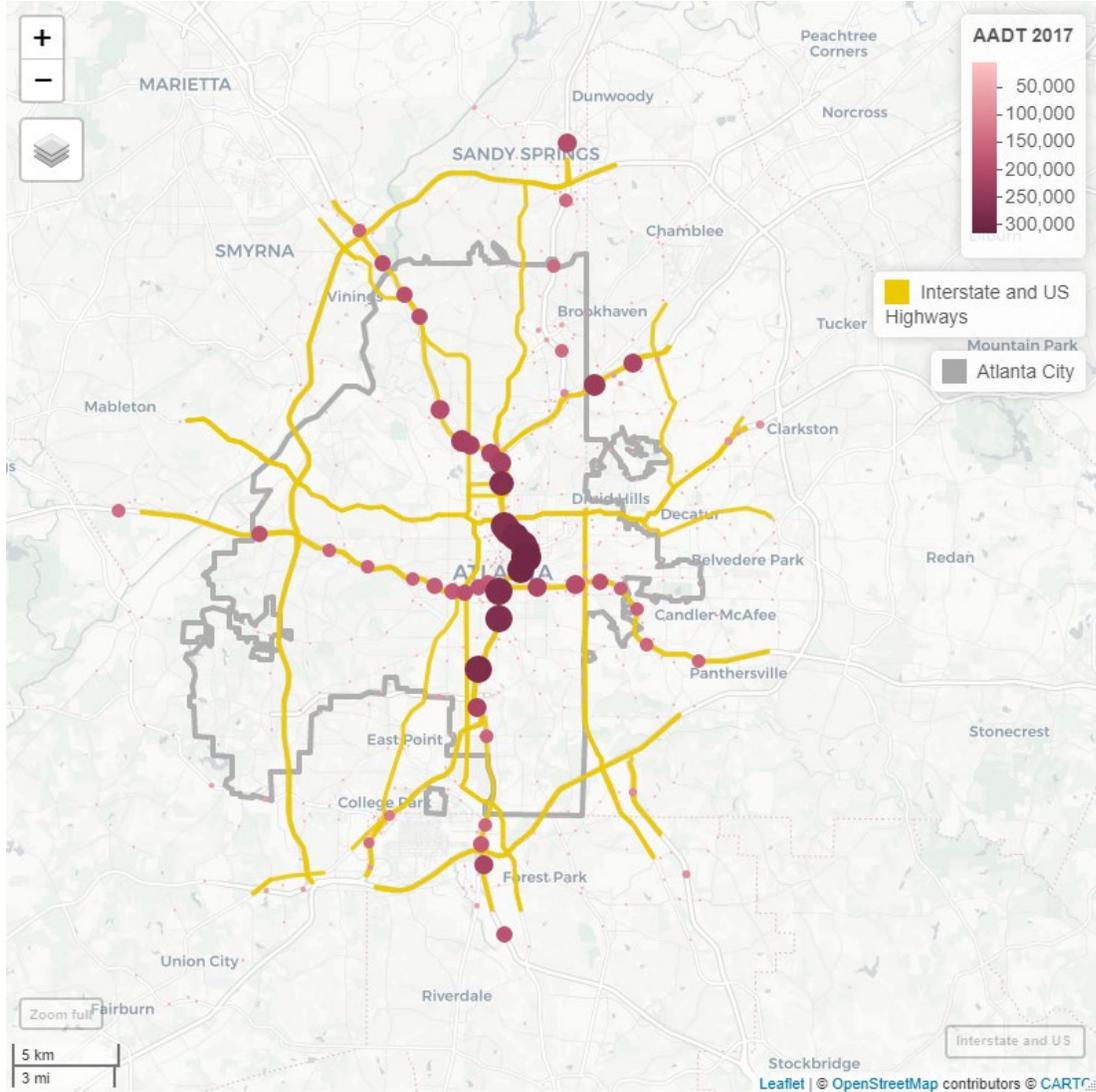
A.   **Key community engagement takeaways from Atlanta:**

- Residents are concerned about how transportation impacts gentrification – and vice versa.

- Navigation apps impact new drivers in unique ways that need to be addressed through driver's education.

- As a growing city with a new Department of Transportation, Atlanta has opportunities to address navigation app challenges in upcoming plans and initiatives, while building in equity considerations.
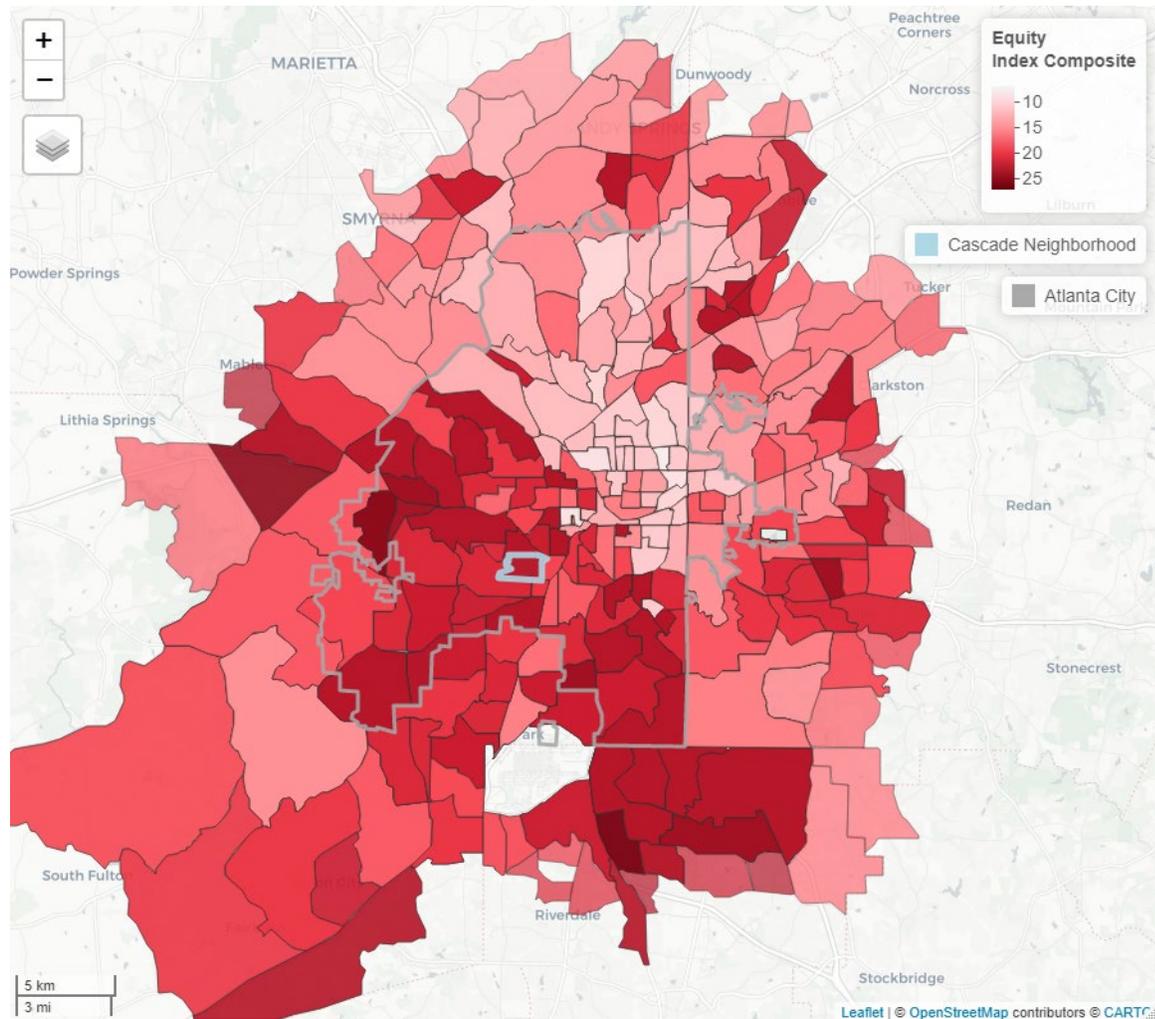
IV. Data Analysis

Atlanta hosts a robust network of rail lines with several interstates running through it (Figure 1).

Figure 1 – City of Atlanta, Annual Average Daily Traffic, 2017

As described in the community engagement summary, the city of Atlanta had already identified a specific area of study around the Tuskegee Global Academy in the Cascade neighborhood. Figure 2 shows the location of the neighborhood with an overlay of the equity index developed by the Atlanta Regional Commission (ARC). ARC's equity analysis considers the concentration of nine population groups[2] to create the index. In the map, the darker areas indicate higher concentration across all groups; the cascade neighborhood has a high score index, as most of the city's west and southwest, which makes the area a high priority for equity purposes.

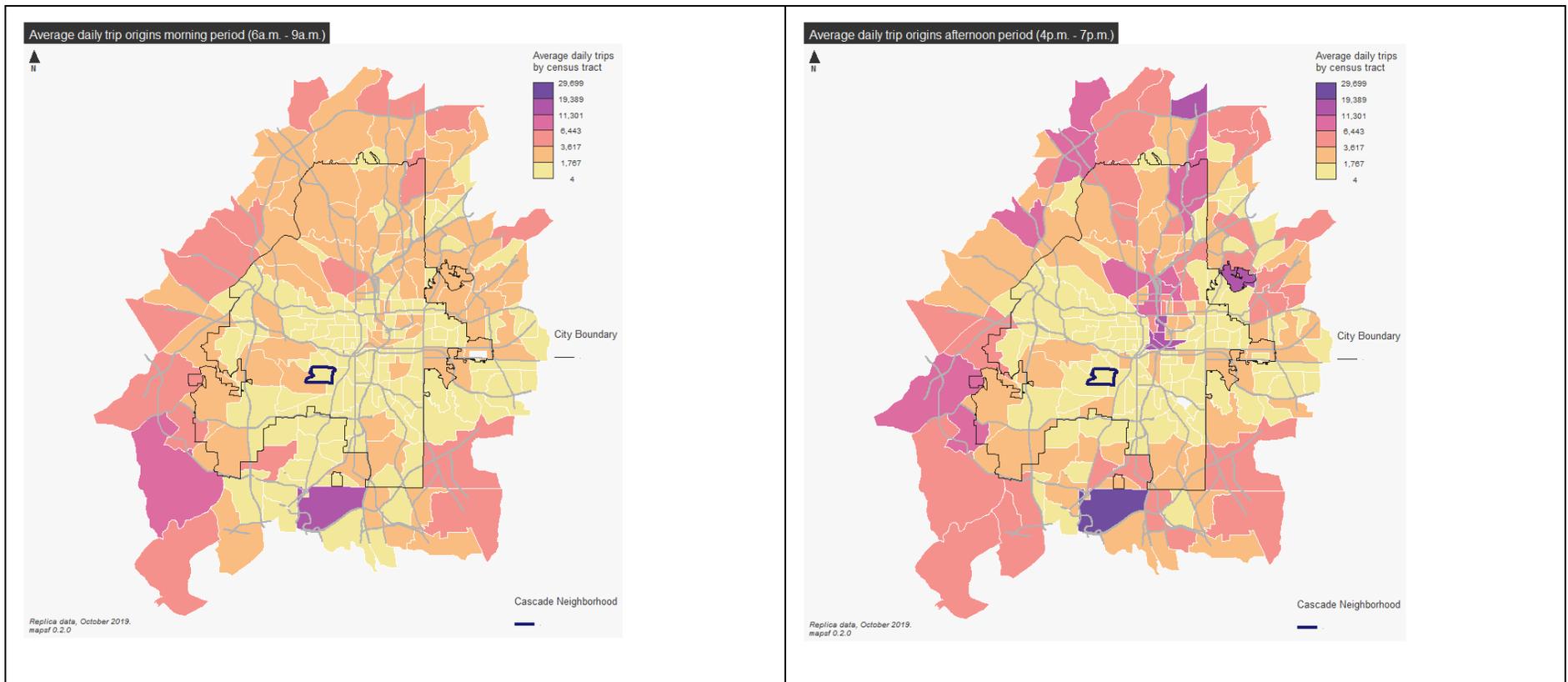**Figure 2. ARC equity index and location of Cascade (TAG) Neighborhood**

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[2] These are older adults, youth, female population, racial minority, ethnic minority, national origin, limited English proficiency, people with disabilities, and low-income.

Total trip origins by census tract

Maps in **Figure 3** show the concentration of trips starting at a given census tract in the three-hour morning and afternoon peak period. Highest trip origination census tract in the morning is Hartsfield Atlanta International Airport. Other census tracts with high trip origination are in the peripheries of the city, particularly in the west and southwest where distribution centers and warehouses concentrate. In the afternoon, the airport is still the highest trip originator, however downtown, Emory University, Perimeter Center in Sandy Spring, also have high trips origination. These areas have a high concentration of employment. The commercial corridor around US-19 and SR-400 north of downtown has several high-trip origination census tracts. Interestingly, both periods show low trip origination in tracts south of downtown, which can indicate that most of the trips spillover can be related with downtown and the distribution centers in the far south and southwest.
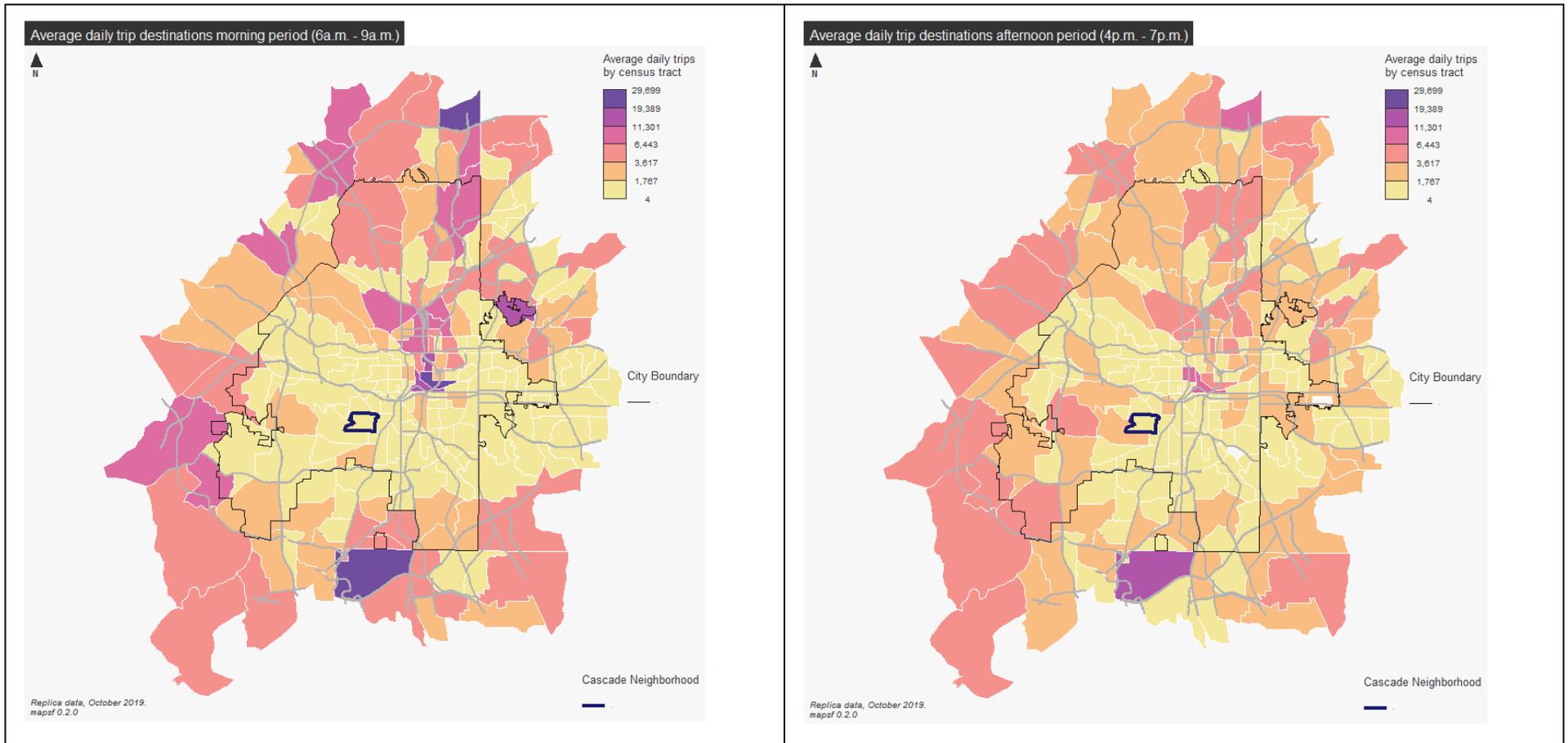
Figure 3 – Total trip origins by census tract, morning and afternoon peak periods

Total trips destinations by census tract

Maps in **Figure 4** show the concentration of trips with destination at a given census tract in the three-hour morning and afternoon peak period. The destinations in the morning are concentrated near the airport, downtown including Georgia Tech area, the corridor around US-19 and SR-400 north of downtown, Sandy Springs, Emory University, and the southwest peripheries. In the afternoon, the airport is the tract with highest destinations trips, followed by Downtown and Perimeter Center in Sandy Springs. The commuting patterns are very symmetrical in Atlanta; for the most part areas with high trip destinations in the morning are the same with high trip origination in the afternoon.
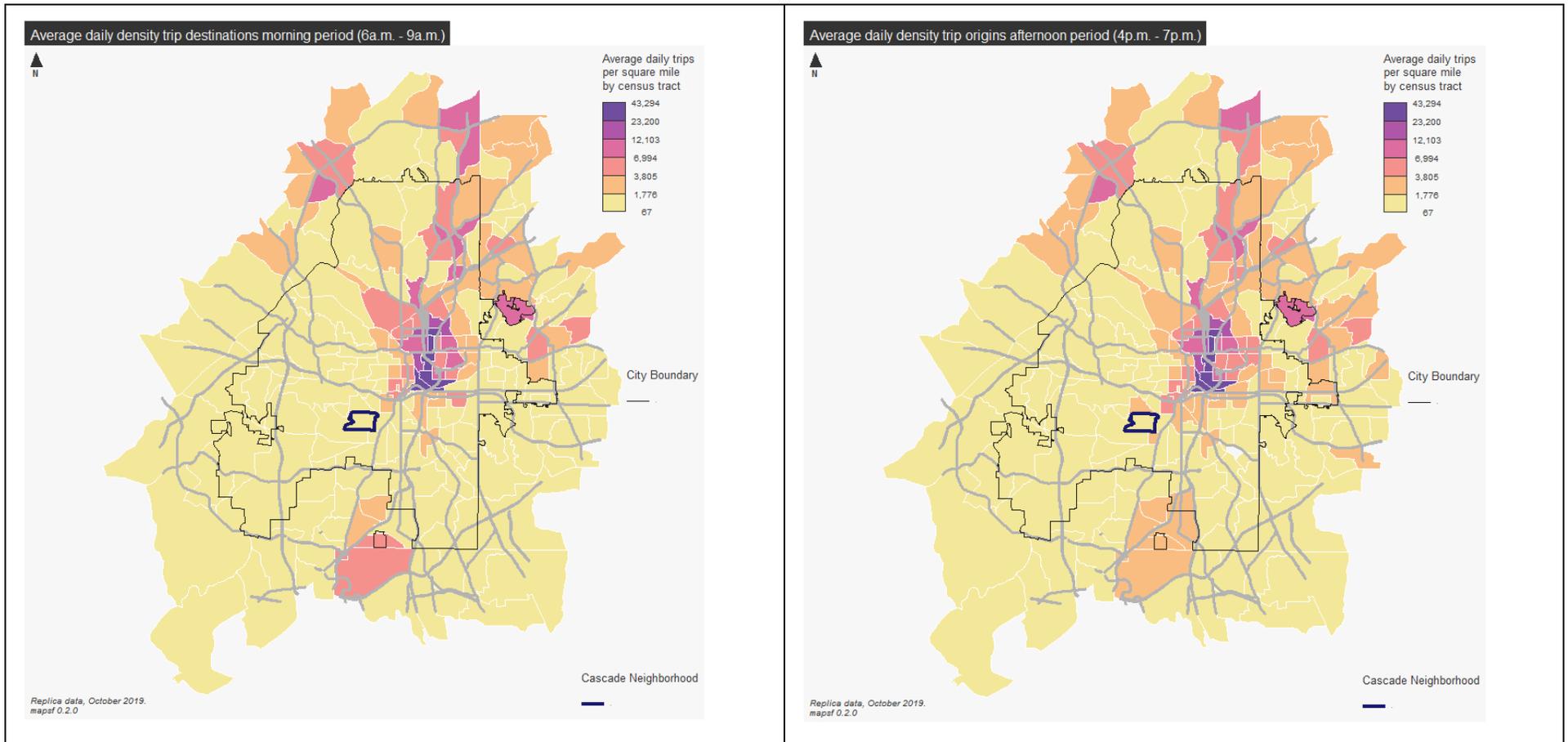
Figure 4 – Total trip destinations by census tract, morning and afternoon peak periods

Density trips by census tract

Figure 5 shows the density of trip destination in the morning and trip origination in the afternoon during the three-hour period. The greatest concentration of trips is downtown, the US-19 and SR-400 corridors. Trip density in the airport is not as high as the total trips, however potential connections between the airport and the downtown area might have a spillover effect on the Cascade neighborhood, particularly traffic traveling using US-29 instead of I-85. The same logic applies for the area in the southwest and west showing low trip density, they can still be creating traffic spillover for the cumulative traffic cutting through Cascade road as opposed to use the I-285 and I-20 to connect with downtown.

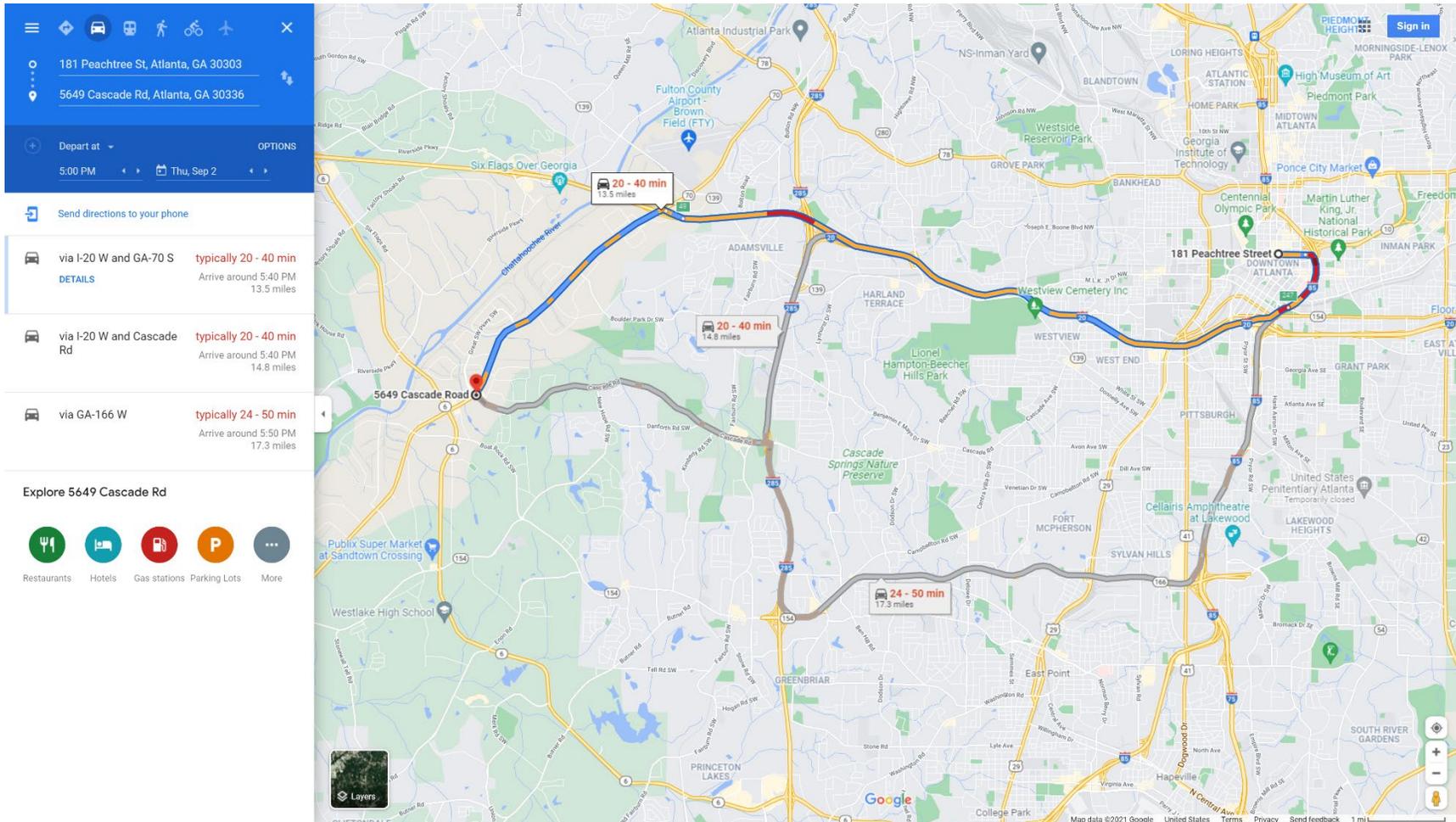**Figure 5 – Trip origins and destinations per square mile periods**

Atlanta's app routing example

Atlanta's trip origin and destination analysis provides guidance on potential traffic flows that might impact the roads surrounding the Cascade neighborhood. Trip concentration in Downton and the areas west and southwest of the Cascade neighborhood are among the highest, hence trips between those areas traveling on the I-85 and I-20 might be potentially diverted. During meetings, stakeholders indicated that these travel flows can be related to commercial and warehouse activity in the west and southwest area of Atlanta, particularly from workers in late-shift jobs and delivery/commercial vans. Figure 6 shows the suggested driving alternatives for a 5 p.m. weekday trip from Atlanta Downtown to the Fulton Industrial Area in the west part of the city. The suggested route is the I-20 westbound and then Fulton Industrial Blvd southbound. However, depending on traffic, particularly at the I-20 and I-285 interchange, a completely circumvent route using the I-85, SR-266 and Cascade Road can be faster.
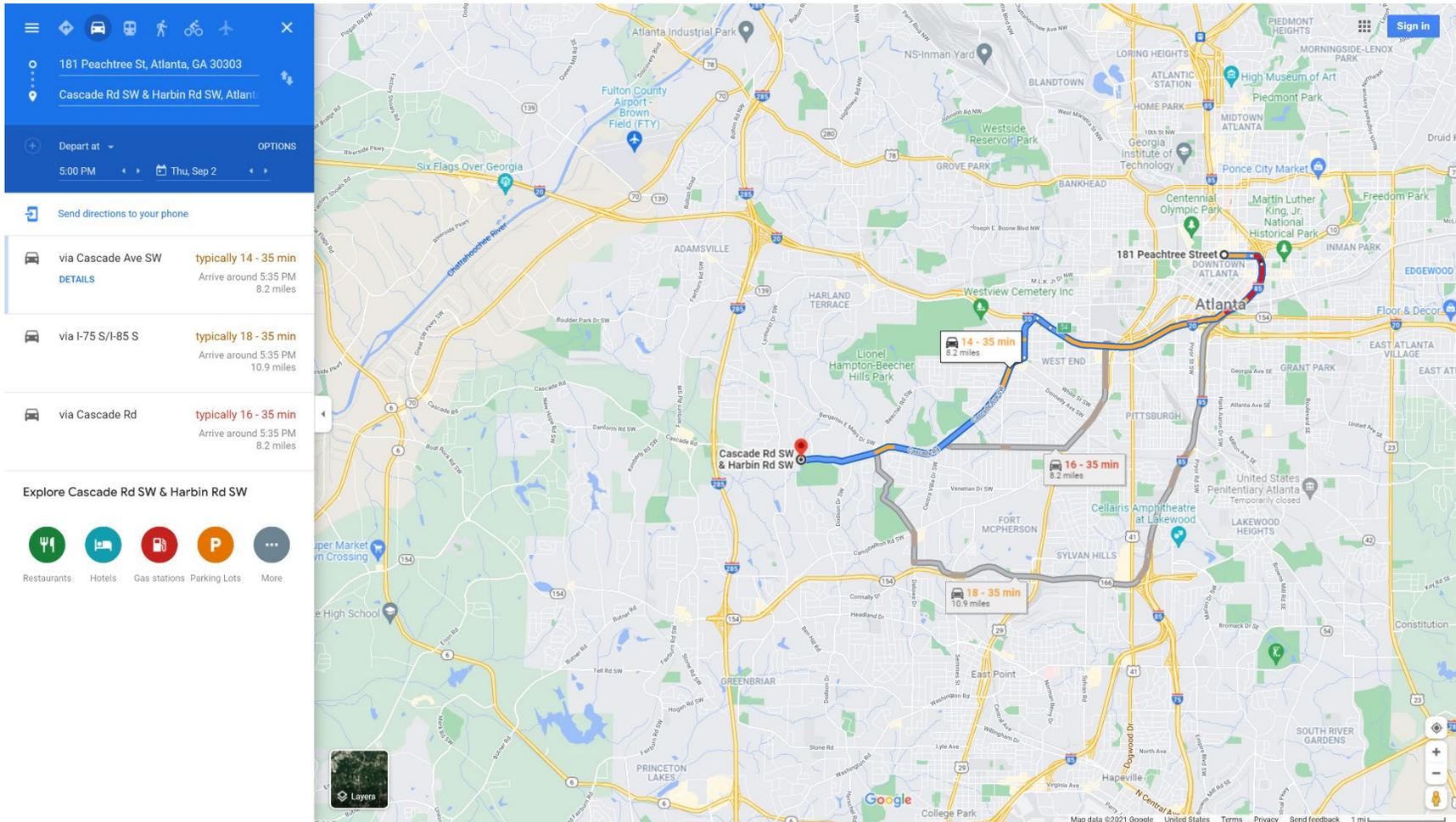
Because of the static nature of this query, it is not possible to simulate real time changes that the app can suggest based on actual traffic conditions. However, the recommended route highlights that congestion in the interstate highways is essential in determining the best alternative. To test this hypothesis, fig sets a destination point along Cascade Road instead of the final destination at Fulton Industrial area. Now the recommended route goes directly through the Cascade neighborhood on Cascade Road, with some alternatives on Lee Street and Avon Avenue, or I-85 and SR-166. This is not surprising given that the destination is within the surrounding highways and specifically on Cascade Rd. Nonetheless, the key takeaway is that this can be a possible suggestion for the original trip (with final destination in the Fulton Industrial Area) if there is high enough westbound congestion on I-20 between Cascade Road and I-285.

Figure 6 – Afternoon weekday trip from Atlanta Downtown to Fulton Industrial Area

Source: Google. (n.d.). [Google Maps directions]. Retrieved September 2, 2021.

Figure 7 – Potential afternoon re-route trip from Atlanta Downtown to Fulton Industrial Area

Source: Google. (n.d.). [Google Maps directions]. Retrieved September 2, 2021.