Austin Transit Partnership

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Austin Light Rail Phase 1 Project

Environmental Justice Technical Report

Austin, TX

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Austin Transit Partnership

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Acronyms and Abbreviations

Term/Acronym	Definition
ATP	Austin Transit Partnership
CAC	Community Advisory Committee
CapMetro	Capital Metropolitan Transportation Authority
CEJST	Climate and Economic Justice Screening Tool
CEQ	Council on Environmental Quality
City	City of Austin
DEIS	Draft Environmental Impact Statement
EJ	environmental justice
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ETC	Equitable Transportation Community
ETOD	Equitable Transit-Oriented Development
FTA	Federal Transit Administration
I-35	Interstate 35
LEP	limited English proficiency
MOW	maintenance of way
NEPA	National Environmental Policy Act
OMF	operations and maintenance facility
$PM_{2.5}$	particulate matter 2.5 microns or smaller in diameter
Project	Austin Light Rail Phase 1 Project
TxDOT	Texas Department of Transportation
USDOT	U.S. Department of Transportation
UT	University of Texas at Austin

1 Introduction

The Federal Transit Administration (FTA) and Austin Transit Partnership (ATP) are completing an environmental review of the Austin Light Rail Phase 1 Project (Project) in Austin, Texas. This environmental justice (EJ) technical report was prepared to support the Project's Draft Environmental Impact Statement (DEIS) in accordance with the National Environmental Policy Act (NEPA) and related laws and regulations. FTA and ATP are the Lead Agencies in the NEPA process.

EJ is the fair treatment and meaningful involvement of all people, regardless of race, ethnicity, income, national origin, or educational level, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. The objective of an EJ analysis is to ensure that transportation decisions are non-discriminatory and address the concerns of low-income and minority populations by promoting full and fair participation in the project development process.

Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations* requires federal agencies to make EJ part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects, including interrelated social and economic effects, of its programs, policies, and activities on minority populations and low-income populations (collectively EJ populations). Disproportionately high and adverse effects are those that would be:

- predominantly borne by an EJ population; or
- suffered by the EJ population and would be appreciably more severe or greater in magnitude than the adverse effect that would be suffered by the non-EJ population.

The guiding EJ principles that FTA and ATP follow are intended to achieve EJ through planning and public outreach to:

- avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects on EJ populations;
- ensure the full and fair participation by all potentially affected communities in the transportation decision-making process; and
- prevent the denial of, reduction in, or substantial delay in the receipt of benefits by EJ populations.

This report:

- identifies EJ populations in the Study Area, defined as the area within 0.5 mile of the Project alignment and light rail facilities;
- summarizes feedback received from ATP's targeted outreach to EJ populations;
- summarizes the Project's adverse and beneficial effects and the measures identified to mitigate adverse effects;

- evaluates the potential for disproportionately high and adverse effects on EJ populations; and
- considers further mitigation measures to avoid, minimize, or mitigate potential disproportionately high and adverse effects on EJ populations.

This report is based on the conceptual design drawings presented in **DEIS Appendix C**.

2 Regulatory Setting

EO 12898 requires each federal agency to develop agency-wide EJ strategies to implement EJ requirements. Relevant guidance documents that have been developed to address this EO include:

- Council on Environmental Quality (CEQ) *Environmental Justice: Guidance Under the National Environmental Policy Act* (CEQ 1997);
- FTA Circular 4703.1, *Environmental Justice Policy Guidance for Federal Transit Administration Recipients* (FTA 2012); and
- U.S. Department of Transportation (USDOT) Order 5610.2(c), *U.S. Department of Transportation Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (USDOT 2021).

The analysis presented below has been prepared in accordance with these guidance documents.

EO 14096, *Revitalizing Our Nation's Commitment to Environmental Justice for All* was enacted on April 21, 2023. EO 14096 does not rescind EO 12898, which has been in effect since February 11, 1994, and is currently implemented through USDOT Order 5610.2(c). This implementation will continue until further guidance is provided regarding the implementation of the new EO 14096 on EJ.

Other EOs address EJ and are used to inform the identification of, and outreach to, EJ populations. These include:

- EO 13166, *Improving Access to Services for Persons with Limited English Proficiency* (2000);
- EO 14008, *Tackling the Climate Crisis at Home and Abroad* (2021);
- EO 13985, *Advancing Racial Equity and Support for Underserved Communities Through the Federal Government* (2021);
- EO 14091, *Further Advancing Racial Equity and Support for Underserved Communities Through the Federal Government* (2023); and
- EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks* (1997).

3 Overview of Methodology

The Study Area for the EJ analysis encompasses the area most likely to experience impacts during Project construction and operation. It includes U.S. census block groups, the smallest geographical unit for which U.S. census data are available, within 0.5 mile of the Project alignment and light rail facilities. The distance most people are willing to walk to a light rail station, and where transit-oriented development is most likely to occur, is largely accepted as 0.5 mile. As a result, changes in land use, and neighborhood and socioeconomic conditions are assessed within 0.5 mile of the proposed new infrastructure. As indicated in **DEIS Chapter 3** and **DEIS Chapter 4**, potential indirect Project effects on communities would occur within a 0.5-mile distance, with potential direct Project effects mostly occurring within the limits of Project construction. The limits of Project construction is the boundary within which construction, materials storage, grading, landscaping, stormwater infrastructure, contractor access, laydown/staging areas, and related activities would occur. The Study Area also encompasses the area most likely to experience potential cumulative effects, when considering the incremental effects of the Project combined with other past, present, and reasonably foreseeable future actions.

EJ analysis requires the following five steps to determine if the Project would have disproportionately high and adverse effects on EJ populations:

1. **Identify low-income and minority populations.** Use available screening tools, U.S. census data, local knowledge, and other reliable sources of income data and population characteristics to create a residential demographic profile of the Study Area.
2. **Conduct targeted outreach to EJ populations.** To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process, use specific techniques to engage EJ populations and solicit feedback to inform Steps 1, 3, 4, and 5.
3. **Identify Project effects and mitigation.** Determine the Project's potential to result in adverse and beneficial effects, considering direct, indirect, and cumulative effects, and the measures that would be implemented to mitigate the adverse effects.
4. **Evaluate the potential for disproportionately high and adverse effects.** Evaluate whether adverse effects would be borne predominantly by low-income and minority populations or whether adverse effects would be more severe or greater in magnitude for EJ populations compared to non-EJ populations.
5. **Consider further mitigation measures.** Evaluate whether there are any practical measures or alternatives that would avoid, minimize, or mitigate the disproportionately high and adverse effects on EJ populations. Practical measures account for social, economic (including cost), and environmental effects of the mitigation measure.

When determining whether an adverse effect is disproportionately high and adverse, FTA considers the mitigation measures that would be implemented, offsetting benefits of the Project, and the input from the affected EJ communities. The methodology used in these analysis steps is further described in the following sections.

4 Data Collection

ATP identified low-income and minority census block groups that intersect the Study Area following methodology found in CEQ guidance (1997), and FTA Circular 4703.1 (2012), and the U.S. Environmental Protection Agency's (EPA) EJScreen (version 2.3) mapping tool. ATP also collected data on income-restricted housing, households with high-cost burdens, persons with a disability, and populations with limited English proficiency (LEP), and used available tools to identify EJ populations and inform the outreach efforts. The data collected for the analysis is described below.

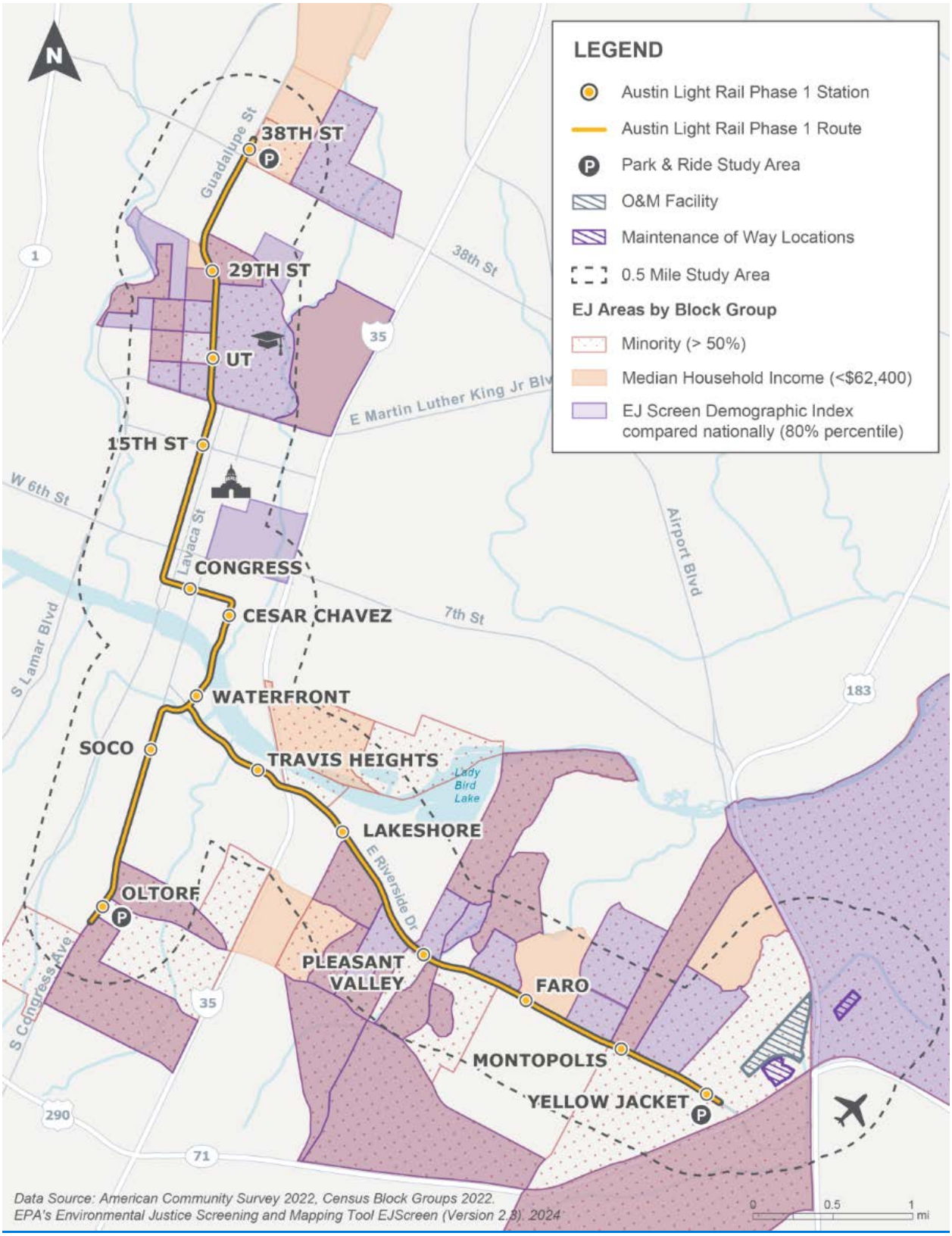
4.1 Identification of Low-Income and Minority Populations

Low-income population means any readily identifiable group of low-income persons who live in geographic proximity and, if circumstances warrant, geographically dispersed/transient persons who would be similarly affected by a project (FTA 2012). While low-income is defined as a person whose median household income is at or below the U.S. Department of Health and Human Services poverty guideline, ATP has defined "low-income" as individuals whose income is equal to or less than 200 percent of the federal poverty level to account for the higher cost of living in the Austin area. The 2024 U.S. Department of Health and Human Services poverty guideline for a family of four is $31,200. Therefore, ATP identified a census block group as low-income if the median household income of the block group was below $62,400. **Table A-1** in **Attachment A** presents the income data by census block group that was used in the analysis. The low-income block groups in the Study Area are shown in **Figure 1**. Low-income block groups are clustered near, and north of, the University of Texas at Austin (UT) campus and the proposed 29th Street Station, along East Riverside Drive east of Interstate 35 (I-35), and near the proposed Oltorf Station.

A minority population is any readily identifiable group(s) of minority persons who live in geographic proximity and, if circumstances warrant, geographically dispersed or transient persons such as migrant workers or Native Americans who would be similarly affected by a proposed USDOT program, policy, or activity (FTA 2012). Minority includes the following:

- **Hispanic or Latino.** A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race;
- **Black or African American.** A person having origins in any of the Black racial groups of Africa;
- **Asian.** A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent;
- **American Indian and Alaska Native.** A person having origins in any of the original people of North America or South America (including Central America) and who maintains cultural identification through tribal affiliation or community recognition; or
- **Native Hawaiian or Other Pacific Islander.** A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands (FTA 2012).

Figure 1: Low-Income and Minority Populations in the Study Area



EJ guidance indicates that minority block groups should be identified where either (1) the minority population exceeds 50 percent or (2) the minority population percentage is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis (CEQ 1997). **Table 1** shows the total population and the population of each racial or ethnic minority for the Study Area and Travis County. For this EJ analysis, because the minority population in Travis County is approximately 52 percent, any census block group was considered to be an EJ area if 50 percent or more of the population identified as a racial or ethnic minority. **Table A-1** in **Attachment A** shows the minority percentage in each census block group. The minority census block groups intersecting the Study Area are shown in **Figure 1.**

Table 1: Race and Ethnicity for the Study Area and Travis County

Demographic Characteristic	Study Area	Travis County
Total population	118,220	1,289,054
Hispanic or Latino origin	36,042	429,581
White alone	60,221	614,956
Black or African American alone	8,744	102,001
Asian alone	8,818	91,043
American Indian and Alaska Native alone	220	1,582
Native Hawaiian and Other Pacific Islander alone	49	504
Some other race alone	287	4,691
Two or more races	3,839	44,696
Total Minority	57,999	674,098
Percent Minority	49.1	52.3

Source: U.S. Census Bureau 2023a.

Minority populations are located throughout the Study Area, with higher concentrations north of West Martin Luther King Jr. Boulevard and around the UT campus, along East Riverside Drive east of I-35, and near the proposed Oltorf Station.

ATP identified an additional low-income and minority census block group in Downtown Austin using EPA's EJScreen (version 2.3). EJScreen is an EJ mapping and screening tool that provides a nationally consistent dataset and approach for combining environmental and demographic socioeconomic indicators (EPA 2024). EJScreen includes a demographic index that averages the low-income and minority population in each census block group in the U.S., applying definitions for low-income and minority that are consistent with the above definitions. EPA recommends identifying areas that are at or above the 80th percentile nationally as a preliminary step to considering whether EJ analysis or outreach may be appropriate. The census block groups where the average of low-income individuals and minorities is relatively

high compared to the rest of the nation is shown in **Figure 1**. An additional EJ area in Downtown Austin has been included in the analysis based on the EJScreen tool.

4.2 Identification of Income-Restricted Housing

Locations of income-restricted housing also help identify where low-income individuals live at a more granular level than census analysis. Affordable housing data are provided by the City of Austin's (City) Comprehensive Affordable Housing Directory (City of Austin 2023a). Properties include those funded by the City along with the Housing Authority of Travis County and the Texas Department of Housing and Community Affairs. Some properties may be funded by more than one entity. According to the City, there are 7,404 legally binding affordable housing units (many in multifamily buildings) within the Study Area and 47,274 listed in Travis County (City of Austin 2023a). The Study Area accounts for approximately 16 percent of the affordable housing units in the county. Many of the affordable housing properties in the Study Area are west of Guadalupe Street near UT as shown in **Figure 2**.

4.3 Identification of Households with High-Cost Burdens

The distribution of households (rented or owned) in the Study Area with high cost burdens is shown in **Figure 3** (these data were available at the census tract level). Approximately 41 percent of the households in the Study Area are considered "high cost burdened," meaning that they spend 30 percent or more of their household income on housing. High cost-burdened households are present throughout the Study Area and are concentrated around UT, the proposed Pleasant Valley Station, and along much of the Project alignment. While most households in the Study Area are burdened by housing costs, renters are more heavily burdened by housing costs than households who own their homes.

4.4 Identification of Populations with Disabilities

The U.S. Census Bureau collects data on individuals who have difficulty with hearing, vision, cognition, ambulatory, and self-care. An individual is counted as having a disability if one or more of these difficulties is evident. The Study Area has a lower percentage of residents with a disability at 8.5 percent than Travis County (9 percent) and Texas (11.7 percent). The population with disabilities within the Study Area is shown in **Figure 4**; the highest percentages of persons living with disabilities are concentrated in Downtown Austin between the 15th Street and Congress Avenue Stations.

4.5 Identification of Populations with Limited English Proficiency

Figure 5 shows rates of individuals with LEP, which compose around 7.3 percent of the Study Area population. ATP included persons reporting LEP in this analysis to help inform public outreach efforts related to EJ populations and to help ensure non-English speaking populations are engaged in the process in accordance with EO 13166. LEP populations occur in 68 of the 92 populated census block groups in the Study Area, and the majority are Spanish speaking. The percentage of the LEP population ranged from 0 percent (in 24 of the Study Area block groups) to 51 percent. LEP populations were more concentrated along the eastern portion of the Study Area along East Riverside Drive, north of Lady Bird Lake east of I-35, and near the proposed Oltorf Station.

Figure 2: Existing and Proposed Affordable Housing

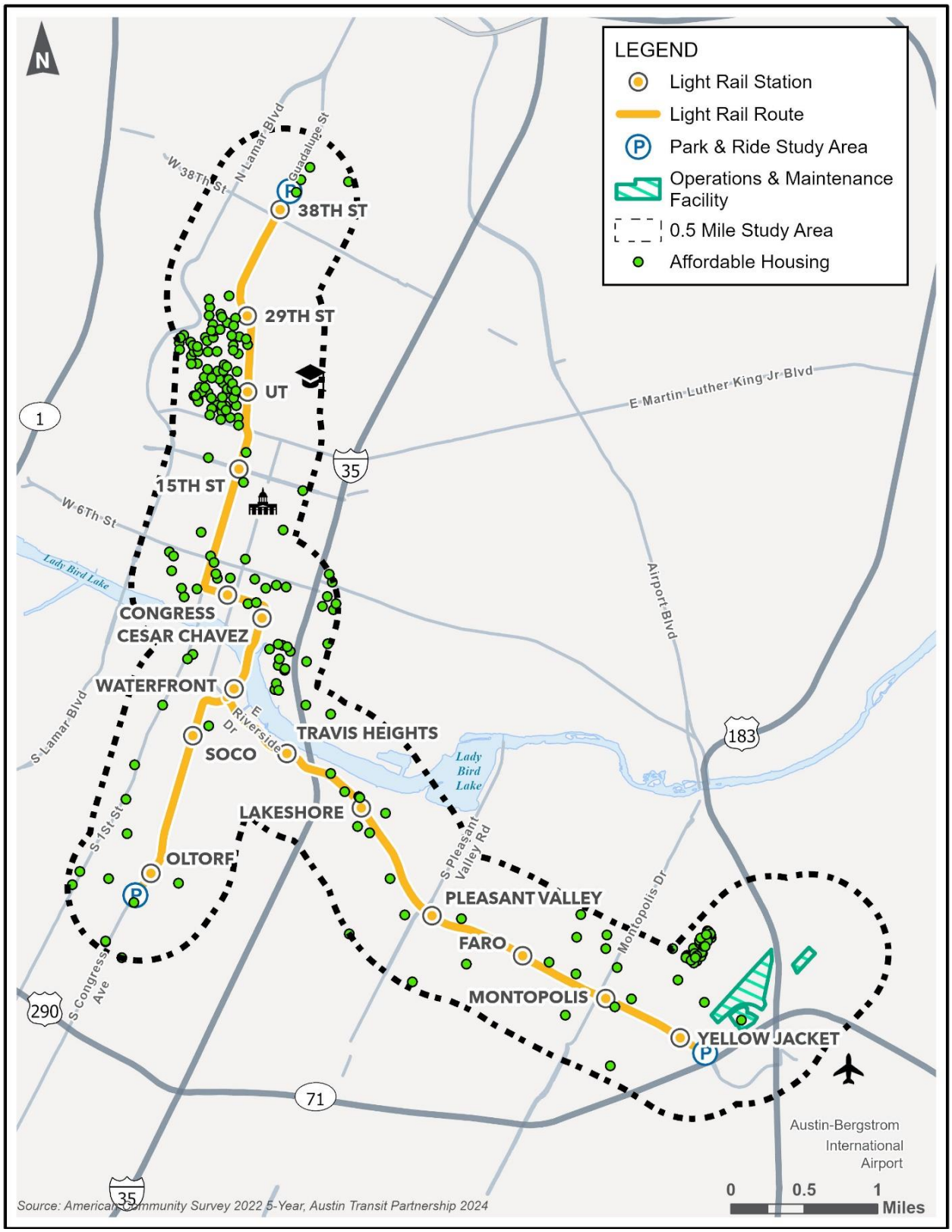


Figure 3: Households with High Cost Burdens

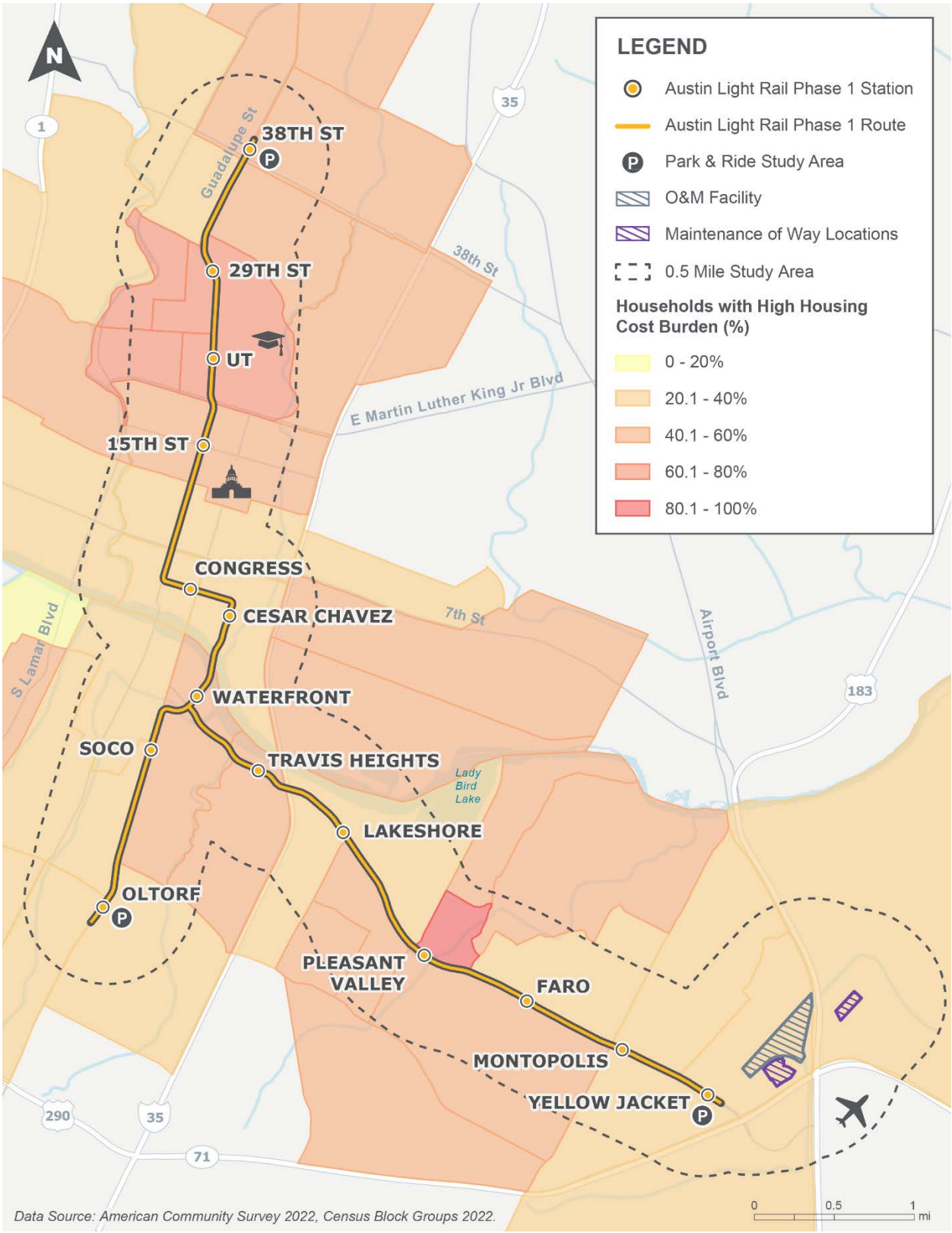


Figure 4: Persons with a Disability

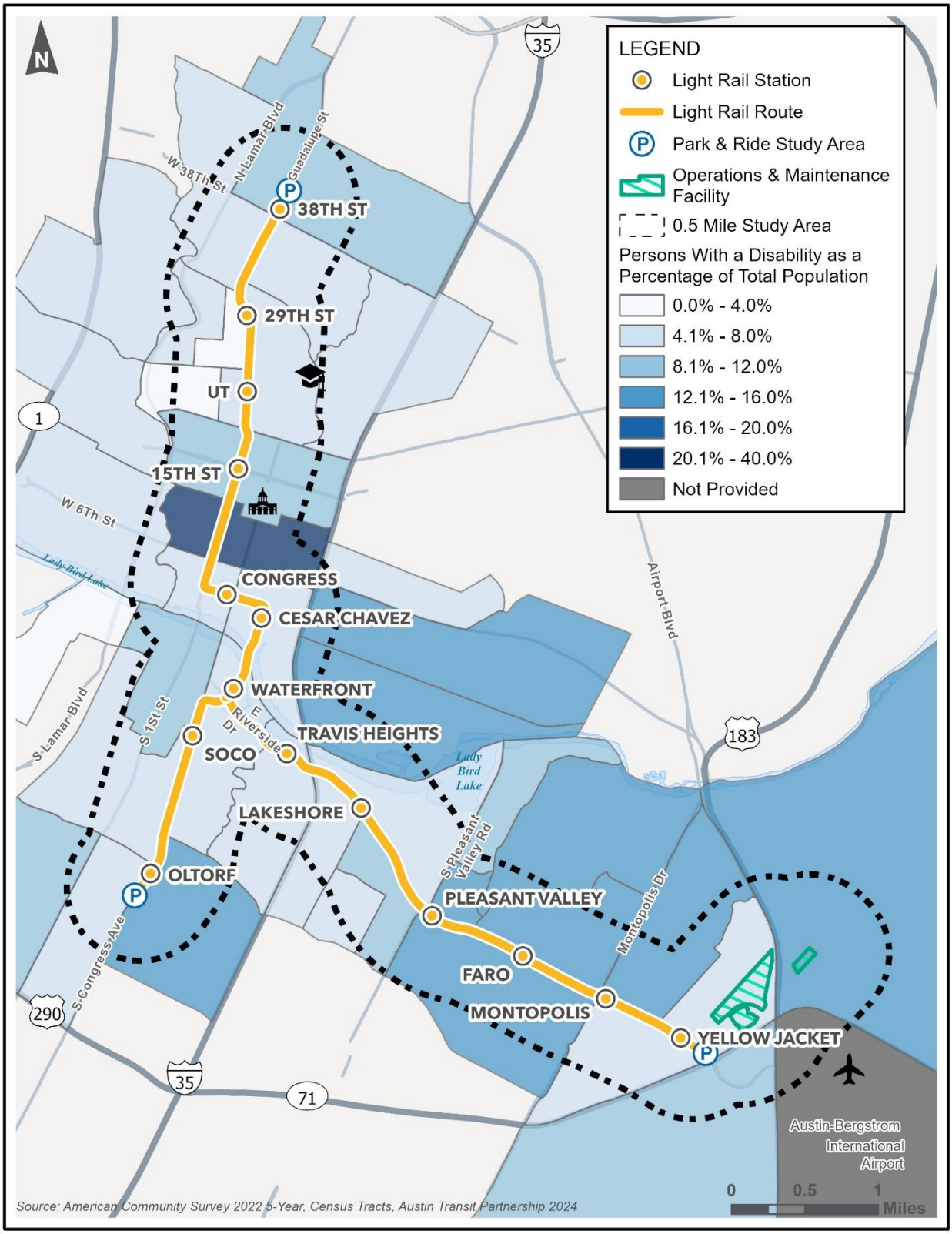
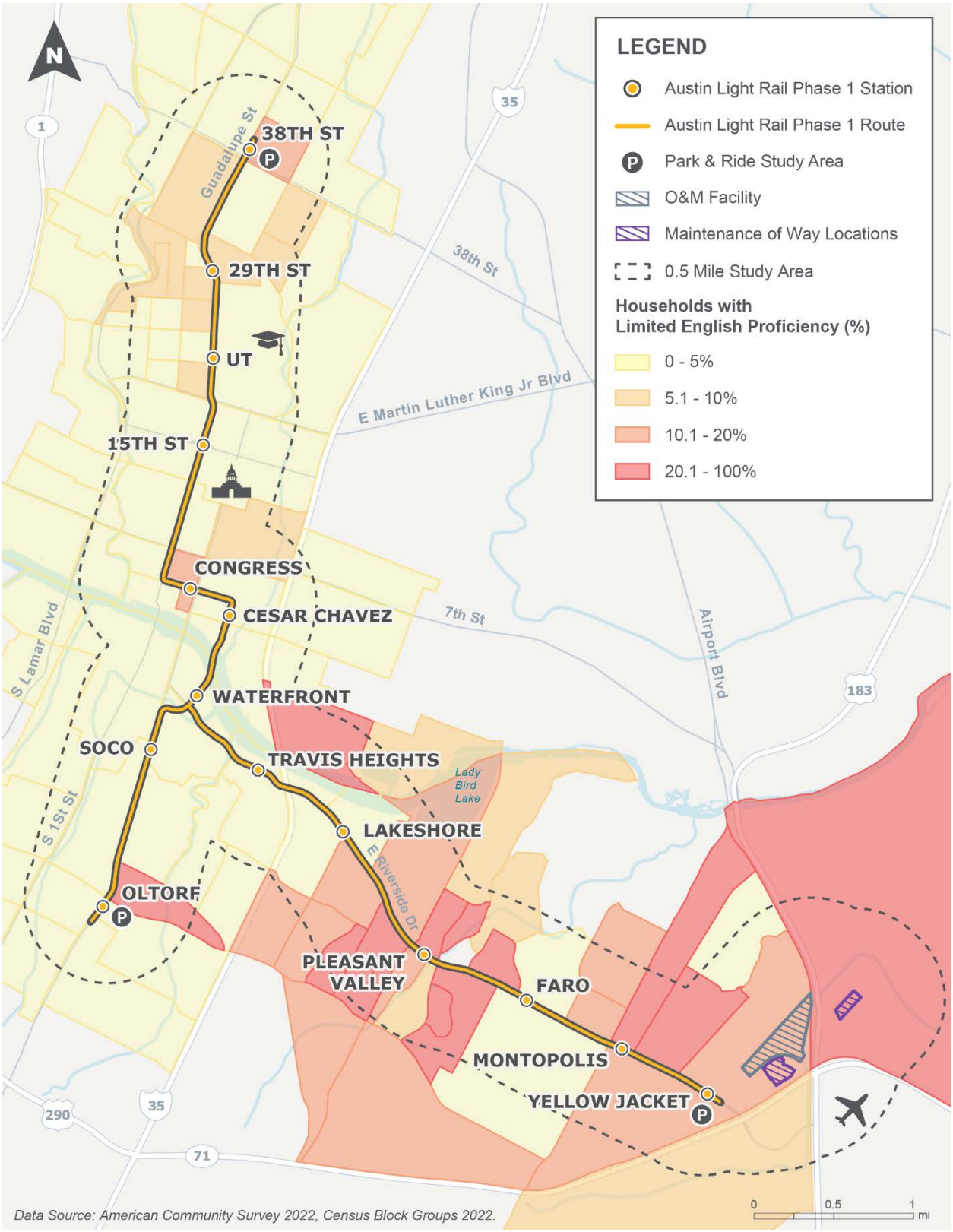


Figure 5: Limited English Proficiency



4.6 Identification of Disadvantaged Communities

Disadvantaged communities were identified in the Study Area using CEQ's Climate and Economic Justice Screening Tool (CEJST), USDOT's Equitable Transportation Community (ETC) Explorer, and EJScreen threshold mapping. The disadvantaged areas identified by the screening tools are shown in **Figure 6** and described below. Each tool and the datasets used to identify community and/or environmental burdens are described below along with the past harms that have led to disadvantages that persist today.

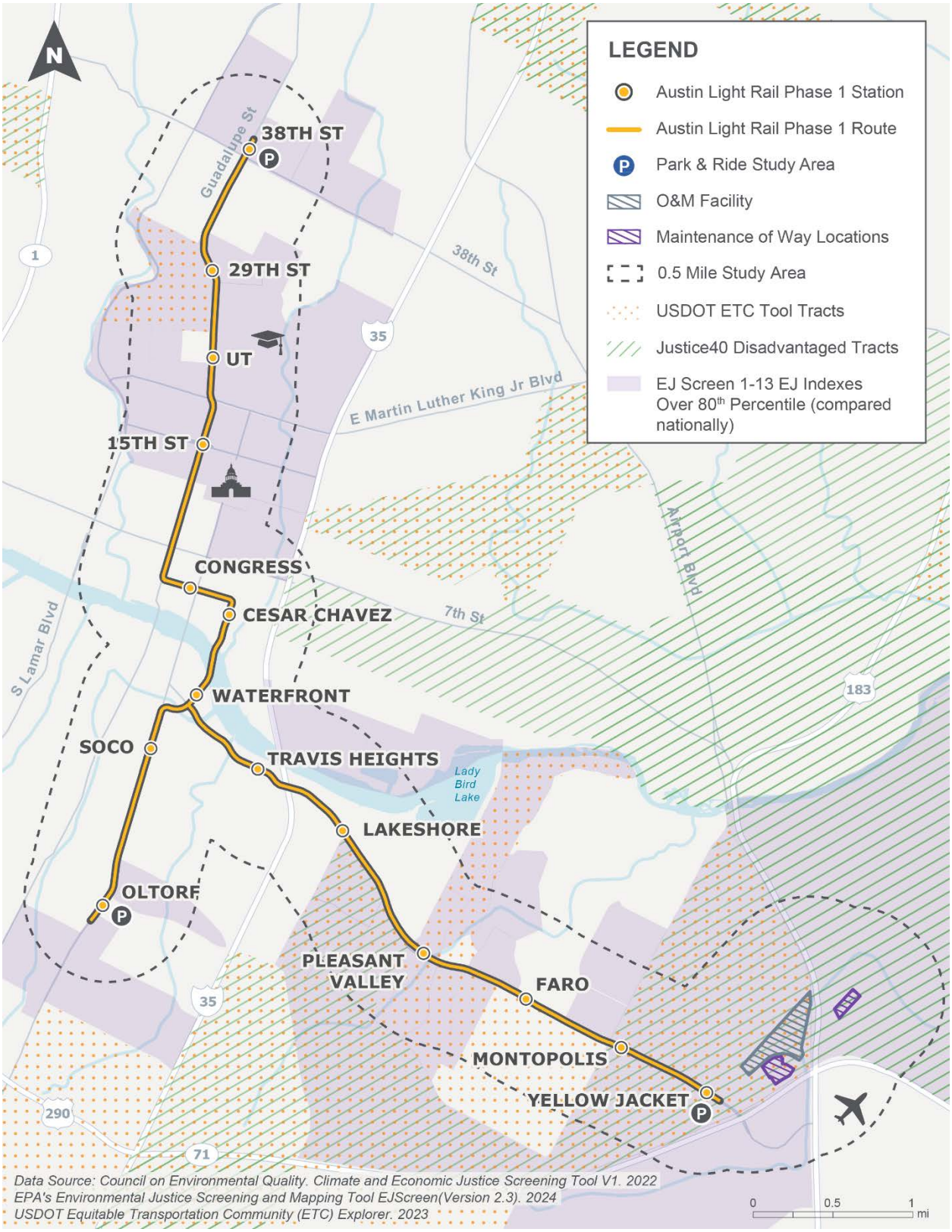
4.6.1 CEQ Climate and Economic Justice Screening Tool

CEJST has an interactive map and uses datasets that are indicators of burdens in eight categories that collectively define the disadvantaged communities (CEQ 2022). The census tracts identified in the CEJST are shown in **Figure 6**. Communities are considered disadvantaged if they are on land within the boundaries of federally recognized tribes or in census tracts that meet the threshold for at least one of the following categories of burden: climate change, energy, health, housing, legacy pollution, transportation, water and wastewater, and workforce development (CEQ 2022). The Study Area does not contain any land within the boundaries of federally recognized tribes.

There are a total of 42 census tracts within the EJ study area, and 4 (9.5 percent) are identified as disadvantaged by the CEJST. All four disadvantaged tracts are concentrated in the southeastern end of the Study Area around the Lakeshore, Pleasant Valley, Faro, Montopolis, and Yellow Jacket Stations and the operations and maintenance facility (OMF). These census tracts exceed thresholds for one or more of the following burdens:

- **Housing.** The area has experienced historical underinvestment or is at or above the 90th percentile for housing cost; lacks green space, lacks indoor plumbing, or has lead paint; and is at or above the 65th percentile for low income.
- **Water and wastewater.** The area is at or above the 90th percentile for underground storage tanks and releases or wastewater discharge and is at or above the 65th percentile for low income.
- **Workforce development.** The area is at or above the 90th percentile for linguistic isolation, low median income, poverty, or unemployment and has more than 10 percent of people ages 25 years or older whose high school education is less than a high school diploma.

Figure 6: Disadvantaged Communities



4.6.2 USDOT ETC Explorer

Designed to complement the CEJST, USDOT's ETC Explorer is an interactive web application that uses 2020 census tracts and data to explore the cumulative burden that communities experience because of underinvestment in transportation in five categories: transportation insecurity, health vulnerability, environmental burden, social vulnerability, and climate and disaster risk burden (USDOT 2023). A composite score is calculated by totaling the ranked normalized indicators for each category. USDOT considers a census tract to be experiencing disadvantage if the overall index score places it in the 65th percentile (or higher) of all U.S. census tracts. The 65th percentile cutoff was chosen for consistency with the CEJST, which prioritizes tracts at the 65th percentile or above as a low-income indicator and was verified as the appropriate cutoff for the ETC Explorer through sensitivity analyses.

Of the 42 census tracts that intersect with the EJ Study Area, 9 tracts (21.5 percent) are identified as disadvantaged by the ETC Explorer (see **Figure 6**). The nine disadvantaged tracts are located throughout the Study Area. Stations where the tracts are concentrated include 29th Street, Lakeshore, Pleasant Valley, Faro, Montopolis, and Yellow Jacket. The OMF is also located within a tract identified as disadvantaged by the ETC Explorer. Notable burdens identified in the ETC Explorer for the nine census tracts compared to national averages include the following:

- **Environmental Burden:** 71st percentile ranking
  - Particulate matter 2.5 microns or smaller in diameter ($PM_{2.5}$) level: 83rd percentile ranking
  - Hazardous sites proximity: 78th percentile ranking
  - High-volume road proximity: 84th percentile ranking
  - Airports proximity: 76th percentile ranking
- **Social Vulnerability:** 63rd percentile ranking
  - House tenure: 86th percentile ranking
  - Housing cost burden: 77th percentile ranking
  - Uninsured: 68th percentile ranking
  - Endemic inequality: 73rd percentile ranking
- **Climate and Disaster Risk Burden:** 70th percentile ranking
  - Anticipated changes in extreme weather: 68th percentile ranking
  - Impervious services (from land cover): 76th percentile ranking

4.6.3 EJScreen Threshold Maps

EPA recommends the use of EJScreen threshold maps as a screening tool to identify potential vulnerable communities based on an index that combines information on pollutant burdens and low-income and minority population data. The threshold maps identify low-income and minority census block groups with high environmental burdens including factors for air emissions ($PM_{2.5}$,

ozone, nitrogen dioxide, diesel particulate matter, and toxic releases to air), traffic proximity, lead paint, superfund proximity, Risk Management Program facility proximity, underground storage tanks, wastewater discharge, and drinking water non-compliance. **Figure 6** presents the EJ threshold map for the Study Area, showing the census block groups that are at or above the 80th percentile compared to all census block groups in the nation.

Of the 42 census tracts that intersect with the EJ Study Area, 18 tracts (42.9 percent) are identified as disadvantaged. The 18 disadvantaged tracts are located throughout the Study Area. Stations where the tracts are concentrated include 29th Street, UT, 15th Street, Oltorf, Lakeshore, Pleasant Valley, Faro, Montopolis, and Yellow Jacket. The OMF is also located within a tract identified as disadvantaged by the EJScreen threshold maps.

4.6.3.1 Description of Past Harms

Communities in the Study Area have been harmed by disinvestment, discriminatory policies, and transportation decisions, the effects of which are still felt today. Past harms include the following:

- **Segregation and separation of the races (Jim Crow laws)** were encouraged by the 1928 Master Plan, which relocated Blacks and African Americans from other areas to east of East Avenue (currently I-35).
- **Freeway development** in the 1960s included the placement of I-35 along East Avenue, which displaced homes and businesses, created a physical barrier in Austin and enforced racial barriers.
- **Deed restrictions and "redlining,"** a policy in which the Federal Housing Administration refused to insure mortgages in and near African American neighborhoods, led to East Austin becoming an almost entirely Black community prior to World War II.
- **Gentrification** is ongoing in East Austin, as is described in the **Socioeconomics Technical Report** (**DEIS Appendix E-4**).

In 1839, newly independent from Mexico, Austin was designated the capital of the Republic of Texas. The first census in Austin, conducted in 1840, reported 865 residents, including 145 enslaved people. After the Civil War, many emancipated African Americans moved to Austin for work, forming freedman's communities (also called freedom colonies). During this period, Austin's African American population increased by more than 100 percent to more than 3,400 in 1874 (Texas Department of Transportation [TxDOT] 2017). Meanwhile, segregation and separate but equal status for African Americans became the norm and eventually became law with the enactment of the Jim Crow laws in the 1890s (Texas State Library and Archives Commission 2015).

Austin's population continued to grow after the turn of the century and was at 34,000 by 1920, leading to expansion and development of new areas. The area east of I-35 (formerly called East Avenue) grew rapidly during the late nineteenth and early twentieth centuries. In addition to African Americans, other immigrant groups, including Swedes, Germans, and Mexicans, arrived by railroad for work. In East Austin, several important African American institutions, such as the

Ebenezer Baptist Church, the Robertson Hill School, and the Roberts Clinic, were established (TxDOT 2017).

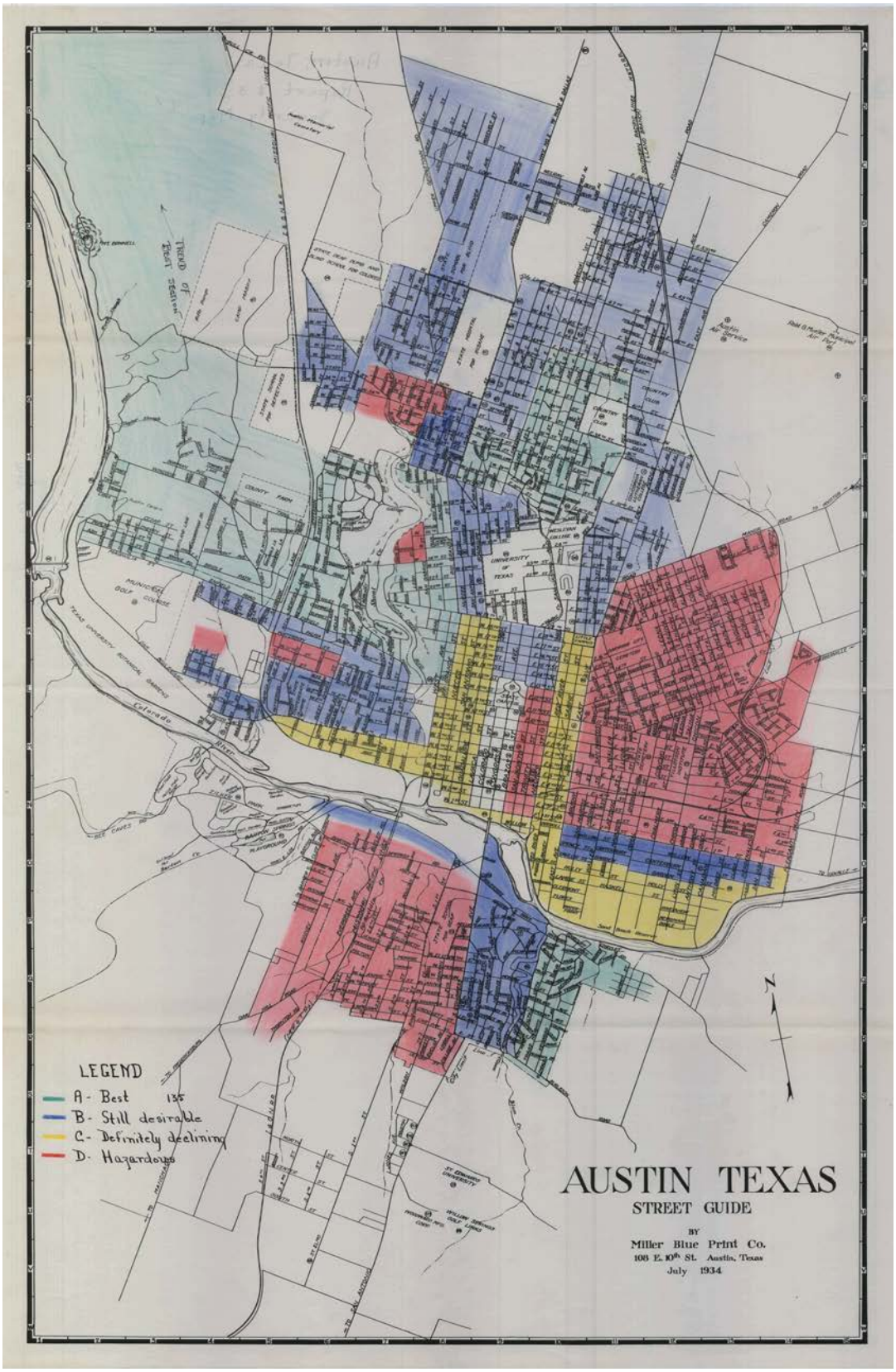
In 1917, the U.S. Supreme Court overturned civil government-instituted racially biased zoning in residential areas. Despite this ruling, the City continued its practices and recommended in its 1928 Master Plan the creation of a district specifically for Black people, east of I-35. Schools, parks, and other facilities established there were to serve the Black community specifically and encourage growth of the Black community in that area while discouraging it west of the highway. African American parks and schools west of East Avenue were relocated to the east side, and City utilities were denied to Black enclaves in other parts of Austin, such as in Clarksville (TxDOT 2017). Additionally, deed restrictions, and "redlining," a policy in which the Federal Housing Administration refused to insure mortgages in and near African American neighborhoods, led to East Austin becoming an almost entirely Black community prior to World War II (see **Figure 7**; TxDOT 2017).

After World War II, the City's segregationist policies continued, and African American communities continued to grow east of I-35 (TxDOT 2017). The 1928 Master Plan also limited where Hispanic and Mexican American people could access services, pushing them east of East Avenue and south of areas occupied primarily by the Black and African American communities. These ongoing policies contributed to the eventual construction of I-35 along the East Avenue divide, despite protests and claims from residents that the project was racially motivated and intended to create a physical barrier between East Austin and Downtown Austin (TxDOT 2017). With I-35's double-decker design, the construction in 1962 solidified an existing racial and economic divide in Austin and reduced the accessibility of primarily minority and less economically privileged neighborhoods to the east with essential destinations in the downtown area. The freeway provides a visual and physical barrier to movement and reduces community cohesion between the east and west sides of the facility to this day.

Suburban development in the 1950s led to the removal of commercial and retail services from downtown areas both in Austin and nationally. Although local leaders began the movement to desegregate Austin's schools and services in the 1950s, East Austin remained an affordable place for minorities due to suburban migration and the continuing lack of adequate facilities. Recently, a movement back into downtown areas has caused increased housing prices, gentrification, and loss of minority and low-income communities in East Austin (TxDOT 2023).

The City's 1980 Comprehensive Plan and environmental and watershed protections that restrict housing development in West Austin have all contributed to ongoing development pressures in East Austin in existing EJ communities.

Figure 7: 1934 Redlining Map



5 Targeted Outreach to EJ Populations

ATP has implemented a public outreach program that emphasizes meaningful engagement with all members of the community, including minority, low-income, disabled, underserved, and transit-dependent populations. Outreach began with the development of Project Connect,[1] which preceded the formation of ATP, and included a scoping process for this DEIS held in January 2024. The outreach activities are summarized below and described more fully in ATP's *Austin Light Rail: Community Engagement Report* (2023a) and **DEIS Appendix B, Scoping Summary Report.**

5.1 Pre-scoping Outreach Activities

At the outset of planning for Austin Light Rail Phase 1, ATP assessed the previous engagement activities conducted for Project Connect (prior to March 2022) and established objectives to increase participation by the following populations:

- Youth (ages 18–24);
- Spanish-speaking communities;
- Black and Latino communities;
- People with disabilities; and
- Low-income communities.

To address these gaps, ATP convened targeted focus groups and implemented broad strategies to inform the decision-making process.

5.1.1 Focus Groups and Public Meeting

ATP conducted a series of 11 Light Rail Focus Groups between December 2022 and January 2023. The focus groups comprised members who self-identified as low-income, minority, disabled, underserved, and/or transit-dependent. The goals of the focus groups were to (1) engage with diverse populations, (2) receive Community Values Criteria feedback, and (3) evaluate perceptions on key destinations that light rail could service. Focus group participants indicated that the Project team should prioritize:

- access to opportunities;
- affordability benefits;
- who it serves;
- connectivity; and
- traffic.

Following the conclusion of the focus groups, the results of the Community Values Criteria exercise informed the development and evaluation of options for the first phase of light rail. The community values were combined with ATP's guiding principles (i.e., to build equity,

[1] See the Project Connect Engagement Library at https://www.atptx.org/engagement-library/.

sustainability, and accessibility into community outreach and the overall decision-making process) to guide the staff recommendation in the light rail plan. The Community Values Criteria included:

- **Mobility and customer service.** Are we providing convenient and good quality transit service? Considerations included ridership, bicycle and pedestrian connectivity, traffic (mobility for all modes), and seamlessness of transfers between bus and rail;
- **Access to opportunities.** Are we making meaningful connections, especially for the people who need them most? This was evaluated using current and future population densities, demographic data, and access to key destinations;
- **Environmental benefits.** How do the scenarios compare in relation to the potential effects on sensitive environmental resources and climate change? Considerations included greenhouse gas emissions, effects on community resources and amenities, and effects on water resources and floodplains; and
- **Land use and housing.** Are we creating links between affordable/attainable housing and transit? Considerations included affordability benefits, current housing, and future growth opportunities supportive of anti-displacement and Equitable Transit-Oriented Development (ETOD) initiatives.

ATP presented five light rail scenarios with different endpoints at a public meeting in March 2023, which kicked off a 6-week community dialogue event. Between March and May 2023, ATP engaged the community in dialogue about the five scenarios at several events, including one in-person open house, a virtual open house, 45 bus and train station outreach events, and a variety of virtual community updates and community conversations. **Figure 8** shows the locations of public involvement events that took place between December 2022 and May 2023. The engagement process included the following:

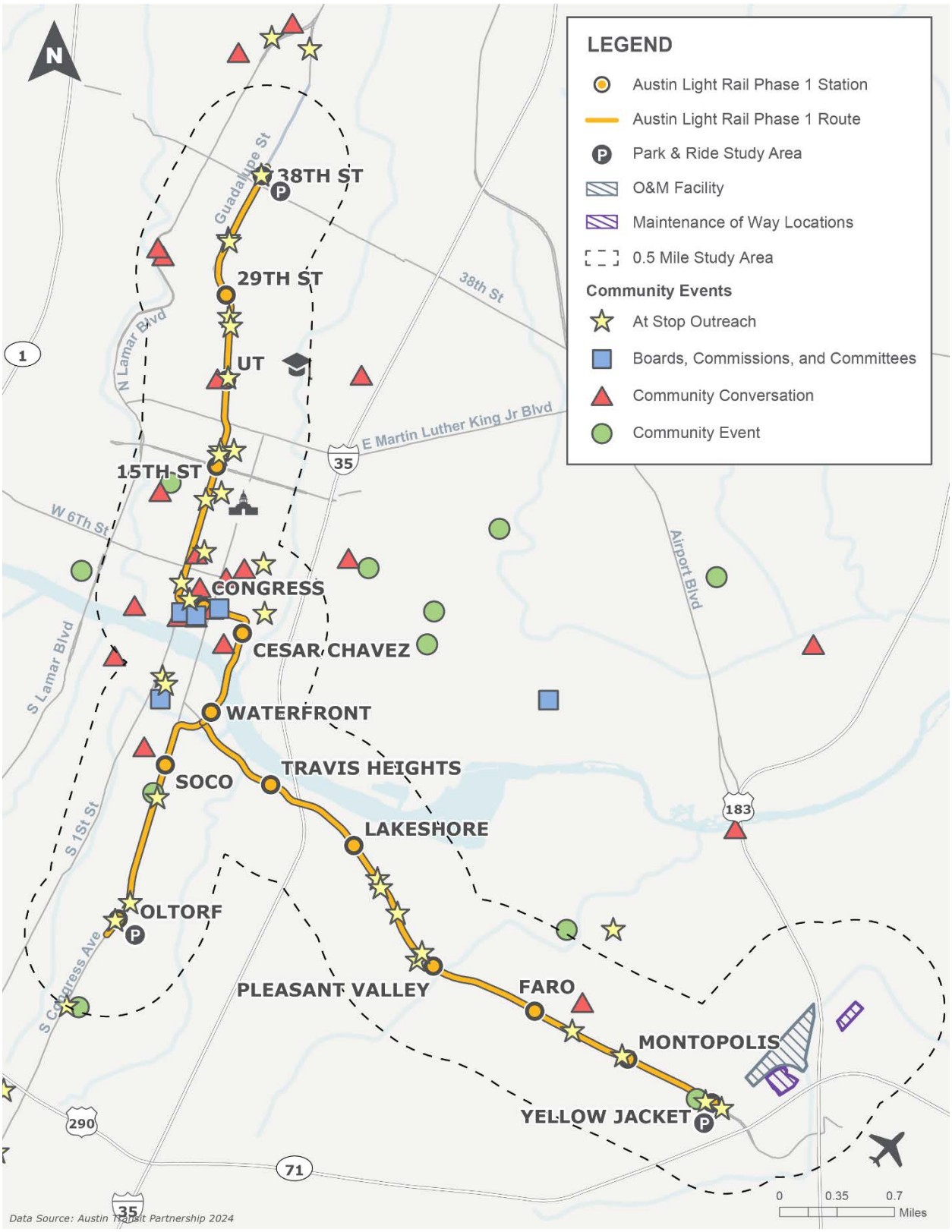
- **In-person open house.** Attended by 532 people who provided 423 written comments;
- **Virtual open house.** Had more than 19,000 views and approximately 2,000 participants who provided more than 5,000 comments;
- **Bus station and train station outreach.** Occurred at 45 unique locations around Austin reaching 3,469 people;
- **Virtual community updates.** Reached 149 community members and answered more than 90 questions at the April 6, 2023, event; and
- **Community conversations, events and boards, commissions, and committees.** ATP participated in more than 90 events during the 6-week dialogue period.

The engagement process and summary of feedback received are presented in the *Austin Light Rail: Community Engagement Report*[2] (ATP 2023a).

[2] The *Austin Light Rail: Community Engagement Report* can be found at https://www.atptx.org/wp-content/uploads/2023/09/AustinLightRail_CE_Report-Spring2023_FINAL-ENG.pdf.

Austin Transit Partnership

Figure 8: Public Involvement Events (between December 2022 and-May 2023)



5.1.2 Broader Engagement Tactics

ATP implemented the following engagement tactics to involve the populations identified in Section 5.1 and engage a broader group of individuals in the process:

- Held virtual open house and virtual meetings in English and Spanish;
- Engaged the media in Spanish-language markets;
- Partnered with community groups to support deeper connections with diverse populations;
- Spoke to core transit riders through outreach at bus stops and train stations;
- Attended meetings in community spaces and public events;
- Partnered with Austin City Council members to engage with their constituents;
- Presented to City boards and commissions and to Capital Metropolitan Transportation Authority (CapMetro) and ATP committees; and
- Ensured access to ATP staff for all questions via email, phone, in person, etc.

In partnership with the Project Connect team at the City and CapMetro, ATP staff made strides toward reaching target populations, increasing outreach and education about the Project, and receiving valuable feedback about the light rail options. The community dialogue between March and May 2023 reached thousands of people including:

- more than 8,000 through in-person events generating more than 5,600 comments;
- more than 42,000 through e-newsletters (806 text message recipients) with an average unique open rate of 57.2 percent;
- about 20,000 website views (English and Spanish) (more than 67,000 combined across all atptx.org pages) generating more than 5,000 comments in English and Spanish; and
- about 15,000 users reached on social media (ATP 2023a).

ATP requested demographic data from participants to characterize the data and infer how different groups feel about the Project. Roughly half of the virtual open house participants provided race/ethnicity data, and about one-third provided their income. ATP will continue to actively explore ways of collecting demographic data in future engagement efforts.

5.1.3 Summary of Public and Stakeholder Input

During outreach activities, demographic information was requested to provide a snapshot of how different groups view the Project. The following list includes the priority themes that were identified from comments from different populations; the demographic data was self-reported and not provided by all participants:

- Priority themes from self-identified minority participants (744 comments, approximately 13 percent based on 5,600 total comments):
    - Top community values were access to opportunities, mobility, and customer service;

  - Participants supported the light rail options that would serve the most locations and carry the most riders;
  - Feedback was split on the importance of reaching Austin-Bergstrom International Airport during the first phase of the light rail; and
  - Continued access to ATP staff for all questions via email, phone, in person, etc. was also a common theme.

- Priority themes from self-identified low-income participants (547 comments, approximately 10 percent based on 5,600 total comments); for the purpose of the outreach event, low-income participants were considered to have an individual income of less than $43,000 or a household income of less than $73,000:
  - Top community values were access to opportunities, mobility, and customer service;
  - Participants supported the light rail options that would serve the most people and focus on connections for bicyclists, pedestrians, and bus transit as well as overall system connections; and
  - Extending light rail to Austin-Bergstrom International Airport to increase access to East Austin was a common theme.
- Priority themes from current transit rider participants (3,355 comments, approximately 60 percent based on 5,600 total comments):
  - Top community values were access to opportunities, mobility, and customer service;
  - Participants identified Austin-Bergstrom International Airport and Downtown Austin as key destinations; and
  - Participants supported the light rail options that would have larger coverage, serve the most people, provide frequent service, and fulfill the need for multimodal connections and bus connectivity.

Following the technical results and feedback from the public, Scenario 1 – On-Street: 38th to Oltorf and Yellow Jacket was identified as the preferred scenario for the Phase 1 Project. This scenario had the second highest ridership of the scenarios and was supported by survey participants because of ridership, access, and connectivity. Additionally, this scenario would provide the opportunity for expansion to the north, south, and east to the Airport. Ultimately, the ATP Board of Directors, Austin City Council, and CapMetro Board of Directors adopted this scenario as the locally preferred project for the first phase of light rail in the *Austin Light Rail Implementation Plan* (ATP 2023b) and is the Build Alternative evaluated in the DEIS.

5.2 NEPA Scoping

FTA and ATP initiated the NEPA scoping process by publishing a formal notice of intent to prepare an environmental impact statement for the Project in the *Federal Register* on January 19, 2024. ATP also sent out a media release notifying the community about the start of scoping and published the release on its website. Scoping included a public comment period from January 19 through March 4, 2024. During that time, the public could provide comments

about the Project through postal mail or email, in person during an outreach event or meeting, by filling out a survey, or online. On January 19, 2024, federal, state, regional, and tribal governments, as well as cooperating and participating agencies for the Project, were invited to scoping meetings. ATP held in-person scoping meetings on February 1, 10, 12, 27, and 29, 2024, in Austin and a virtual scoping meeting on February 22, 2024.

ATP advertised the public scoping meetings through a variety of methods, including a postcard mailing to approximately 38,445 homes, apartments, and businesses within 0.5 mile of the Project and along 45 existing transit routes; print and online advertising; a media advisory; multiple listserv emails sent to 5,066 email addresses; notification on the Project website and various community calendars; and social media posts. ATP also created a Federal Process Communications Toolkit (designed for partners/agencies to help spread the word) and distributed flyers advertising the scoping meetings at libraries, community gathering places, bus stops, and large employers throughout the Project area. ATP also addressed several boards, commissions, advisory committees, and participated in stakeholder briefings to encourage interagency coordination and community involvement.

ATP employed the following strategies to ensure a diverse group of participants was involved in the NEPA scoping process:

- Engaged individuals in historically underinvested areas;
- Strategically planned to engage specific venues, events, and organizations in EJ and LEP communities;
- Attended community events and incorporated a “go-where-they-gather” strategy for pop-up outreach events in EJ and LEP communities;
- Distributed event and Project information through groups and existing networks, such as chambers of commerce, schools, neighborhood and community groups, faith-based and community-service organizations, and low-income assistance programs;
- Coordinated with essential services for information sharing and distribution through existing networks;
- Coordinated with apartment complexes in EJ and LEP communities for information sharing and distribution;
- Distributed information via print and broadcast channels, including local community papers, social media, and neighborhood magazines/publications, as well as Spanish, Korean, and Vietnamese translations of such publications;
- Translated meeting documents and web content on key initiatives into languages other than English upon request; and
- Provided Spanish interpretation services at all six public meetings.

More than 480 people attended six public meetings in early 2024. Additionally, 268 people submitted completed scoping surveys at the in-person meetings, 94 people provided completed surveys at outreach events, and 396 individuals submitted completed surveys online. In total, ATP received 758 completed surveys with 3,850 comments (each survey had multiple questions

and could result in multiple comments per survey). There were also 135 people who signed up during a public meeting to receive additional information from ATP via emails and/or e-newsletter distribution.

ATP received a total of 3,863 comments during the scoping period. Most of those (3,850) were in response to the scoping survey. To gather demographic information, ATP asked four demographic questions that allowed survey respondents to share their race and ethnicity, gender, and age, as well as whether they are differently abled. Survey questions also asked whether respondents use public transportation, their zip code, and their income and dependent status. All questions were optional. Some respondents opted to supply information for all questions, while some answered only a few questions and others did not answer any questions.

Table 2 shows the breakdown of the scoping survey demographic results. See **DEIS Appendix B, Scoping Summary Report**, for more information.

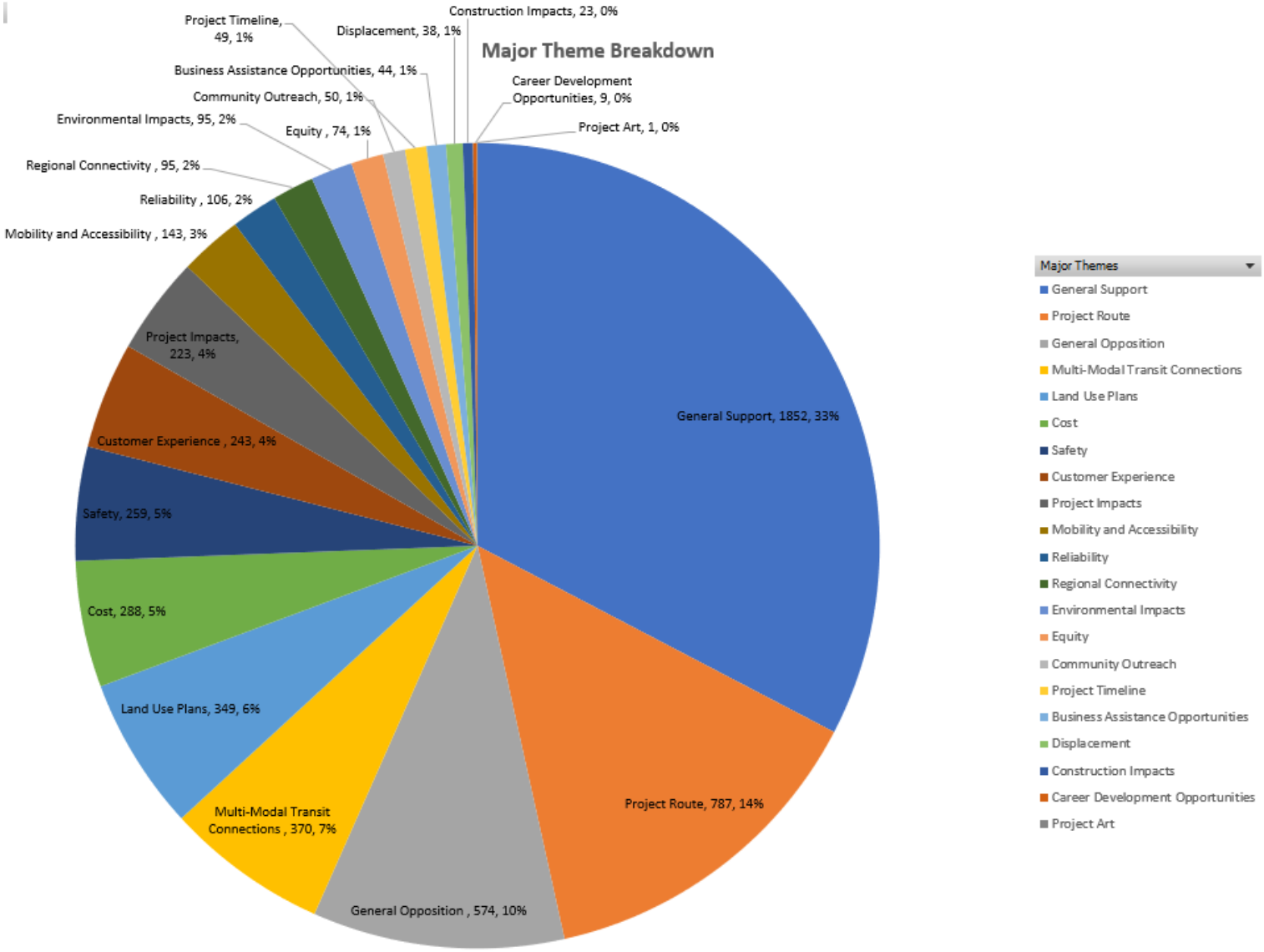
Table 2: Scoping Survey Demographics

Demographic	Count	Percentage
Race and Ethnicity		
Asian American, Native Hawaiian, or Pacific Islander	61	8
Black or African American	40	5
Hispanic, Latino/a, Latinx, or Chicanx	160	22
Indigenous	11	2
White	460	63
Gender		
Gender non-conforming	15	3
Man	259	54
Woman	210	43
Age		
60 years or older	84	11
Under 21 years old	10	1
Other (respondent either did not answer or selected None)	664	88
Differently Abled		
I am a person living with a disability or am a differently abled person	37	5
Other (respondent either did not answer or selected None)	721	95

Demographic	Count	Percentage
Dependents		
I am responsible for a person in my household who is older than 65 years	39	5
I have dependents who are children in my household	106	14
Other (respondent either did not answer or selected None)	613	81
Income		
My household's income is less than $71,576 in one year	126	17
My individual income is less than $43,043 in one year	125	16
Other (respondent either did not answer or selected None)	508	67
Transit User		
No	304	42
Yes	416	58
Homelessness		
I am a person experiencing homelessness	11	1
Other (respondent either did not answer or selected None)	747	99

Of those who answered the demographic questions, 37 percent self-identified as minority and approximately 33 percent self-identified as low-income. Approximately 33 percent of respondents were supportive of the plan to build Austin Light Rail Phase 1, with some commenters urging ATP to build a reliable, safe, and cost-effective light rail system as quickly as possible. Approximately 10 percent of respondents expressed opposition to the plan. The breakdown of all 21 themes and how often they were mentioned (by total comments received and percentage of received comments) is shown in **Figure 9**.

Figure 9: Major Themes Overview



6 Identification of Project Effects and Mitigation Measures

This section summarizes the beneficial and adverse effects of the Project, considering the potential for direct, indirect, and cumulative effects, and the mitigation measures that ATP would implement to mitigate these effects, as described in **DEIS Chapters 3, 4, and 5**. This section also presents the results of ATP's environmental findings for the OMF site and summarizes ATP's siting and equity analysis for the OMF. The OMF would be located in Montopolis, an EJ area and disadvantaged community identified by the CEJST (CEQ 2022).

6.1 Project Benefits

Project benefits include improved multi-modal mobility to employment centers and regional destinations and between affordable housing and jobs in the Study Area; increased transit ridership and reduced numbers of private automobile trips in the region; reduced local pollution and greenhouse gases; safer streets; and short- and long-term job creation. In addition, efficient public transit is an affordable transportation option, which provides residents an opportunity to reduce household expenses related to car ownership. These Study Area benefits would not occur under the No Build Alternative. While all populations in the vicinity of the Project would realize these benefits, the benefits to EJ populations may be greater compared to the general population because a greater percentage of low-income and minority individuals rely on transit. Households in low-income areas typically own fewer vehicles, have longer commutes, and have high transportation costs in proportion to income. The Project's air quality benefits may also accrue to a greater degree in the EJ communities because the negative health effects of pollution fall hardest on vulnerable members of the community (USDOT 2013).

6.2 Adverse Effects and Mitigation

Table 3 summarizes the potential adverse effects and mitigation identified in the chapters and appendices of this DEIS.

Table 3: Summary of Adverse Effects and Mitigation

Effect Category (DEIS Location)	Potential Adverse Effects	Proposed Mitigation
Traffic and Parking (Chapter 3)	• Adverse effects on traffic at 17 intersections in Downtown Austin and on East Riverside Drive • Loss of up to 607 on-street parking spaces	• Signal timing optimization, addition of turns lanes, and continued coordination with the City to optimize flow • Shared community parking at the proposed Oltorf park-and-ride
Acquisitions and Displacements (Chapter 4, Section 4.1)	• Permanent acquisition of approximately 85 acres, which includes the 62-acre OMF site • Potential displacement of up to 59 businesses and up to 4 residences	• Compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act • Administration of a Business Assistance Program
Land Use and Zoning (Chapter 4, Section 4.2)	No adverse effects	NA
Neighborhoods and Community Resources (Chapter 4, Section 4.3)	• Relocation of one community facility: Waller Creek Boathouse • Changes in vehicular and pedestrian access • Increase in travel time for vehicles crossing tracks that may affect emergency response	• Relocation of community facility in accordance with Uniform Relocation Assistance and Real Property Acquisition Policies Act and Section 6(f) of the Land and Water Conservation Fund Act • Coordination with City fire and police on emergency response procedures
Socioeconomic Conditions (Chapter 4, Section 4.4)	• Indirect effects related to accelerating gentrification, which could cause additional displacements in station areas • Adverse cumulative effects related to rise in property values given historic trends and planned private development	• Administration of Business Assistance Program • Participation in the regional Workforce Development Program
Visual Quality (Chapter 4, Section 4.5)	• Views affected by elevated structures	• Design features, and architectural and landscaping treatments
Cultural Resources (Chapter 4, Section 4.6 and Appendix G)	No adverse effects	NA

Effect Category (DEIS Location)	Potential Adverse Effects	Proposed Mitigation
Hazardous Materials (Chapter 4, Section 4.7)	No adverse effects	• Compliance with local, state, and federal regulations
Utilities (Chapter 4, Section 4.8)	No adverse effects	NA
Safety and Security (Chapter 4, Section 4.9)	No adverse effects	NA
Noise and Vibration (Chapter 4, Section 4.10)	• Moderate impacts at 22 buildings (514 dwelling units); severe impacts at 9 buildings (439 dwelling units) • Vibration impacts at a hotel and multi-family residence adjacent to OMF lead track.	• Mitigation analysis to determine cost-effectiveness of special trackwork, noise barriers, and building sound insulation
Air Quality, Energy, Greenhouse Gases, and Climate Change (Chapter 4, Sections 4.11 and 4.12)	No adverse effects	NA
Electromagnetic Fields (Chapter 4, Section 4.12)	• Potential for electromagnetic interference to affect sensitive equipment near the overhead catenary	• Coordination with property owners with sensitive equipment and installation of shielding if required
Soils and Geologic Resources (Chapter 4, Section 4.13)	No adverse effects	NA
Water Resources (Chapter 4, Section 4.14)	• 100-year floodplain effects in 16 acres and 500-year floodplain effects in 17 acres • Wetland effects of 4.2 acres (National Wetlands Inventory) and 0.05 acre (City-identified wetlands)	• Compliance with regulatory permit requirements and conservation measures

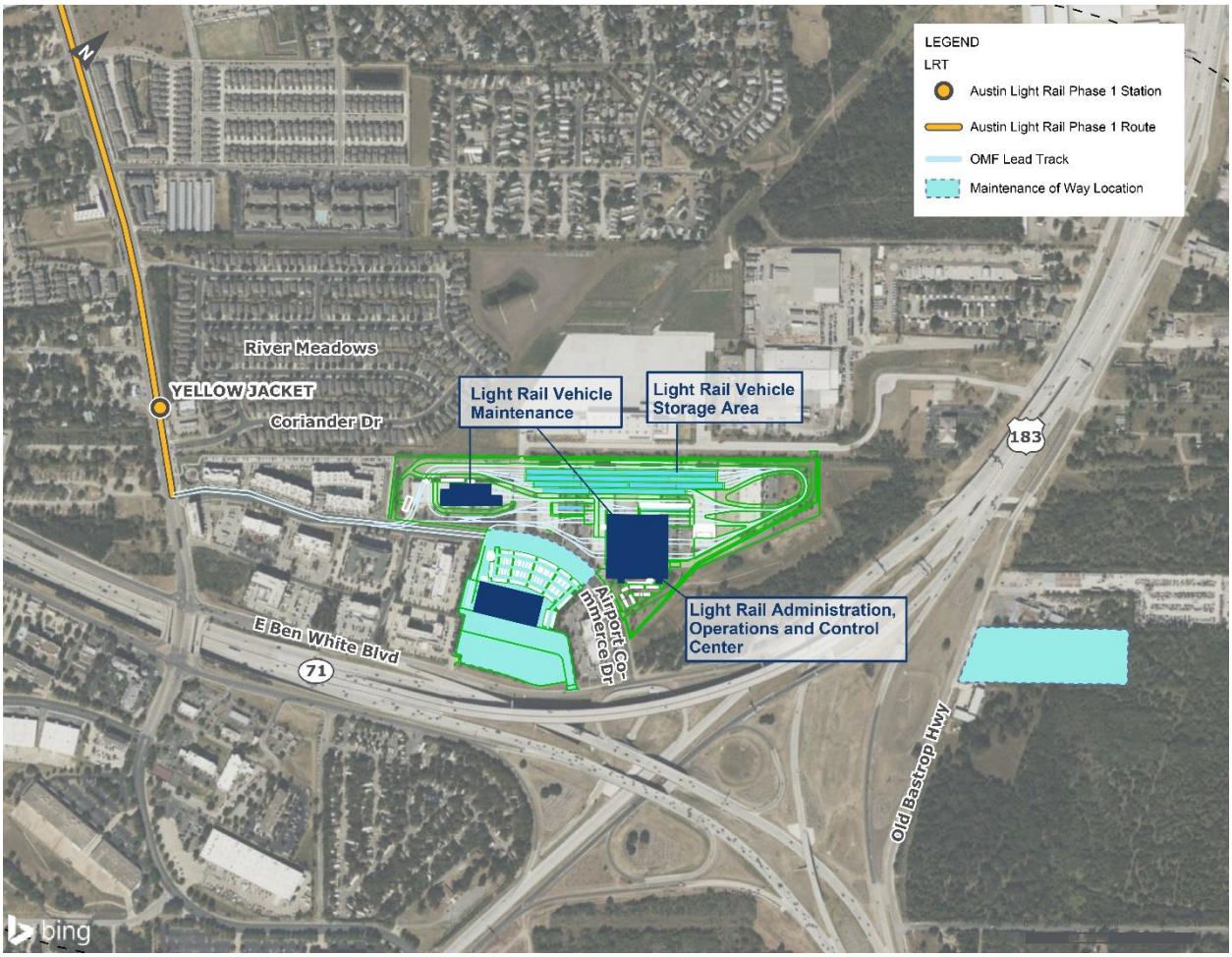
Effect Category (DEIS Location)	Potential Adverse Effects	Proposed Mitigation
Threatened and Endangered Species (Chapter 4, Section 4.15)	• 245 protected trees and 211 heritage trees within the limits of Project construction that require protection or removal	• Coordination with City Arborist and development of tree mitigation plan to be approved by Austin City Council
Construction Effects (Chapters 3 and 4)	• Increased dust and air emissions from construction equipment and vehicles, visual intrusion, noise, and vibration near construction sites and truck haul routes • Traffic, transit, bike, and pedestrian detour routes and increased travel delays • Temporary loss of street parking and disruption of local businesses • Adverse cumulative effects related to overlapping construction periods with planned public and private development projects	• Development of Construction Management Plan • Development of Environmental Mitigation and Monitoring Plans and monitoring contractor compliance • Administration of the Business Assistance Program • Participation in the Construction Partnership Program

6.3 OMF Environmental Findings and Siting Analysis

The OMF would be located on a 62-acre site on the eastern border of Montopolis, abutting Airport Commerce Drive and the US 183/SH 71 interchange to the south and east. The site is zoned for commercial and industrial uses, and light industrial businesses currently operate on site. The activities at the OMF are a permitted use on the site.

Eight large hotels serving the Austin-Bergstrom International Airport are located to the south of Airport Commerce Drive, and a multi-family residence is located to the north and approximately 270 feet from the OMF tracks. The OMF lead track providing access to the OMF would be on Airport Commerce Drive and within 20 feet of this multi-family residence and the airport hotels. The low-density neighborhood of Riverside View Terrace is located to the north of the OMF, approximately 180 feet from the nearest track (see **Figure 10**).

Figure 10: OMF Conceptual Site Plan



6.3.1 Socioeconomic and Environmental Effects of the OMF

More than one third of the businesses that would be displaced by the Project are located on the OMF site and are mostly light industrial (manufacturing and warehouses) and offices. The OMF is within a City-regulated Airport Overlay that limits residential uses. ATP would acquire the 62 acres and provide relocation assistance to the 24 business tenants in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act. While relocation of these businesses would not adversely affect the neighborhood character or community cohesion in the Montopolis community, the displacement would be considered an adverse effect due to the potential loss of jobs if relocation within the same area were not possible.

Based on the transportation and environmental assessments conducted for the Project, adverse effects on neighborhood conditions would not result from construction or operation of the OMF or maintenance of way (MOW) shops. The anticipated Project effects are described below.

6.3.1.1 Traffic and Parking

The OMF would not result in adverse traffic or parking effects. The facility would employ approximately 200 people, arriving and departing over the course of three shifts via the existing

access on Airport Commerce Drive via the US 183/SH 71 Interchange or off of Old Bastrop Highway for access to the MOW shops. Existing businesses currently use the access routes, and peak-hour traffic generated by the OMF would not be appreciably different. OMF activities would not affect roadways in residential neighborhoods or increase congestion on the adjacent arterial roadways. Employee parking would be provided on the site, and on-street parking would not be affected.

6.3.1.2 Visual Quality

The OMF would not result in adverse visual effects. The buildings that compose the OMF would be similar in appearance to the industrial buildings currently on the site in terms of both height and mass. The design of the facility would include landscaping and architectural elements to minimize the view of the facility for the residents in the adjacent neighborhood (see **Figure 11**). Facility lighting would be designed in accordance with the Texas Health and Safety and City lighting codes and designed to reduce glare, minimize light pollution, and preserve the natural light environment.

6.3.1.3 Community and Cultural Resources

The OMF would not result in adverse effects on community or cultural resources. There are no community facilities or historic properties listed in or eligible for listing in the National Register of Historic Places on the OMF site.

6.3.1.4 Air Quality

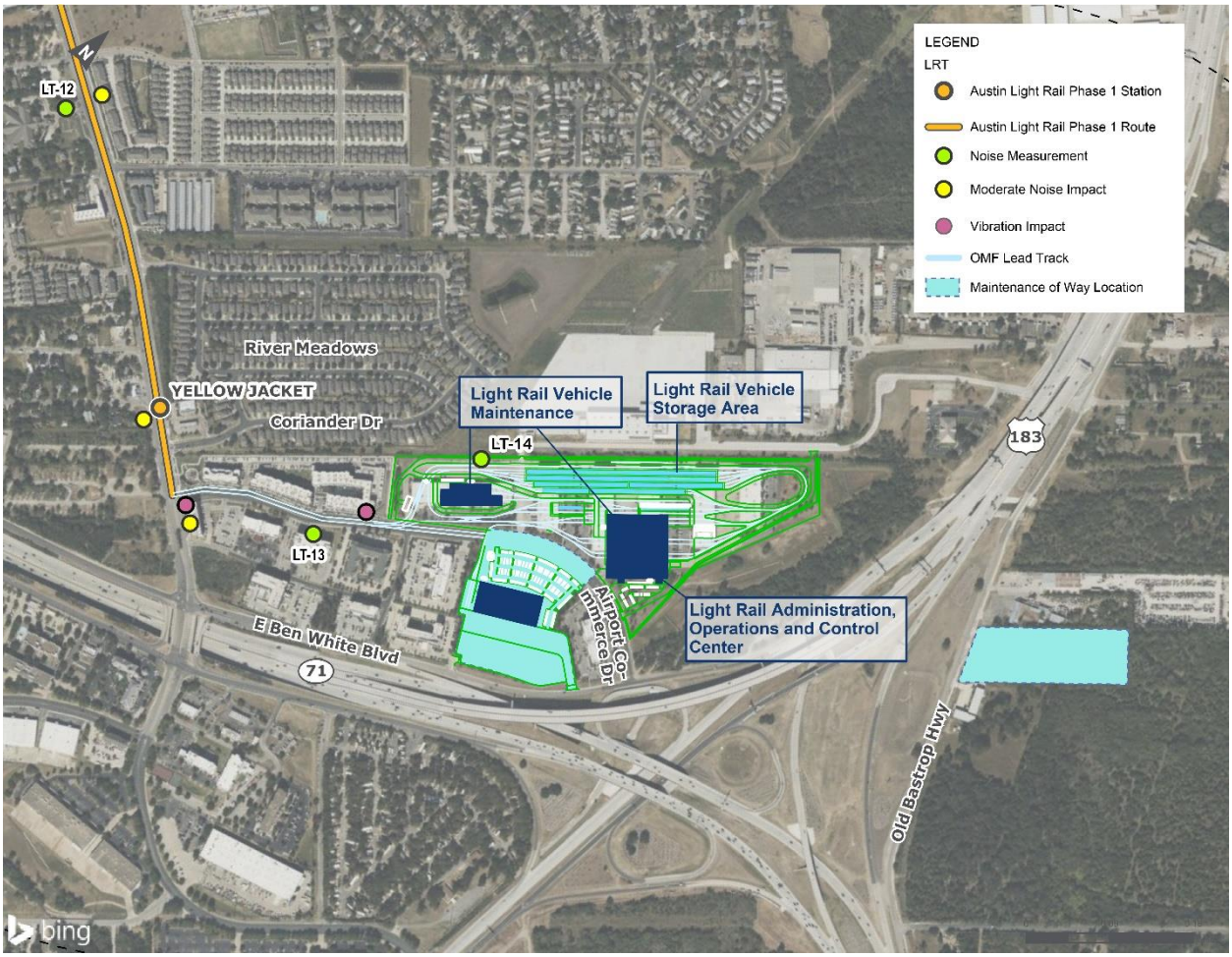
Operational air emissions at the OMF would be limited to mobile source emissions from maintenance and employee vehicle access to the site. Minor emissions associated with welding and painting would occur inside an enclosed maintenance facility and would be addressed by implementing standard minimization measures. Motor vehicles would use the existing access routes to the OMF and MOW shops, which would avoid the Study Area's residential neighborhoods. The electric light rail vehicles would not have motors and would not idle or produce air emissions at the site.

Figure 11: View from Riverside Meadows: Existing and Proposed

6.3.1.5 Noise

Noise-generating activities at the OMF site would include vehicles moving at slow speeds within the OMF site, vehicle washing and drying, limited testing of train bells and horns, a traction power substation, and vehicles accessing the facility on the lead track to the mainline tracks. Maintenance activities would be performed in the enclosed maintenance facility. Noise impacts are not predicted to result from maintenance activities at the OMF. The Project exposure noise level at Coriander Drive is predicted to be well below the FTA criteria for moderate impact. ATP's noise monitoring at the OMF site indicates that ambient noise levels are relatively low at 57 dBA. Project noise exposure would be 45 dBA at the nearest residence and would not produce a noticeable change in noise levels in the residential neighborhood. The OMF lead track on Airport Commerce Drive would result in a moderate noise impact at a hotel on East Riverside Drive due to the crossover tracks. ATP anticipates that this impact would be effectively mitigated through the design and installation of special noise dampening tracks.

Figure 12: Potential Noise and Vibration Impacts Near the OMF



6.3.1.6 Vibration

Light rail vehicles accessing the OMF on the lead track to the OMF have the potential to result in vibration impacts at two sensitive receptors – the multi-family residence to the west of the OMF and a hotel on East Riverside Drive. ATP anticipates that these vibration impacts would be effectively mitigated through the design and installation of special vibration dampening tracks.

6.3.1.7 Water Resources

Adverse effects on water resources would not occur. Water resources are present on the southeast portion of the site but would be avoided.

6.3.1.8 Threatened and Endangered Species

Adverse effects on threatened and endangered species would not occur. There are no heritage trees or threatened and endangered species habitat on the site. Mature trees would be avoided, protected, or removed in accordance with the tree mitigation plan.

6.3.1.9 Electromagnetic Fields

Overhead catenary wires produce electromagnetic fields, which can cause electromagnetic interference if within approximately 100 feet of the operation of sensitive equipment. ATP has not identified facilities likely to have sensitive equipment within this distance to the OMF site.

6.3.1.10 Construction Effects

In comparison to the construction of stations and tracks, which would occur closer to densely populated areas, construction of the OMF would be less intrusive for nearby residents. Direct construction worker and truck access to the site and its large size provide opportunities to avoid or minimize most nuisance effects. The construction noise analysis identified the potential for noise impacts within 120 feet of daytime construction activities, extending to 380 feet for nighttime construction activities. The potential for nighttime construction noise impacting residents would be mitigated through the development of a Noise Mitigation and Monitoring Plan, which would include limiting noisy construction activities at night.

The construction vibration analysis identified a vibration annoyance distance of 290 feet for impact pile driving. A Vibration Mitigation and Monitoring Plan would be developed to reduce annoyance effects. Mitigation may include use of less vibratory equipment (e.g., use of drilled piles or sonic pile driver), when possible; isolating the equipment using vibration isolation pads or mounts; adding damping materials to absorb vibration; and making saw cuts and other measures. If nighttime construction is necessary, lighting would be only as bright as necessary to comply with Occupational Safety and Health Administration requirements, and lights would be effectively shielded away from residential areas.

6.3.2 Siting and Equity Analysis

ATP conducted an extensive siting analysis for the OMF between July 2022 and June 2023 during the planning phase of the Project, described in **DEIS Appendix A, Alternatives Development and Analysis**. The OMF site must be sized and located to provide necessary functions for the operation and maintenance of the light rail system. These functions include

storage of up to 40 light rail vehicles; facilities for inspection and maintenance of the vehicles; MOW shops for maintenance of light rail materials and equipment; administrative spaces and facilities for light rail operations and maintenance staff; and light rail operations control center facilities.

The functions of the OMF and MOW shops require a relatively flat site of at least 40 acres. Sites of suitable size and topography were identified and evaluated prior to the selection of the end points for the Phase 1 alignment. Of 21 sites evaluated, nine OMF sites were advanced for further consideration based on compatibility with surrounding land use, avoidance of residential property taking, minimization of business displacement, and other criteria.

In accordance with Title VI of the Civil Rights Act, ATP performed an equity analysis of the nine sites to ensure that the OMF site selection would not displace persons on the basis of race, color, or national origin, nor result in cumulative adverse impacts due to the presence of other facilities with similar impacts in the area. The Title VI Equity Analysis for the OMF is available for review on the Project website at www.atptx.org. Based on the equity analysis and site screening analysis, ATP selected two sites for the OMF, one at the North Lamar Transit Center and the other at Airport Commerce Drive.

During an extensive outreach process, ATP communicated to the public that the OMF site location would be dependent on the alignment scenario selected—it would be located at the North Lamar Transit Center if the alignment were to extend that far north, and at the Airport Commerce Drive site if the alignment were to extend to Yellow Jacket or the airport. Proximity to the light rail alignment is a key element in determining the viability of a site because locations not in close proximity would increase capital and operating costs and could adversely impact areas that do not benefit from direct light rail access.

ATP analyzed two additional sites for the Phase 1 alignment, one at Oltorf Street and one near Willow Creek Drive. Neither of these sites is large enough to accommodate MOW shops. At approximately half the size of the Airport Commerce Drive site, the OMF activities would be closer to residential properties in dense neighborhoods that surround the sites on all sides. Disadvantaged communities identified in federal databases are located adjacent to both sites. ATP eliminated these sites from consideration because they would not offer any advantage over the Airport Commerce Drive site and would have greater potential to adversely affect the nearby communities.

Upon selection of the current Project alignment, the ATP Project team met with the community in Montopolis to solicit input on the proposed OMF at Airport Commerce Drive. The Project Connect Community Advisory Committee (CAC) hosted this meeting on April 15, 2023, and documented the community feedback in a memorandum. This meeting informed the EJ mitigation measures described below in Section 8.

7 Evaluation of Disproportionately High and Adverse Effects

ATP analyzed the location, number, and severity of the Project's adverse effects in EJ areas compared to non-EJ areas for each environmental category to determine the potential for disproportionately high and adverse effects on EJ populations. The results of this analysis are described below.

7.1 Potential for Disproportionately High and Adverse Effects

The Project's potential for disproportionately high and adverse effects in EJ communities was considered by Project and City leadership during the early planning phase of Austin's light rail system. Due to rising property values and gentrifying neighborhoods in the Study Area, the $300 million Anti-Displacement Fund and the City's affordable housing initiatives were established to address the scarcity of affordable housing and enable existing residents to remain in their communities and reap the benefits of the light rail investment. ATP and its partners established an active CAC that will recommend Community Initiated Solutions to the Austin City Council and monitor the funding decisions for the Anti-Displacement Program for the duration of the Project.

The effect on property values near high-capacity transit stations has been studied for different geographic areas and types of transit systems. While complex factors influence property values, including local real estate market conditions and neighborhood and building stock conditions, a positive correlation between transit and property value rise has been shown. A study prepared for FTA by the Center for Transit-Oriented Development found that increases in property values near transit were most dramatic for office and retail spaces, increasing from a few percent to more than 150 percent. For residential properties, single-family dwellings had a property value increase range from 2 to 32 percent, condominiums from 2 to 18 percent, and apartments from 0 to 45 percent (FTA 2008).

A separate study prepared by the American Public Transportation Association and the National Association of Realtors examined how well residential properties located near fixed-guideway transit maintained their value during the national recession from 2006 to 2011. Across five study regions, the drop in average residential sales prices near transit stations was smaller than in the region as a whole, and the station areas with higher levels of transit access saw the most price resilience within and across regions (American Public Transit Association 2013).

Gentrification can result in forced migration of low-income residents and businesses and can shift the racial-ethnic composition of neighborhoods. When this occurs, the cohesiveness and resilience of neighborhoods can be threatened. However, the extent to which the Project could accelerate the rate of gentrification in the Study Area is limited by the land use regulations that incentivize affordable housing as density increases. In March 2023, the Austin City Council approved the *ETOD Policy Plan*, which provides a comprehensive policy framework to guide future development around the Project's stations (City of Austin 2023b). The plan lays out the path to mitigate displacement pressures and ensure that historically marginalized communities benefit from transit connectivity while maintaining economic opportunities. The emerging land

development regulations associated with the *ETOD Policy Plan* are described in **DEIS Appendix E-4, Socioeconomics Technical Report**.

In May 2024, the Austin City Council adopted an ETOD Overlay applicable to approximately 850 acres of multifamily and commercially zoned properties. The ETOD Overlay restricts new non-transit-supportive uses and creates a density bonus program that permits more height and provides flexible zoning options in exchange for affordable housing or transit-supportive infrastructure. The density bonus program requires replacement of existing affordable multifamily units and priority businesses. These plans and policies would encourage high-density and affordable housing, which over the long-term is intended to reduce the cost of housing in Austin while sustainably supporting the robust population and employment growth projected for the region.

ATP's acquisition of property and direct displacement of businesses and residents for Austin Light Rail Phase 1 would predominantly occur in EJ communities because the route was planned to address the needs of the transit-dependent populations residing in the underserved communities along the alignment. Potential future displacements due to accelerated rates of gentrification would also predominantly occur in EJ communities because most of the proposed stations would be located in or near EJ areas. EJ populations would suffer the negative effects of relocations to a greater degree than non-EJ populations because the supply of suitable neighborhoods and affordable property is more limited for those with less financial means. For these reasons, the Project has the potential to result is disproportionately high and adverse effects on EJ populations. The potential for the Project's effects to be disproportionately high and adverse on EJ populations, however, is reduced by the anti-displacement measures currently in place in Austin.

7.2 No Potential for Disproportionately High and Adverse Effects

ATP found no potential for disproportionately high and adverse effects in most environmental categories. The sections below describe how the effects would occur in EJ and non-EJ areas to a similar degree and effects would not be more severe for, or suffered to a greater extent by, EJ populations when compared to non-EJ populations.

7.2.1 Neighborhoods and Community Resources

The Project would not result in disproportionately high and adverse effects on neighborhood conditions or community resources in EJ communities. The scale of business and residential displacements that would occur in different neighborhoods along the Project alignment would not be large enough to alter the racial-ethnic composition of a neighborhood and would not affect neighborhood cohesion. Roadway modifications and access changes would affect EJ and non-EJ areas to a similar degree. The Project has been designed to integrate the light rail system into the roadway, bicycle lane, and sidewalk network in such a way that all modes would be accommodated safely and with optimal flow. Substantial changes to vehicle access would not occur, and the bicycle and pedestrian network would be improved. The one community facility that would be replaced, the Waller Creek Boathouse, is not located in an EJ area or used predominantly by EJ populations.

7.2.2 Visual Quality

The Project would not result in disproportionately high and adverse visual effects on EJ populations. Most of the visible Project elements would be compatible with the urban environment in which they would be located. The component of the Project that would result in an adverse visual effect—extension of the Lady Bird Lake Bridge under that Design Option—is not located in an EJ area. The OMF would replace light industrial buildings of similar height and bulk and is anticipated to have a neutral visual effect on nearby residents.

7.2.3 Noise and Vibration

The Project would not result in disproportionately high and adverse noise or vibration effects on EJ populations. Light rail systems generate noise from warning bells, substations, and wheel/rail interaction when trains cross over from one track to another. Light rail vehicles do not produce engine noise.

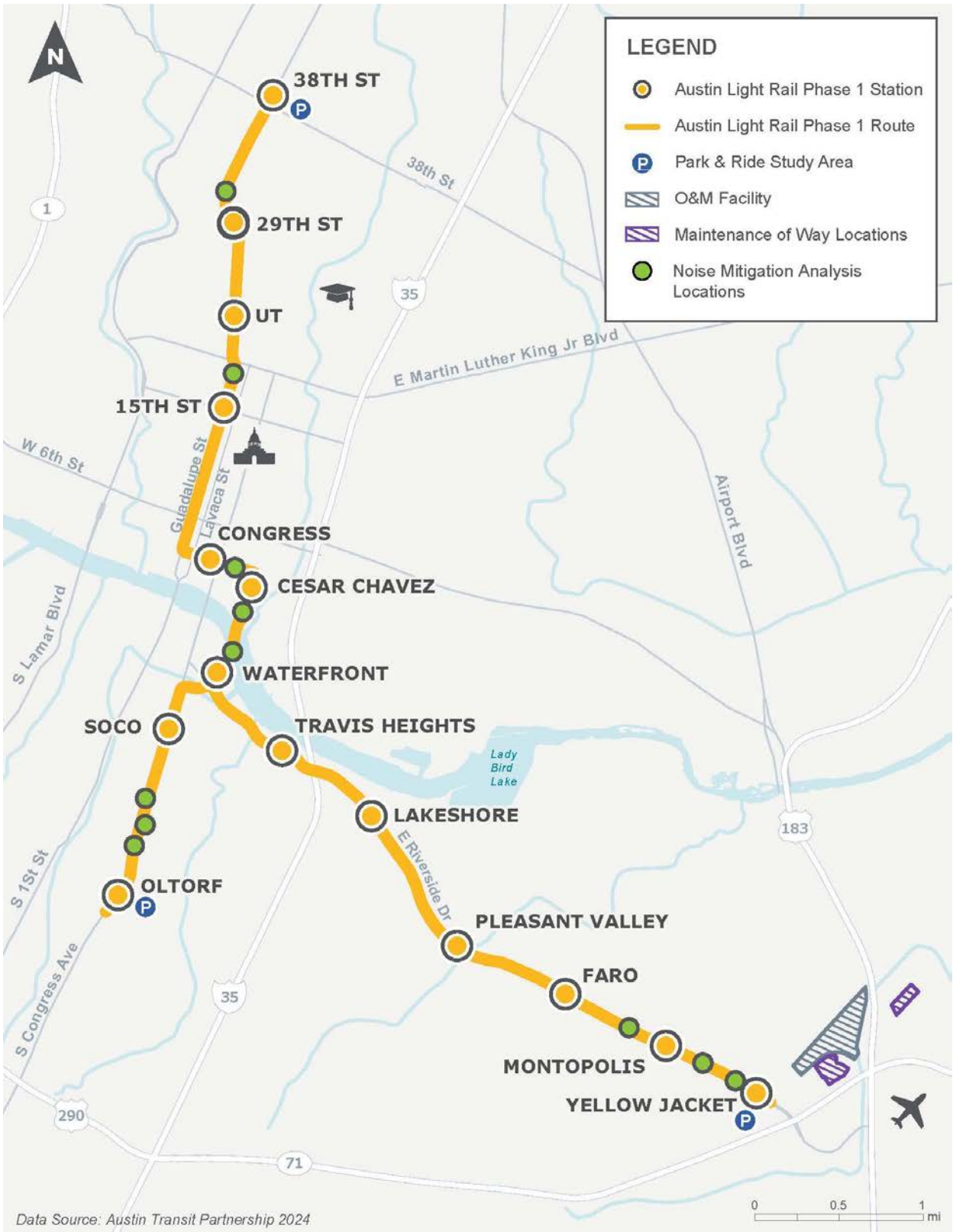
Most severe noise impacts are predicted to occur along 3rd Street between Guadalupe and Trinity Streets in Downtown Austin, which is not an EJ area. Moderate noise impacts are predicted to occur in EJ and non-EJ areas to a similar degree. FTA's methodology for identifying noise impacts is conservative, and the predicted increases in noise due to the Project would be barely perceptible or not noticeable in most locations. Except for two segments along the alignment, the increase in outdoor noise levels as a result of the Project would be 3 decibels or less at the nearest sensitive land use. A 3-decibel increase in noise in an outdoor setting is generally considered to be barely noticeable to the human ear.

Increases in noise levels due to the Project would be noticeable in the following locations where the ambient noise is relatively low (between 50 and 55 decibels):

- At multi-family residences on the south shore of Lady Bird Lake due to the proximity of light rail operating on the new bridge (non-EJ area); and
- Along South Congress Avenue between Mary Street and Oltorf Street due to the proximity of tracks and a nearby crossover (EJ area).

ATP is evaluating noise mitigation measures in accordance with FTA criteria for all locations (whether or not a noise increase would be noticeable). Mitigation may include relocating crossover tracks to less sensitive areas, installing special trackwork to minimize the wheel/rail interaction at crossovers, and installing noise barriers or building sound insulation if they would be effective. ATP would evaluate and apply effective noise mitigation measures uniformly in EJ and non-EJ areas. The mitigation analysis sites are shown in **Figure 13**. Potentially adverse vibration impacts are anticipated to be effectively mitigated through the design of special vibration dampening tracks.

Figure 13: Operational Noise Mitigation Analysis Sites



7.2.4 Electromagnetic Fields

The Project would not result in disproportionately high and adverse effects on EJ populations as a result of new electromagnetic fields. The potential for electromagnetic interference would occur throughout the Study Area and would be mitigated by ATP through coordination with property owners with sensitive equipment and installation of shielding if required.

7.2.5 Water Resources and Threatened and Endangered Species

The Project would not result in disproportionately high and adverse effects related to water resources or threatened and endangered species. The Project's effects on natural resources would occur primarily at the river crossings in non-EJ areas. Fewer than half of all heritage trees that would be protected or removed are located in EJ areas. A large percentage of trees slated for removal in EJ areas, including at the OMF site, are invasive species or non-native species.

7.2.6 Construction Effects

Project construction would not result in disproportionately high and adverse effects on EJ populations. Construction effects would occur throughout the Study Area and would not be predominantly borne by EJ populations or appreciably more intrusive in EJ communities compared to non-EJ communities. Construction effects would be temporary and would be phased to avoid prolonged exposure to nuisances such as dust, noise, and traffic detours and congestion. ATP would develop a comprehensive Construction Management Plan and construction specifications to address the planned timing of construction and the mitigation measures and best management practices to minimize effects to the greatest extent practical. Construction plans and specifications would require that the same high standards of mitigation and management be applied across all affected communities.

ATP has formed a multi-agency partnership with the region's transportation agencies to prepare for the transportation and public infrastructure construction that would occur over the next 10 years. The Construction Partnership Program would coordinate construction plans, streamline communications, and keep the traveling public informed and up-to-date on construction plans and detour routes.

8 Further Evaluation of Mitigation Measures

ATP would mitigate potential disproportionately high and adverse effects on EJ populations through continued support of the CAC's anti-displacement objectives and the implementation of Business Assistance and Workforce Development programs. ATP is working with regional partners on developing infrastructure and mobility career pathways to provide EJ populations with access to jobs and career growth opportunities on the Project and beyond. The OMF would create high-skilled, living wage jobs for more than 200 people in Austin. A local hiring program would be implemented to recruit, employ, and retain residents and workers along Austin Light Rail Phase 1. The program would also address upskilling construction trades and building the workforce in the construction industry.

ATP's Business Assistance and Workforce Development Plan is under development and will be informed by direct outreach and collaboration to identify the needs of the businesses adjacent to construction sites across Austin Light Rail Phase 1, including in EJ areas. The purpose of the outreach will be to provide businesses with Project information, to identify measures to address the challenges anticipated during construction, and to develop business assistance program elements that are responsive to local needs.

In May 2023, the Project Connect CAC presented light rail implementation recommendations, which ATP is considering as design advances. ATP will continue to engage with the surrounding community. Of the CAC recommendations, the following measures are reflected in the Project design or identified as proposed mitigation:

- Where warranted, commit to environmental monitoring and sharing the data with the CAC and the public;
- Minimize impacts on adjacent residential uses;
- If there is to be any fuel storage, ensure that there is no underground fuel storage;
- Ensure that there is proper on-site stormwater mitigation;
- Use green building techniques and advanced environmental standards;
- Use a landscape buffer and setbacks from residential uses;
- Use shielded and directional light fixtures;
- Ensure that there is minimized idling of non-light-rail vehicles on the site;
- Explore the potential for education and workforce partnerships with local school districts and community colleges to create work opportunities for local residents during the construction and operation phases; and
- Proactively work to ensure the participation of Disadvantaged Business Enterprises in the Project, with an aim to support businesses of all types.

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Attachment A. Demographics Table and Figure

Table A-1 includes the demographic characteristics for the Study Area and each census block group. Figure A-1 shows the Map Identification (ID) corresponding to each census block group.

Table A-1: Demographic Characteristics by Block Group within the Study Area[1]

Map Identification (ID)	Geographic Area (Census Tract; Block Group)	Total Population	Median Household Income	Individuals in Poverty (%)	Limited English Proficiency (%)	Hispanic or Latino Origin (%)	Minority by Identified Race (%)	Total Minority (%)
Study Area	Study Area	130,922	$82,771 [2]	22.6	7.8	31.2	18.0	49.2
--	Travis County	1,289,054	$92,731	11.3	10.3	33.3	19.0	52.3
--	State of Texas	29,243,342	$73,035	13.9	13.0	39.9	20.0	59.9
1	CT 2.03; BG 1	607	$106,667	20.9	2.8	12.2	27.2	39.4
2	CT 2.03; BG 2	2413	$78,375	21.5	2.8	15.9	24.2	40.1
3	CT 2.04; BG 1	1049	$67,011	24.6	6.7	20.8	11.4	32.2
4	CT 2.04; BG 2	906	$158,889	2.4	1.2	15.3	5.2	20.5
5	CT 2.04; BG 3	638	-	7.1	1.9	10.8	16.5	27.3
6	**CT 3.02; BG 3**	1403	-	25.0	1.6	54.0	6.1	**60.1**
7	**CT 3.02; BG 4**	1137	**$59,191**	5.9	0.0	10.2	11.1	21.3
8	**CT 3.02; BG 5**	1150	**$45,433**	30.5	11.7	21.5	29.7	**51.2**
95	CT 3.05; BG 1	1302	$79,825	5.1	0.0	7.0	9.9	16.9
9	**CT 3.05; BG 2**	904	**$53,387**	12.1	0.0	12.3	9.6	21.9
10	**CT 4.01; BG 3**	1070	**$30,000**	46.1	2.9	26.9	16.4	43.3
11	CT 5; BG 1	1060	$66,026	23.0	1.3	3.5	12.2	15.7
12	CT 5; BG 2	1361	$68,596	31.3	5.5	16.2	5.8	22.0
13	CT 5; BG 3	935	-	61.0	5.8	18.1	16.7	34.8
14	CT 5; BG 4	575	$105,250	10.1	3.5	3.5	6.3	9.7
15	**CT 6.01; BG 1**	1163	**$15,962**	**74.1**	6.9	16.7	36.5	**53.2**

Map Identification (ID)	Geographic Area (Census Tract; Block Group)	Total Population	Median Household Income	Individuals in Poverty (%)	Limited English Proficiency (%)	Hispanic or Latino Origin (%)	Minority by Identified Race (%)	Total Minority (%)
16	**CT 6.01; BG 2**	8942	-	100.0	2.5	26.0	33.3	**59.3**
17	CT 6.05; BG 1	1085	-	69.5	6.8	31.4	14.9	46.4
18	CT 6.05; BG 2	833	-	71.2	1.9	12.7	21.6	34.3
19	**CT 6.05; BG 3**	861	**$5,845**	78.8	5.6	27.3	28.1	**55.4**
20	**CT 6.06; BG 1**	196	**$5,404**	65.4	0.0	25.0	6.6	31.6
21	**CT 6.06: BG 2**	1192	**$11.033**	76.8	10.0	34.6	12.2	46.8
22	**CT 6.06: BG 3**	1329	**$7.368**	93.9	0.0	17.5	45.2	**62.8**
23	CT 6.06: BG 4	1836	-	67.6	7.1	15.5	42.3	**57.8**
24	CT 6.07: BG 1	801	-	38.0	0.7	14.2	16.5	30.7
25	**CT 6.07: BG 2**	1325	**$11.458**	77.5	1.6	25.4	34.1	**59.5**
26	**CT 6.07: BG 3**	912	-	85.9	0.4	20.9	44.4	**65.4**
27	**CT 6.08; BG 1**	1958	-	83.7	1.0	30.4	41.1	**71.5**
28	**CT 6.08; BG 2**	1669	-	69.5	5.4	21.6	41.8	**63.3 (11)**
29	CT 7; BG 1	1321	$72,321	31.9	0.2	19.1	20.1	39.2
30	CT 9.01; BG 2	1652	$107,604	9.0	1.3	22.6	26.7	49.3
31	CT 9.02; BG 4	1700	$86,310	16.5	0.0	6.1	20.9	27.0
32	CT 10; BG 1	765	-	0.8	1.4	22.0	6.5	28.5
33	**CT 10; BG 4**	482	-	9.3	7.8	47.9	4.4	**52.3**
34	**CT 10; BG 5**	486	**$29,643**	11.1	23.9	38.5	19.1	**57.6**
35	CT 11.01; BG 1	912	-	57.7	9.2	23.6	26.2	49.8
36	CT 11.01; BG 2	843	$105,134	5.5	0.0	40.1	8.7	48.8
37	CT 11.02: BG 1	2262	$166.836	4.3	1.5	1.8	15.6	17.5
38	CT 11.02; BG 2	417	-	23.0	12.5	12.5	0.0	12.5

Map Identification (ID)	Geographic Area (Census Tract; Block Group)	Total Population	Median Household Income	Individuals in Poverty (%)	Limited English Proficiency (%)	Hispanic or Latino Origin (%)	Minority by Identified Race (%)	Total Minority (%)
39	CT 11.02; BG 3	892	$190,709	0.0	0.0	0.0	4.7	4.7
40	CT 11.03; BG 1	2230	$188,500	10.4	3.8	26.1	12.6	38.7
41	CT 11.03; BG 2	1292	-	4.7	0.0	13.5	7.8	21.4
42	CT 12; BG 1	746	-	0.0	0.0	17.2	0.0	17.2
43	CT 12; BG 2	671	$76,800	3.7	0.0	5.2	1.8	7.0
44	CT 12: BG 4	3799	$149.902	3.4	0.0	8.6	17.2	25.7
96	CT 12: BG 5	556	$164.205	4.9	0.0	3.8	9.7	13.5
45	CT 13.07: BG 2	838	$90.530	1.8	3.6	43.2	2.9	46.1
97	CT 13.07: BG 3	2826	$68.714	**35.0**	2.2	22.9	11.5	34.4
46	CT 13.08: BG 2	516	$118.750	6.2	4.4	29.7	11.8	41.5
47	**CT 13.08: BG 3**	1059	$96.042	7.2	2.2	48.8	10.1	**58.9**
48	CT 13.09; BG 1	1413	$139,219	0.0	1.6	20.6	2.9	23.5
98	CT 13.10; BG 1	1474	$151,125	0.3	0.0	17.9	8.8	26.7
49	CT 13.11; BG 1	1379	$106,458	7.2	0.0	14.9	19.4	34.4
50	CT 13.12; BG 1	1535	$77,458	1.1	0.0	11.7	34.3	46.0
51	CT 13.12; BG 2	1645	$68,609	7.1	0.0	27.4	12.2	39.5
52	CT 13.12; BG 3	1552	$119,620	2.3	0.0	26.7	3.5	30.2
53	CT 14.01; BG 1	1030	$136,250	4.9	0.0	8.5	17.3	25.8
54	CT 14.01; BG 2	607	$70,000	18.6	0.0	2.8	7.2	10.0
55	CT 14.01; BG 3	960	$78,456	7.5	1.4	15.9	14.5	30.4
56	CT14.02; BG 1	650	-	1.8	0.0	11.8	19.8	31.7
57	CT 14.02: BG 2	664	$119.764	0.0	3.8	8.1	6.5	14.6
58	**CT 14.02; BG 3**	886	$65,941	8.1	3.1	31.4	20.4	**51.8**

Map Identification (ID)	Geographic Area (Census Tract; Block Group)	Total Population	Median Household Income	Individuals in Poverty (%)	Limited English Proficiency (%)	Hispanic or Latino Origin (%)	Minority by Identified Race (%)	Total Minority (%)
59	**CT 14.03; BG 1**	724	**$58,889**	16.4	12.3	28.6	8.0	36.6
60	CT 14.03; BG 2	753	$140,403	0.5	4.6	21.6	12.7	34.4
61	CT 16.03; BG 1	676	$215,086	3.4	1.3	0.0	0.7	0.7
62	CT 16.03; BG 3	399	$202,969	2.8	0.0	0.0	0.0	0.0
63	CT 16.03; BG 4	1074	$175,982	5.1	0.0	24.4	0.0	24.4
64	CT 16.05: BG 3	716	$130,455	0.0	0.0	0.0	11.7	11.7
65	CT 23.04: BG 1	1160	$116,964	1.5	0.0	26.2	12.4	38.6
66	**CT 23.04: BG 2**	807	$104,639	0.0	0.0	31.7	24.4	**56.1**
67	CT 23.04: BG 3	1883	$67,321	6.4	10.7	32.9	7.6	40.6
99	**CT 23.10: BG 2**	2360	$68,090	5.4	29.8	82.1	4.5	**86.6**
100	**CT 23.13: BG 1**	2023	**$52,500**	12.2	12.9	50.8	16.4	**67.2**
101	**CT 23.13; BG 2**	1707	**$46,691**	40.8	18.8	39.3	30.8	**70.1**
68	**CT 23.14; BG 1**	245	-	31.0	19.6	19.6	32.2	**51.8**
69	**CT 23.14; BG 2**	876	**$54,681**	1.8	31.9	64.0	5.7	**69.7**
70	**CT 23.14; BG 3**	1949	**$51,582**	10.5	8.0	65.7	18.2	**83.8**
71	**CT 23.14; BG 4**	1894	$69,662	33.9	22.3	54.6	10.9	**65.5**
72	CT 23.14; BG 5	563	$133,839	8.2	4.3	18.3	26.3	44.6
73	**CT 23.15; BG 1**	954	**$57,132**	6.1	12.5	30.9	31.2	**62.2**
74	**CT 23.15; BG 2**	1668	**$41,707**	26.5	46.7	71.0	12.8	**83.8**
75	**CT 23.16; BG 1**	1773	**$44,716**	29.0	12.6	59.3	19.9	**79.2**
76	**CT 23.16; BG 2**	1328	**$37,784**	24.2	21.2	32.6	32.6	**65.2**
77	**CT 23.16: BG 3**	1462	$63,537	12.7	20.2	54.0	20.0	**74.0**
78	**CT 23.20; BG 1**	3987	$78,093	16.5	17.1	53.7	10.1	**63.8**

Map Identification (ID)	Geographic Area (Census Tract; Block Group)	Total Population	Median Household Income	Individuals in Poverty (%)	Limited English Proficiency (%)	Hispanic or Latino Origin (%)	Minority by Identified Race (%)	Total Minority (%)
79	**CT 23.21; BG 1**	814	**$19,281**	42.9	39.4	63.0	10.2	**73.2**
102	**CT 23.21; BG 2**	454	**$51,354**	16.5	0.0	39.3	2.0	**41.3**
80	**CT 23.21; BG 3**	2569	$85,965	25.6	46.0	83.5	3.9	**87.5**
81	**CT 23.23; BG 1**	1435	$35,955	34.4	34.3	34.2	17.1	**51.3**
82	**CT 23.23; BG 2**	1312	$122,321	0.0	1.8	37.3	14.9	**52.1**
83	**CT 23.23: BG 3**	1822	**$23.977**	54.0	4.9	31.8	24.8	**56.6**
84	**CT 23.24: BG 1**	782	-	7.5	22.1	24.8	44.2	**69.1**
85	CT 23.24: BG 2	0	N/A	N/A	N/A	N/A	N/A	N/A
86	**CT 23.24: BG 3**	465	-	65.6	51.0	9.9	51.0	**60.9**
87	**CT 23.25: BG 1**	464	**$57.821**	**34.3**	0.0	14.7	3.4	18.1
88	**CT 23.25: BG 2**	220	-	50.9	14.1	90.9	0.0	**90.9**
89	**CT 23.25; BG 3**	2049	$73,036	34.7	10.7	75.3	8.7	**84.0**
90	CT 23.25; BG 4	1352	$66,085	21.5	31.8	82.2	7.0	**89.2**
91	**CT 23.26; BG 1**	903	$39,444	30.2	6.4	33.8	35.3	**69.1**
92	**CT 23.27; BG 2**	4332	**$26,087**	48.4	7.0	53.9	20.9	**74.8**
93	CT 23.27; BG 3	0	N/A	N/A	N/A	N/A	N/A	N/A
94	**CT 24.48; BG 1**	296	**$21,500**	0.0	9.8	74.0	0.0	**74.0**
103	CT 9800; BG 1	0	N/A	N/A	N/A	N/A	N/A	N/A

Source: U.S. Census Bureau 2023b.
N/A = not applicable
[1] Bolded text indicates that an EJ community is present within the census block group.
[2] The median household income for the Study Area is the average of the median household income for the census block groups composing the Study Area.

Figure A-1: Census Geographies in the Study Area