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Appendix A: Socioeconomic Analysis



To: Carson City Safe Routes to Schools (SRTS)
From: Cole Peiffer, Sierra Rodriguez-Torres, Alta Planning + Design
Date: May 9, 2025
Re: Carson SRTS Action Plan - Socio-Economic Analysis Memo

Introduction

The Carson Safe Routes to School Action Plan (Action Plan) presents an opportunity to focus transportation safety investments in areas with the greatest safety needs while also targeting areas with high proportions of disadvantaged populations such as people with low-incomes or those without a vehicle. Alta Planning + Design (Alta) conducted a targeted analysis of socio-economic data to quantify the levels of disparity between disadvantaged areas and the larger Carson City area in order to best inform the development of recommendations. This memo outlines the analysis approach, summarizes the data sources, and highlights key findings across a selection of individual data metrics.

Analysis Approach

To best position projects from this plan to be competitive within current federal funding guidelines, Alta leveraged the USDOT Areas of Persistent Poverty¹ (USDOT APP) dataset. This dataset was developed by the USDOT to identify areas that have historically been underinvested in and include a large proportion of disadvantaged residents. By focusing on these areas, the Action Plan will help target investments in active transportation in areas where they are needed most, helping students who are more likely to rely on walking and biking due to limited transportation options.

Using this dataset, Alta identified a sub-set of four census tracts within the Carson City area as 'Disadvantaged Areas', which are highlighted in Table 1 and Figure 1. Alta then compared the Disadvantaged Areas with the greater Carson City area using individual datasets from the Census Bureau and Center for Disease Control (CDC), shown in Table 2.

Table 1. Disadvantaged Census Tracts in Carson City (Per USDOT APP)

Disadvantaged Census Tracts (Tract Number)	
10.01	6.01
4.00	6.02

¹ [Persistent Poverty in Counties and Census Tracts \(May 9, 2023\)](#)

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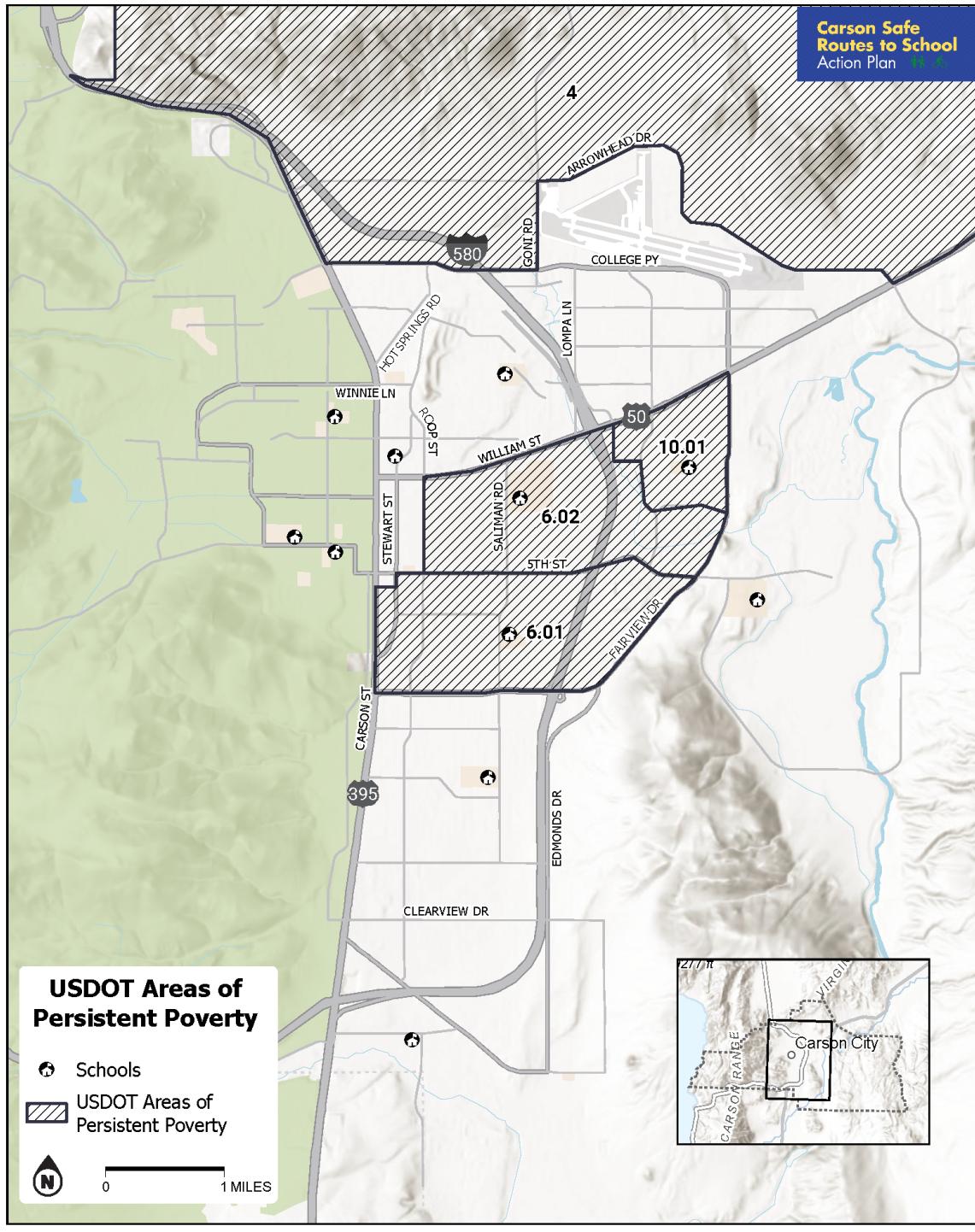


Figure 1. USDOT Areas of Persistent Poverty (Disadvantaged Areas) in Carson City, NV (Census Tracts)



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Table 2. Data Sources for Analysis

Data Source	Name of Data	Year	Description
Census Bureau	Median Household Income	2018-2023	ACS data based on the median household income.
	Commute Mode	2018-2023	ACS data based on individuals travel mode to work.
	Zero Vehicle Households	2018-2023	ACS data based on how many vehicles are registered to households.
	Age and Population	2018-2023	ACS data based on the age and population of census tracts.
Center for Disease Control	Physical Inactivity	2024	CDC data estimated the percentage of individuals that do not participate in physical activity during their leisure time. Among adults and older adults, physical activity can lower the risk of early death, coronary heart disease, stroke, high blood pressure, type 2 diabetes, breast and colon cancer, falls, and depression. ²
	Mobility Disability	2024	CDC data based on seven disability measures. Assessing disability helps identify opportunities to remove barriers and improve inclusion, ensuring people with disabilities can fully participate in daily life, access timely services, and contribute to their communities. ³

² U.S. Department of Health and Human Services. Physical Activity Guidelines for Americans, 2nd edition. U.S. Department of Health and Human Services; 2018. https://health.gov/sites/default/files/2019-09/Physical_Activity_Guidelines_2nd_edition.pdf

³ National Center for Health Statistics. Chapter 9: Disability and Health. Healthy People 2020 Midcourse Review; 2016. <https://www.cdc.gov/nchs/data/hpdata2020/HP2020MCR-C09-DH.pdf>

Analysis Findings

This section summarizes the findings of each socio-economic data metric to highlight the level of disparity between Disadvantaged Areas and the entire Carson City area. These metrics help to understand the levels of disparity in different areas of Carson across various socio-economic factors including economic, transportation, and health. The key findings from each data metric are summarized below in a table and displayed in a corresponding map.

Median Household Income

Median Household Income is a standard metric for assessing the general economic state of residents within a specific geography and between geographies. Based on data from the US Census, the 2018-2023 median household income varies significantly across the Carson City area (Figure 2).

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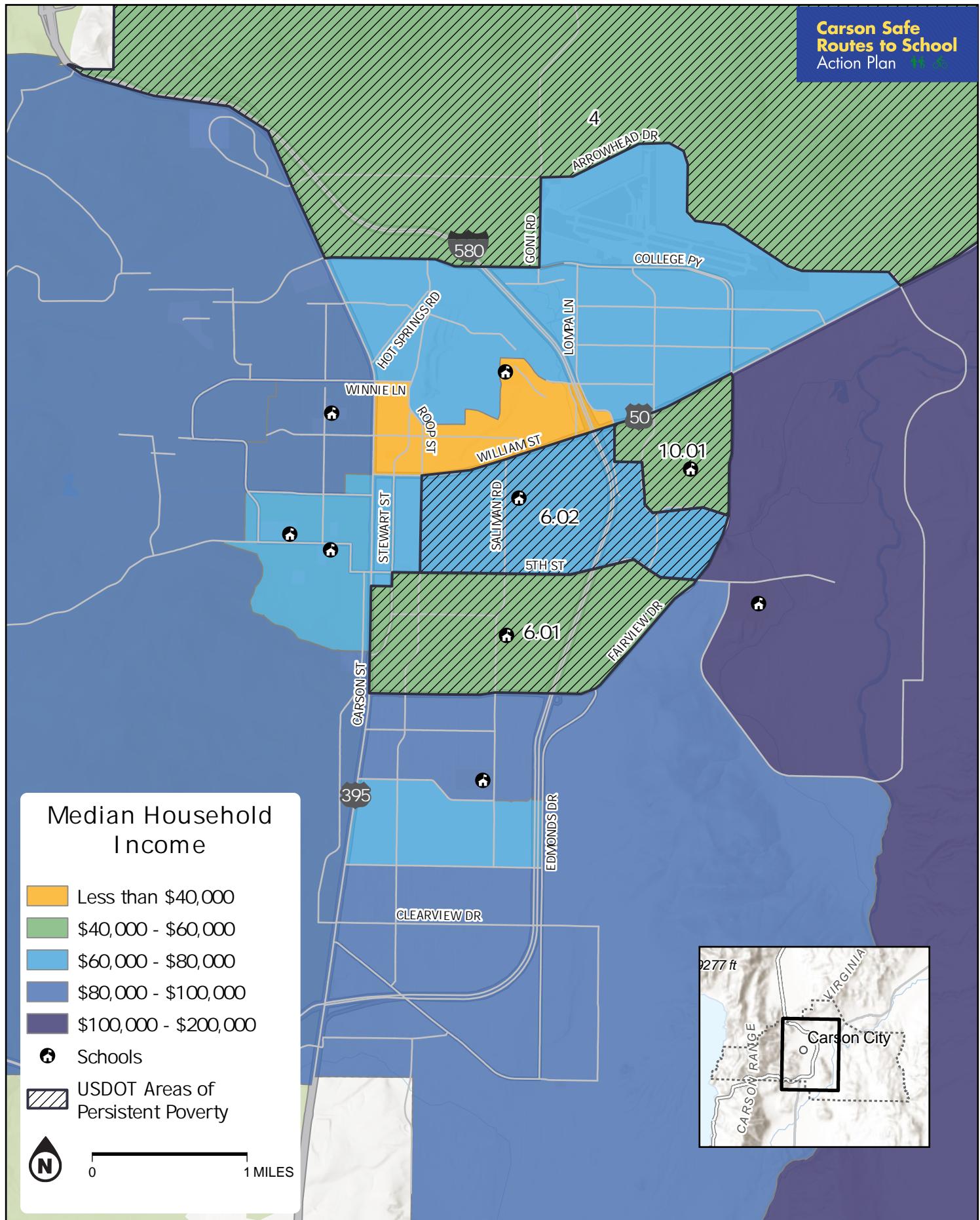


Figure 2. Median Household Income in Carson City, NV (Census Tracts)

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As shown in Table 3, each of the four disadvantaged census tracts have median household incomes that fall below the Carson City average (\$71,809). The most significant difference in median household incomes is seen in census tract 10.01, which covers the area between Hwy 50, N Lompa Ln, Airport Rd, Butti Wy, and Fairview Dr. This census tract has a median household income of \$55,211, which is \$16,598 below the area average.

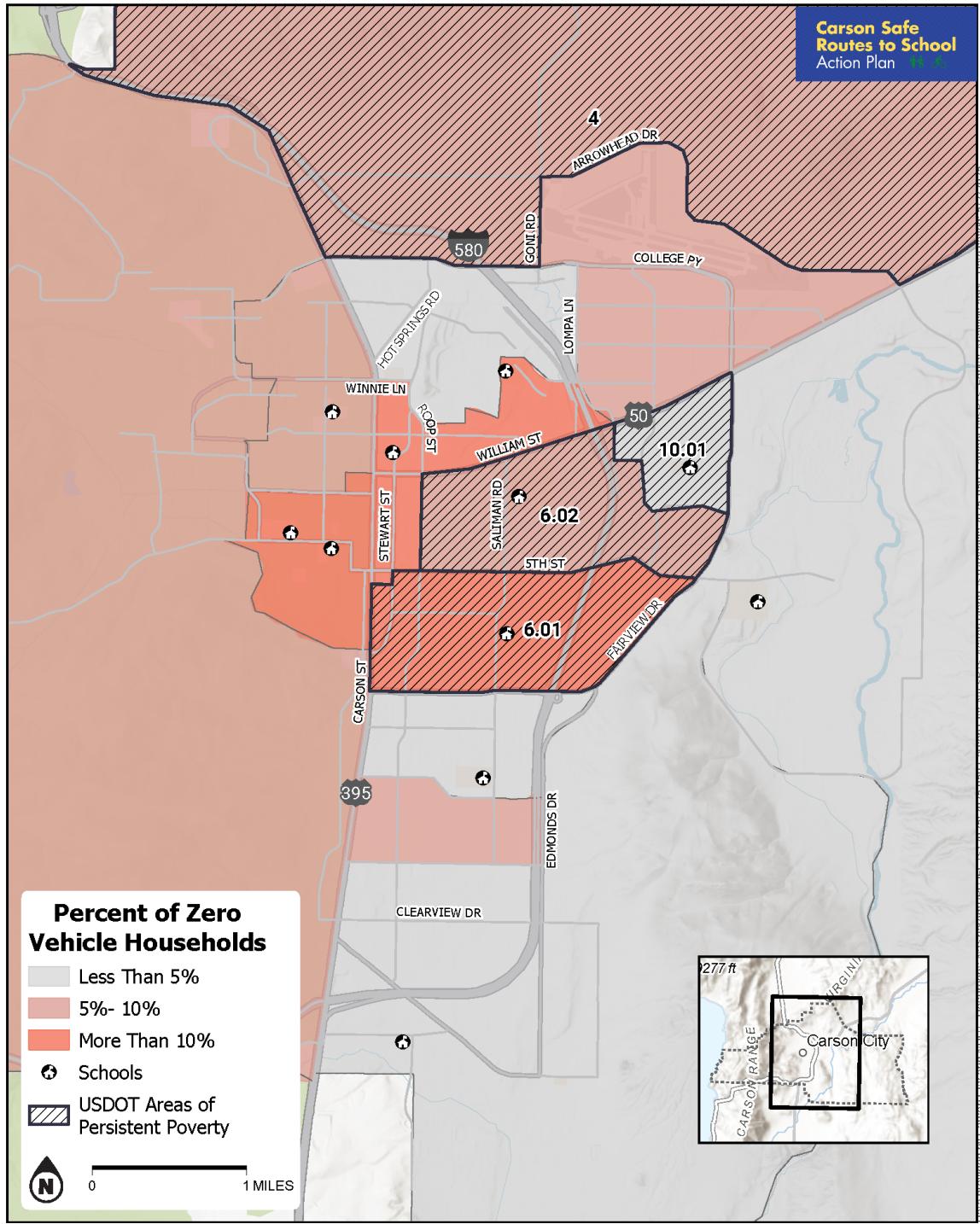
Table 3. Median Household Income Data for the Disadvantaged Census Tracts

Area	Median Household Income
Census Tract 10.01	\$55,211.00
Census Tract 4	\$56,578.00
Census Tract 6.01	\$59,870.00
Census Tract 6.02	\$69,954.00
Carson City	\$71,809.00

Zero Vehicle Households

Households which lack access to a vehicle (zero vehicle households) are dependent on active transportation, public transportation, and carpooling. Areas with a high proportion of zero vehicle households (Figure 3) have a greater reliance on active transportation and public transportation and therefore typically have a greater overall need for biking and walking improvements.

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Figure 3. Zero Vehicle Households in Carson City, NV (Census Tracts)

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As shown in Table 4, the Disadvantaged Areas generally align with the Carson City average of Zero Vehicle Households at 6.2%. However, census tract 6.01 bound by S Carson St, Fairview Dr, and E 5th St is nearly twice the area average with a total of 11% of households lacking access to a vehicle. Based on this, improvements for walking and biking in this area could have more significant benefits than those in areas with a lower level of zero vehicle households.

Table 4. Access to Vehicle Data

Area	Zero Vehicle Households (%)
Census Tract 10.01	4.7%
Census Tract 4	6.9%
Census Tract 6.01	11.0%
Census Tract 6.02	6.9%
Carson City	6.2%

Commute Mode to Work

Census tract 6.01 has the highest proportion of individuals who walk to work (5%), which is twice the area average rate (2%). This aligns with data from Table 4, which shows that census tract 6.01 has the highest percentage of households without access to a vehicle. Census tract 4 ranks second in walking commutes, as shown in Table 5, and has more than triple the area average for transit use. Census tract 6.02 stands out as having a carpooling rate that is 7% higher than the regional percentage. Additionally, across multiple tracts, a portion of individuals work from home and therefore do not participate in daily commuting. Overall, driving alone remains the dominant commute mode across the broader Carson City region.

Table 5. Commute Mode by Percentage

Area	Drove alone	Walk	Bike	Carpooled	Bus	Work from home
Census Tract 10.01	82%	0.3%	0.0%	16%	0%	1%
Census Tract 4	72%	3.0%	0.0%	11%	7%	7%
Census Tract 6.01	79%	5.0%	0.0%	4%	0%	13%
Census Tract 6.02	71%	0.0%	0.0%	21%	0%	5%
Carson City	73%	2.0%	0.2%	14%	2%	9%

Physical Inactivity

Regular physical activity can improve the health and quality of life of Americans of all ages, regardless of the presence of a chronic disease or disability.⁴ The second edition of the Physical Activity Guidelines for Americans states that adults should move more and sit less throughout the day. One way to get more physical activity is by choosing more active forms of transportation, such as walking or biking, which allows individuals to be active while getting where they need to go. As seen in Table 6 and displayed in Figure 4, Census tract 10.01 (area surrounding Empire Elementary School) has the highest percentage of individuals who are physically inactive with a third of all individuals lacking physical activity of a regular basis; this exceeds the Carson City average (24%) by nine percent. This census tract also has the highest percentage of individuals that commute to work by car and a low percentage of individuals that commute to work by an active transportation mode (walking/biking). Census tracts 4 and 6.02 also have a slightly higher percentage of individuals who are physically inactive than the regional average. Census tract 6.01 has the lowest percentage of individuals that are physically inactive, which is four percent lower than the regional average.

Table 6. Physical Activity Data

Area	Physical Inactivity (%)
Census Tract 10.01	33%
Census Tract 4	26%
Census Tract 6.01	20%
Census Tract 6.02	25%
Carson City	24%

⁴ U.S. Department of Health and Human Services. Physical Activity Guidelines for Americans, 2nd edition. U.S. Department of Health and Human Services; 2018. https://health.gov/sites/default/files/2019-09/Physical_Activity_Guidelines_2nd_edition.pdf

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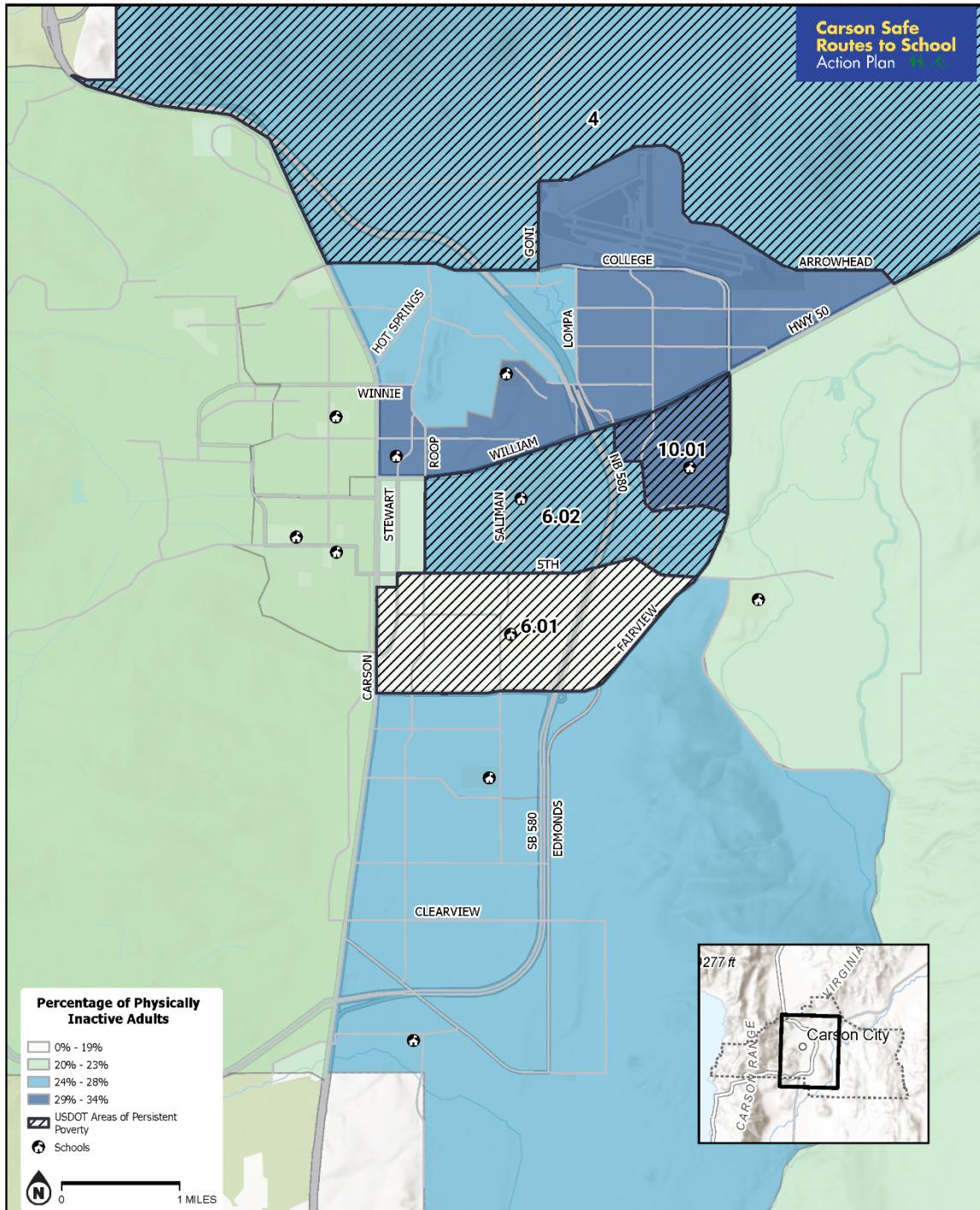


Figure 4. Physical Inactivity in Carson City, NV (Census Tracts)

Mobility Disability Among Adults

To be healthy, all people with or without disabilities must have opportunities to take part in meaningful daily activities that add to their growth, development, fulfillment, and community contribution. Assessing disability provides valuable insight into both opportunities and gaps in accessibility, helping to identify where improvements can be made. This includes ensuring that individuals with disabilities can fully engage in public health initiatives, receive timely services and interventions, navigate their environments without physical or systemic barriers, and participate fully in everyday life.⁵ As shown in Table 7 and displayed in Figure 5, census tract 10.01 and census tract 4 have the highest percentage of individuals with mobility disabilities at 18%. Census tract 6.01 has the lowest percentage of individuals with mobility disabilities, which is five percent lower than the area average.

Table 7. Mobility Disability Data Among Adults

Area	Mobility Disability (%)
Census Tract 10.01	18%
Census Tract 4	18%
Census Tract 6.01	11%
Census Tract 6.02	14%
Carson City	16%

⁵ National Center for Health Statistics. Chapter 9: Disability and Health. Healthy People 2020 Midcourse Review; 2016. <https://www.cdc.gov/nchs/data/hpdata2020/HP2020MCR-C09-DH.pdf>

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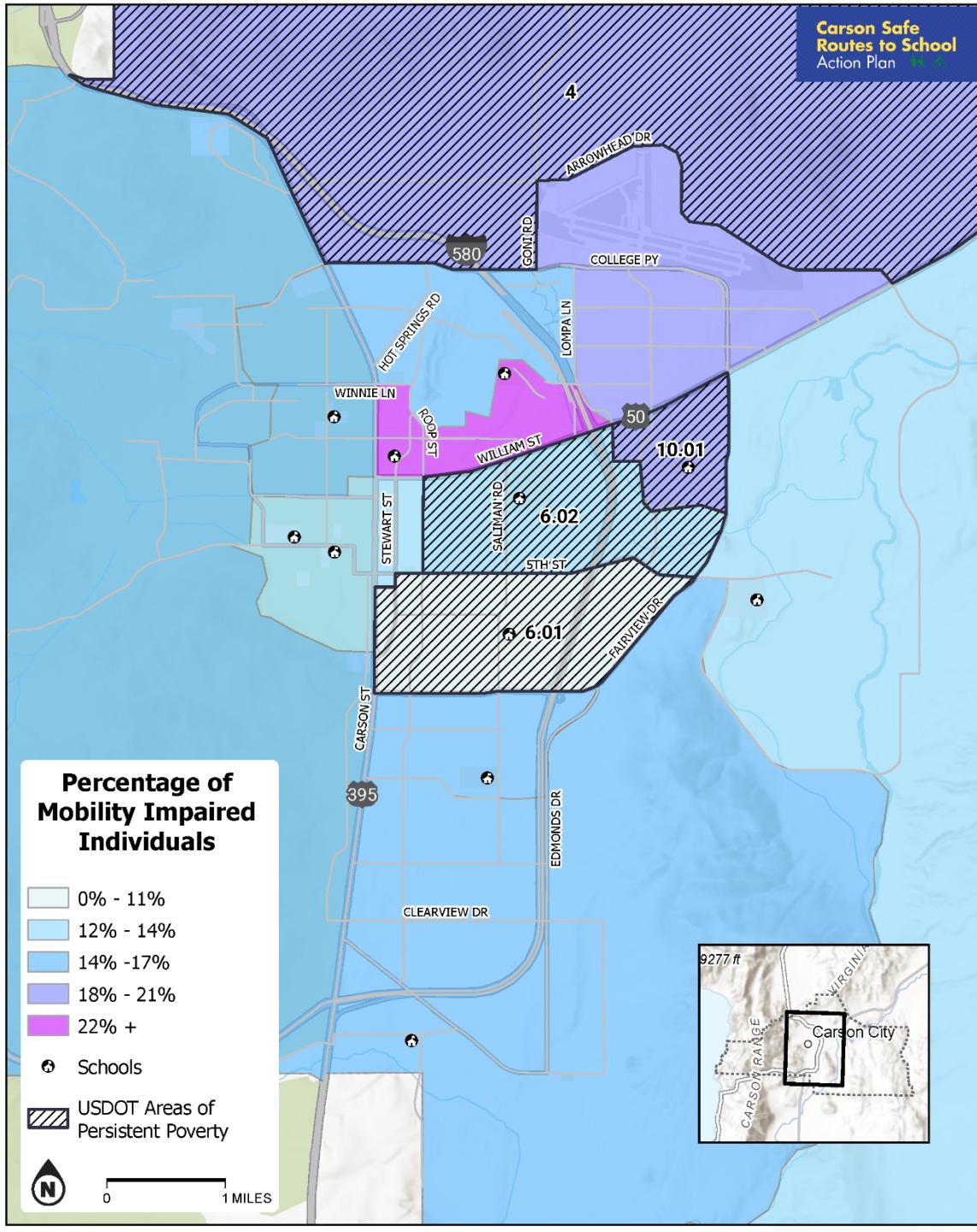


Figure 5. Mobility Impaired Individuals in Carson City, NV (Census Tracts)

Summary

The Disadvantaged Areas within Carson City have a significant level of disparity compared to Carson City as a whole. These areas generally have lower incomes and higher proportions of zero vehicle households which highlight the increased reliance on public transportation and active transportation in these areas. Furthermore, the active transportation can provide additional health benefits in disadvantaged areas, which include large proportions of physically inactive adults. Targeted active transportation investments in these areas are likely to have a larger benefit due to the increased level of reliance on modes other than a private vehicle.