

# Appendix G: RTP Environmental Justice Analysis

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## Introduction

The following appendix presents the results of RTC’s environmental justice (EJ) analysis conducted for the 2024 Regional Transportation Plan (RTP). The concept of environmental justice, derived from Title VI of the Civil Rights Act of 1964 and other civil rights statutes, was first put forward as a national policy goal by Presidential [Executive Order 12898](#), issued in 1994. It directs "each federal agency to make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." In response, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) have renewed their commitments to assure that environmental justice is carried out in the programs and strategies they fund, including the activities of metropolitan planning organizations.

Title VI issues and environmental justice are an integral part of RTC’s transportation planning and programming process. The commitment to Title VI has been, and continues to be, reflected in RTC’s work program, publications, communications, and public involvement efforts. As part of RTC’s work program in 2023, the agency updated the [Environmental Justice Demographics Profile for Clark County](#). The report provides a baseline demographic profile documenting population of concern for EJ analysis and defining population thresholds to be used in further EJ analysis. The Environmental Justice Demographics Profile for Clark County report was based on data from the US Census Bureau’s 2016-2020 American Community Survey 5-Year Estimates and 2020 Decennial Census. The report focuses on the primary EJ groups—people of color and residents with lower incomes—and also includes other Title VI populations, such as those with limited English proficiency, the elderly, and those with disabilities, which are all pertinent to this RTP environmental justice analysis.

To further integrate EJ considerations into RTC’s RTP, this environmental justice analysis looks at both the geographic proximity of projects to the subject populations, as well as the distribution of those projects by RTP goal. The analysis focuses on the RTP projects that are on the RTP regionally designated system, as these transportation strategies and projects focus on development of the regional transportation system. A list of these projects can be found in Chapter 6.

## Equity Focus Areas

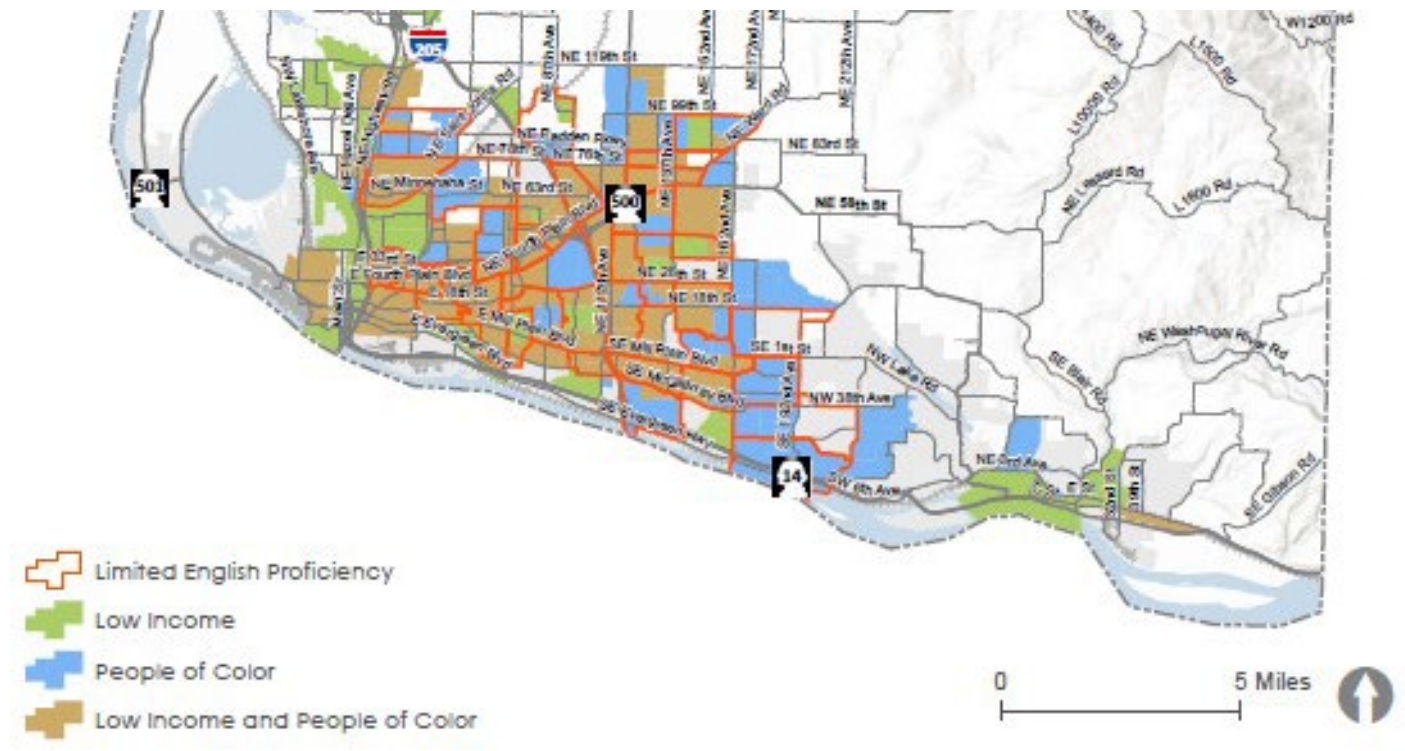
The RTP intertwines equity among its 4 goals and 29 objectives. RTC's goal is to apply a wholistic equity lens to its planning practices to address existing inequities and prevent the creation of new inequities. In support of this work, RTC's equity lens is based on the identification of Equity Focus Areas (EFA). These EFA are census block groups or tracts with higher than the Clark County average concentrations and double the density for the following populations: people of color (block group), people with low incomes (block group), and people with limited English proficiency (LEP) (tract). Most of these areas also include higher than regional average concentrations of other marginalized communities, including youth, older adults, and people living with disabilities. The threshold rates for each population are identified in the table below.

**Table 1: Equity Focus Areas Thresholds**

Community	Definition	Geographic Threshold	Data Source
<b>People of Color</b>	Persons who identify as Hispanic or Latino, Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian and Other Pacific Islander, or Some Other Race	The census block groups that are above the Clark County rate (27.1%) for people of color AND the census tract has twice (2x) the population density of the county (1.25 persons per acre)	2020 US Census
<b>People with Low Incomes</b>	Persons with incomes less than 200% of the Federal Poverty Level	The census block groups that are above the Clark County rate (22.9%) for people with low income AND the census tract has twice (2x) the population density of the county (1.19 persons per acre)	American Community Survey, 2016-2020
<b>People with limited English proficiency</b>	Persons 5 years and older who identify as unable "to speak English very well"	The census tracts that are above the Clark County rate (5.89%) for people with limited English proficiency (all languages combined) AND the census tract has twice (2x) the population density of the county average (1.12 person per acre)	American Community Survey, 2016-2020

Figure 1 illustrates the spatial distribution of people of color, people with lower income, and people with limited English proficiency in the Clark County region. The identified Equity Focus Areas contain about 58% of the region's total population, 70% of the region's people of color population, 72% of the region's people with lower incomes population, and 78% of the region's LEP population.

Figure 1: 2024 RTP Equity Focus Areas



## Regional Transportation Plan Investment

The RTP provides an overview of the metropolitan transportation planning process and is intended to be a plan to meet transportation needs over the next 20-plus years. A total of 387 regional projects have been identified for inclusion in the 6-Year RTP Project list (see Chapter 6) and the 20-Year RTP Project list (see Appendix N). Out of those projects, 188 were mapped on the 6- and 20-year lists. The rest were not mapped given that they were systemwide projects or programs.

Table 2 lists 188 regional projects by RTP goals. Ninety-six projects (51%) are located within or crossing through equity focus areas. This suggests that equitable investments are being planned for underrepresented populations.

**Table 2: Six and Twenty Year RTP Regional Projects Divided by RTP Goals**

RTP Goal	Safety & Security		Economic Vitality & Quality of Life		Accessibility & Mobility		Sustainability & Resiliency	
	Projects	Investments	Projects	Investments	Projects	Investments	Projects	Investments
<b>6-Year List</b>								
Equity Areas	3	\$2,996,000	1	\$985,000	12	\$132,538,400	5	\$137,518,419
% in Equity Areas	30%	9%	50%	10%	55%	58%	71%	95%
Nonequity Areas	7	\$29,323,540	1	\$8,545,761	10	\$95,364,500	2	\$6,682,414
<b>Total</b>	<b>10</b>	<b>\$32,319,540</b>	<b>2</b>	<b>\$9,530,761</b>	<b>22</b>	<b>\$227,902,900</b>	<b>7</b>	<b>\$144,200,833</b>
<b>20-Year List</b>								
Equity Areas	10	\$108,252,636	4	\$159,000,000	58	\$508,675,780	3	\$3,720,000
% in Equity Areas	71%	82%	57%	66%	50%	58%	30%	3%
Nonequity Areas	4	\$23,491,200	3	\$80,545,761	58	\$373,114,999	7	\$108,961,400
<b>Total</b>	<b>14</b>	<b>\$131,743,836</b>	<b>7</b>	<b>\$239,545,761</b>	<b>116</b>	<b>\$881,790,779</b>	<b>10</b>	<b>\$112,681,400</b>
<b>Combined List</b>								
Equity Areas	13	\$111,248,636	5	\$159,000,000	70	\$641,214,180	8	\$141,238,419
% in Equity Areas	54%	68%	56%	64%	51%	58%	40%	55%
Nonequity Areas	11	\$52,814,740	4	\$89,091,522	68	\$464,479,499	9	\$115,643,814
<b>Total</b>	<b>24</b>	<b>\$164,063,376</b>	<b>9</b>	<b>\$249,076,522</b>	<b>138</b>	<b>\$1,109,693,679</b>	<b>17</b>	<b>\$256,882,233</b>

Figure 2: 2024 RTP Equity Focus Areas with 6-year RTP Regional Projects

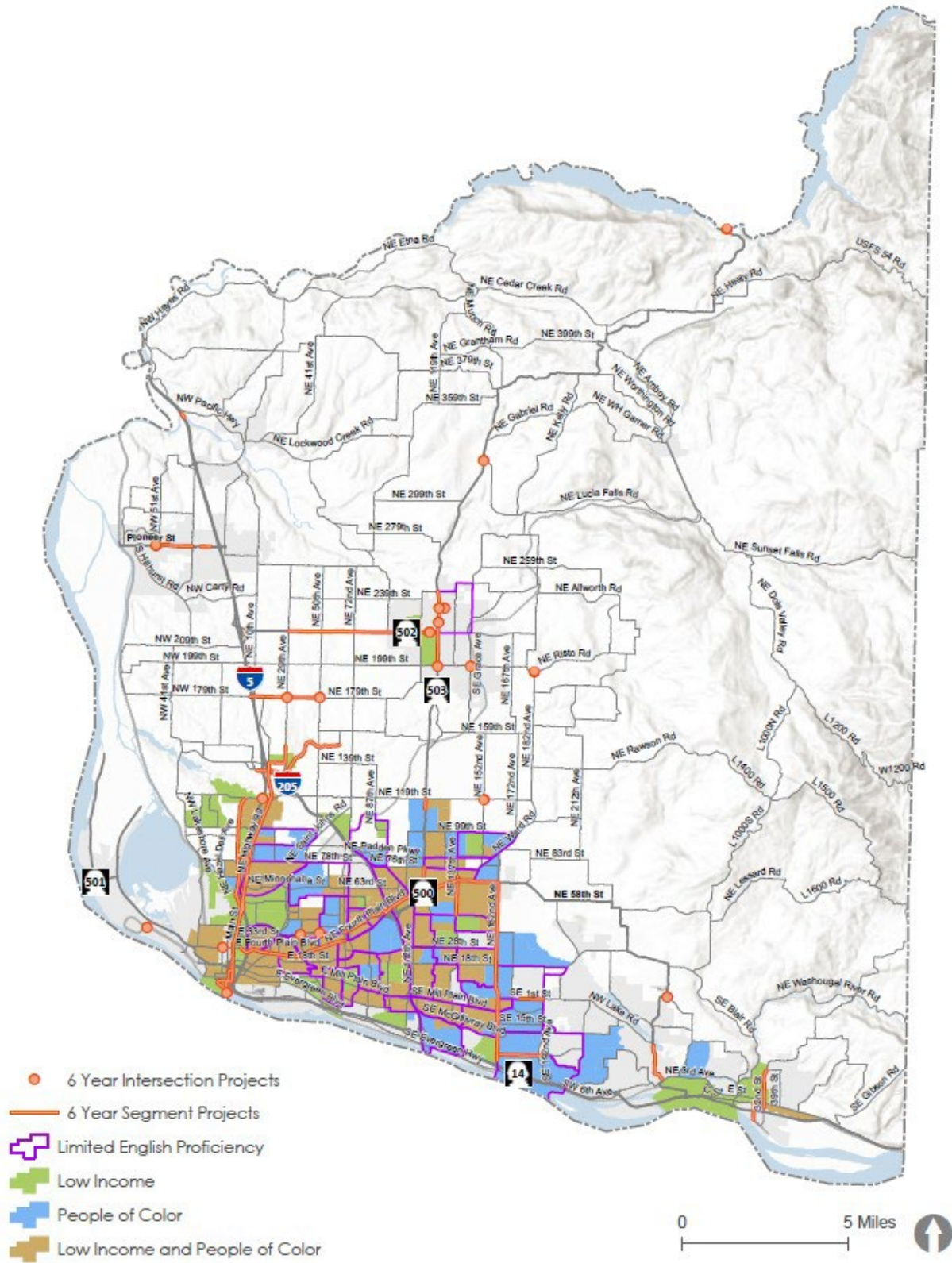
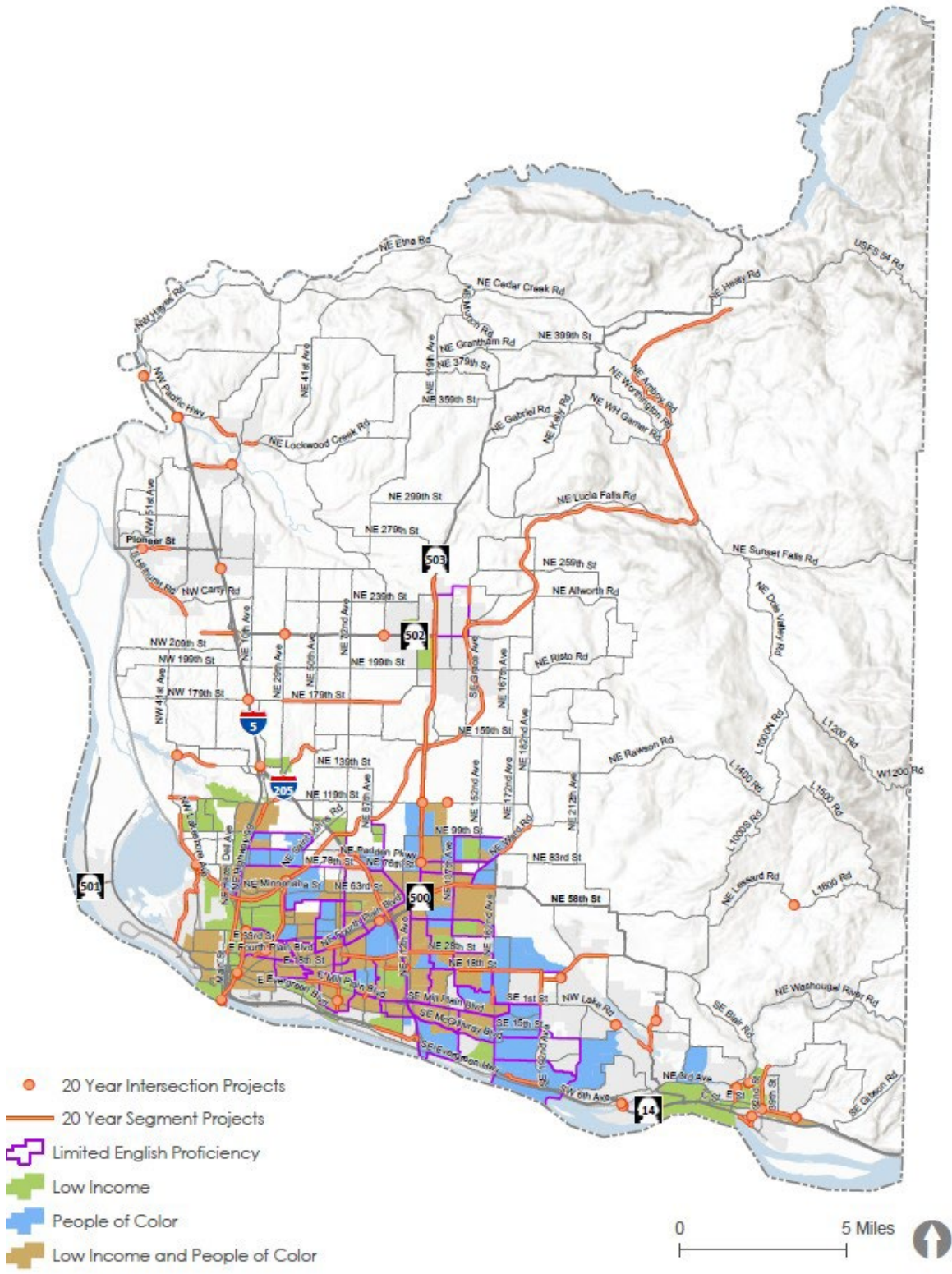


Figure 3: 2024 RTP Equity Focus Areas with 20-year RTP Regional Projects



## Regional Transportation Plan Outcomes

In evaluating environmental justice and equity as it relates to the RTP investment strategy, it is not sufficient to consider the location, timing, how it relates to the RTP goals, and financial cost of investments. While demonstrating proportionality in the geographic distribution of projects and cost of investment as an indication of equality of investment, equity is interested in the results and benefits of that investment in the equity zone areas of the Clark County region. A comparison between the outcomes of the RTP investment strategy compared to a 2045 No-Build scenario can provide insight into the equity of the benefits of the RTP investment strategy.

### Access to Jobs

Job accessibility provides a good measure for evaluating the benefits of the RTP investment strategy. While changes in travel time can measure how far and fast one can travel for work, school, shopping, medical appointments, and recreation, etc., travel time, in and of itself, does not provide a measure of the amount of opportunities available to meet household and individual needs within a certain travel time.

Most households tend to have a fixed travel time budget, meaning that there is only so much time each day that can be devoted to travel between daily activity locations. Most of each day's time is devoted to necessary and scheduled activities, such as work, school, shopping, appointments, etc. Job accessibility measures calculate the number of jobs within a specified travel time and travel mode for a particular area. Job accessibility measures provide a measure not only of the amount of job choice and opportunity within a set travel time but of opportunities to satisfy shopping, recreation, medical, and other needs.

Using the regional travel demand forecast model, the number of jobs that can be reached by each Transportation Analysis Zone (TAZ) during the A.M. peak travel time can be calculated for auto, shared ride, transit, and walk/bike travel modes. Using the population of each TAZ, a weighted average of job accessibility can be calculated for the region as a whole, for all equity focus areas, and for all nonequity areas.

The average job accessibility for the county increases with 2045 RTP investments for both transit and auto modes. The data in Table 3 sets a baseline for those who drive alone, share a ride, use transit, or use active transportation to complete their trips to work or nonwork locations. Based on this data, there are modest increases in sharing a ride, using transit, and using active transportation to complete both work and nonwork trips based on the model outputs for the 2045 Constrained scenario. There are also modest decreases in driving alone to work based on the model, although there is a slight increase in driving alone to nonwork locations.

Table 3: Trips by Mode (Equity Areas/Nonequity Areas) – Clark County, All Trips

	2020 Base		2045 No-Build		2045 Constrained	
	Trips	Share	Trips	Share	Trips	Share
<b>Drive Alone</b>	753,742	46.0%	1,093,602	46.7%	1,077,889	46.1%
Equity Areas	465,534	45.4%	525,093	45.4%	515,462	44.5%
Nonequity Areas	288,208	47.1%	568,509	48.0%	562,427	47.5%
<b>Shared Ride</b>	646,317	39.5%	934,464	39.9%	938,674	40.1%
Equity Areas	394,914	38.5%	447,375	38.7%	448,658	38.8%
Nonequity Areas	251,403	41.1%	487,089	41.2%	490,016	41.4%
<b>Transit</b>	21,377	1.3%	35,340	1.5%	44,200	1.9%
Equity Areas	16,332	1.6%	26,330	2.3%	32,943	2.8%
Nonequity Areas	5,045	0.8%	9,010	0.8%	11,257	1.0%
<b>Walk/Bike</b>	127,897	7.8%	166,202	7.1%	168,854	7.2%
Equity Areas	32,491	3.2%	105,458	9.1%	107,199	9.3%
Nonequity Areas	95,407	15.6%	60,743	5.1%	61,655	5.2%
<b>School Bus</b>	87,649	5.4%	111,041	4.7%	111,045	4.7%
Equity Areas	53,269	5.2%	53,116	4.6%	53,119	4.6%
Nonequity Areas	34,380	5.6%	57,924	4.9%	57,926	4.9%
<b>Total Person Trips</b>	1,636,982		2,340,649		2,340,662	
<b>Total Equity Area Trips</b>	1,024,890		1,157,373		1,157,380	
<b>Total Non-Equity Area Trips</b>	612,092		1,183,276		1,183,282	

Source: RTC Travel Model



### 30 Minutes by Auto Mode and 45 Minutes by Transit by Equity Area vs. Nonequity Area

The travel demand model sets a baseline for traveling to regional jobs either within 30 minutes by automobile or within 45 minutes by transit ride and compares results between equity and nonequity areas. It is important to note that the reason why the time frame for a transit ride is 15 minutes longer than a car ride is because studies have shown that people are more willing to use transit when transit rides are comparable to driving times.

Table 4 shows that equity areas see an increase in access to regional jobs both for driving an automobile and taking transit. Nonequity areas see a slight decrease in access to regional jobs when driving an automobile. Nonequity areas also a slight increase in access to regional jobs by transit, although it is not as high as equity areas. This is in part due to more high-frequency transit routes being implemented in existing equity areas.

**Table 4: Average Jobs Accessible for the Region, Equity Areas, Nonequity Areas during A.M. Peak for 2020 Base, 2045 No-Build, and 2045 Constrained**

	2020 Base		2045 No-Build		2045 Constrained	
	Jobs	Share	Jobs	Share	Jobs	Share
<b>Regional Jobs @ 30 min by Auto</b>	391,361	32.8%	411,254	27.3%	484,164	32.1%
Equity Areas	442,270	37.0%	498,663	33.1%	607,107	40.3%
Nonequity Areas	308,342	25.8%	325,291	21.6%	363,254	24.1%
<b>Regional Jobs @ 45 min by Transit</b>	35,698	3.0%	50,635	3.4%	54,942	3.6%
Equity Areas	51,478	4.3%	88,150	5.9%	96,300	6.4%
Nonequity Areas	9,964	0.8%	13,740	0.9%	14,269	0.9%

Source: RTC Travel Model

### Percent of Households Within 1/3 mile of a Transit or High-frequency Transit Facility: Equity Areas vs. Nonequity Areas

Based on the model, it is anticipated that equity areas will have more access to a both a transit and a high-frequency transit facility. It is anticipated that nonequity areas will see a slight decrease in being within 1/3 mile of a transit facility. However, nonequity areas see a slight increase in having a 1/3 of a mile access to a high-frequency transit service.

**Table 5: Average Transit Accessibility for Equity Areas and Nonequity Areas for 2020 Base, 2045 No-Build, and 2045 Constrained**

	<i>2020 Base</i>		<i>2045 No Build</i>		<i>2045 Constrained</i>	
	<b>Households</b>	<b>Share</b>	<b>Households</b>	<b>Share</b>	<b>Households</b>	<b>Share</b>
<b><i>Within 1/3 min of Transit</i></b>	98,193	52.5%	131,227	50.0%	131,318	50.0%
<i>Equity Areas</i>	78,960	68.0%	96,373	74.0%	96,646	74.2%
<i>Non-Equity Areas</i>	19,233	27.0%	34,854	26.3%	34,671	26.2%
<b><i>Within 1/3 min of High Frequency Transit</i></b>	19,700	10.5%	47,719	18.2%	48,982	18.7%
<i>Equity Areas</i>	18,407	15.9%	43,819	33.7%	45,085	34.6%
<i>Non-Equity Areas</i>	1,293	1.8%	3,900	2.9%	3,897	2.9%

Source: RTC Travel Model

## Summary

Examination of the RTP projects on each of the identified groups individually shows no net disproportionate impact and no clear pattern of denying benefits of transportation planning and programming.