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We've analyzed Visualize 2045 for how it may impact low-income and minority communities

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Now that Visualize 2045 has been approved, the TPB must examine if the plan would have any disproportionately high and adverse impact on low-income or minority populations. The TPB had previously identified areas in the region with higher than average concentrations of low income and minority populations and designated these as Equity Emphasis areas (EEAs). TPB staff conducted an analysis of Visualize 2045 to understand how the region's EEAs compared to the rest of the region on measures of mobility and accessibility. The conclusion was that there are no disproportionately high and adverse impacts on EEAs.

Let's get into the details to learn a little bit more about the region and how the planned transportation system might affect these areas compared to the rest of the region.

What is "Environmental Justice?"

First, a little background on Environmental Justice. In 1994, President Clinton issued Executive Order 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations – requiring 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.” As a recipient of federal funding, the TPB must comply with this order and evaluate its plans to identify the “benefits” and “burdens” of the plan and determine whether low-income or minority populations would be adversely affected.

Title VI is a provision of the Civil Rights Act of 1964 that prohibits agencies or programs that receive federal funding from discriminating based on race or national origin. For the TPB this means that the constrained element of Visualize 2045 must not result in a disparate impact on these protected populations.

Beyond the federal requirements, the TPB wants to ensure that the region's transportation system works for all the people in the region. With this in mind, it's important to analyze Visualize 2045 with a focus on the effects on places with a high concentration of low-income and minority population.

Equity Emphasis Areas

Back in 2017, the TPB approved the method for identifying Equity Emphasis Areas, the first phase of the analysis. There are areas of the region with above average concentrations of low-income and minority populations. By identifying these areas, staff could then compare them to the rest of the region.

[Learn more about Equity Emphasis Areas](#)

The Title VI and Environmental Justice analysis of Visualize 2045

The analysis uses the model that planners developed to look at how Visualize 2045 performs. The performance analysis compares how the transportation system today compares to what is planned for 2045. It includes data on the region's population and job growth forecasts for the analysis.

[Read more about the Visualize 2045 performance analysis.](#)

The Environmental Justice analysis determines the benefits and burdens of the plan using various performance measures and compares this performance within the EEAs to the rest of the region.

The measures are grouped into two categories: accessibility and mobility. The accessibility measure examines how the plan changes access to jobs and transit. The mobility measure looks at the time it takes to reach jobs and hospitals by auto and transit. In all there are ten different measures for comparison, six focused on accessibility and four on mobility.

Accessibility measures:

1. Average number of jobs accessible by auto
2. Average number of jobs accessible by transit
3. Average number of jobs accessible by High Capacity Transit
4. Average number of jobs accessible by bus
5. Population with walkable access to High Capacity Transit
6. Population with walkable access to bus service

Mobility Measures:

7. Average commute time by auto
8. Average commute time by transit
9. Average travel time to closest hospital by auto
10. Average travel time to closest hospital by transit

For the accessibility measures, a benefit is identified as an increase in average accessibility or an increase in the population with access to transit service between today and 2045. While a burden is identified when a decrease in average accessibility or a decrease in the population with access to transit service between today and 2045 is identified. For mobility

measures, a benefit is identified when the average commute time or average travel time declines between today and 2045. And, a burden is identified when the average commute time or average travel time increases between today and 2045.

What did the analysis find?

Based on this analysis implementing the constrained element of Visualize 2045 would not have a disproportionate and adverse impact on the accessibility or mobility of low-income and minority populations. EEAs and the rest of the region experienced similar benefits and burdens from the impact of Visualize 2045. Therefore, burdens would not be predominately borne nor appreciably more severe or greater in magnitude in EEAs than the burdens experienced by the rest of the region.

Looking at each individual performance measures, EEAs and the rest of the region experience similar benefits or burdens across all measures with one measure disproportionately benefiting EEAs. For seven of the ten measures, benefits are identified for EEAs and the rest of the region. For two measures, burdens are identified for EEAs and the rest of the region. For one indicator, average commute time by transit, EEAs experience a benefit while the rest of the region experiences a burden.

Here are some of the results of the analysis:

		2019	2045 Plan-Build	Impact of Visualize 2045 Percent Change
1. Average number of jobs accessible by auto	EEAs	1,029	1,045	+1.6%
	Rest of the Region	799	853	+6.8%
2. Average number of jobs accessible by transit	EEAs	540	738	+36.7%
	Rest of the Region	302	428	+42.0%
3. Average number of jobs accessible by High Capacity Transit	EEAs	197	335	+70.2%
	Rest of the Region	125	203	+62.9%
4. Average number of jobs accessible by bus	EEAs	99	145	+46.3%
	Rest of the Region	70	104	+49.4%
5. Population with walkable access to High Capacity Transit	EEAs	648	1,119	+72.8%
	Rest of the Region	977	1,517	+55.2%
6. Population with walkable access to bus service	EEAs	1,492	1,872	+25.5%
	Rest of the Region	2,617	3,211	+22.7%
7. Average commute time by auto	EEAs	42.3	47.0	+11.1%
	Rest of the Region	47.4	52.5	+10.8%
8. Average commute time by transit	EEAs	54.1	52.9	-2.2%
	Rest of the Region	53.3	54.3	+1.9%
9. Average travel time to closest hospital by auto	EEAs	15.3	16.7	+9.2%
	Rest of the Region	16.8	18.5	+10.1%
10. Average travel time to closest hospital by transit	EEAs	33.9	33.6	-0.9%
	Rest of the Region	45.0	44.9	-0.2%

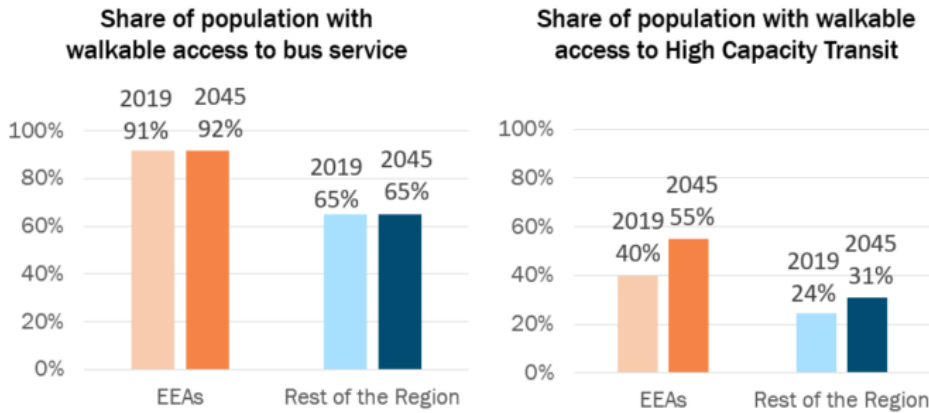
This table summarizes the overall results of the ten measures. For the determination, colors are used to identify burdens in red and benefits in green. The figures are in thousands and time is measured in minutes. Note that High Capacity Transit includes Metrorail, commuter rail, streetcar, light rail, or Bus Rapid Transit. (TPB)

Other takeaways from the report include:

Equity Emphasis Areas have strong walkable transit access, especially bus service.

In 2019, 91% of people in EEAs have walkable access to bus service and 40% have walkable access to High Capacity Transit. High Capacity Transit includes Metrorail, commuter rail, streetcar, light rail, or Bus Rapid Transit. By 2045, with the addition of jobs, population, and transit projects, walkable bus service access will continue to be nearly ubiquitous for people in EEAs, at 92%, and growth in walkable High Capacity Transit access will increase to 55%.

- Equity Emphasis Areas have strong walkable transit access, especially bus service.

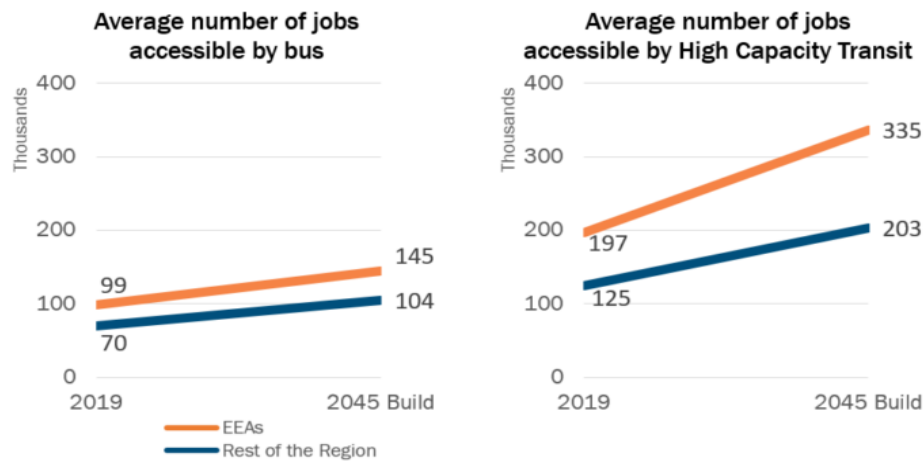


Comparing EEAs to the rest of the region. EEAs have good access for people walking to transit. (TPB)

Jobs accessible in 45 mins by bus service only is limited...

Considering the significant geographic reach of bus service in the region and the high degree of walkable access to such service in EEAs, TPB staff analyzed job access by bus service now and in 2045. For 2019, the average number of jobs accessible is 99,000 for EEAs and by 2045 with the addition of population, jobs, and bus service improvements, an additional 46,000 jobs will be accessible by bus — a 46.3% increase. While this is an improvement it is less than that experienced by high capacity transit.

- Within a 45-min commute, on average, job access by High Capacity Transit is greater than using just bus service.



Access to jobs by High Capacity Transit is greater than by bus. Although High Capacity Transit's reach is limited, people can access it by bus. (TPB)

...until connected with High Capacity Transit.

Although High Capacity Transit's reach is limited, the number of jobs accessible on High Capacity Transit – where one walks to High Capacity Transit directly or transfers from a bus trip by walking to a nearby bus stop – is higher and experiences a greater improvement. For 2019, the average job access is 197,000 for EEAs and 125,000 for the rest of the region. By 2045, with the addition of population, jobs, and HCT service improvements, EEAs and the rest of the region will be able to access 138,000 and 78,000 more jobs, a 70.2% and 62.9% increase, respectively.

These findings will be presented to the board at its [December meeting](#).