Building Equitable Student Transit (BEST)

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Equity and Accessibility to Neighborhood Schools by Public Transit

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EXECUTIVE SUMMARY

Affordable, convenient, and reliable transportation is fundamentally important to ensure that students can attend school and perform at their best. If students are unable to readily get to and from school, they will be at a greater risk for negative outcomes, including chronic absence, dropout, and ill health. Historically, the link between students and schools was provided by the iconic yellow bus. But in an environment of school district budget cuts, school bus services across California have in many places been scaled back or cut entirely. According to the 2010-2012 California Household Travel Survey, across the state about 8% of students use public transit to get to school, roughly the same proportion who rely on the school bus. The proportion of students relying on public transit is likely to grow over time, as school bus service continues its decline.

In this research brief, we examine how well public transit serves neighborhood schools in the Sacramento City Unified School district (SCUSD). We bring together information about school attendance boundaries, local demographics, and transit service, to understand the extent to which public transit is a viable option for neighborhood school attendance, as well as the demographics of those places that are well-served.¹ This district-wide analysis shows very little evidence of racial/ethnic transit inequity. But the analysis highlights the substantial travel times that would be faced by many students-especially at the middle and high school levels-who choose to, or have no choice but to, take public transit to their neighborhood school.



Figure 1. SCUSD boundary and RT routes.

RESEARCH METHODS

We calculated an expected travel time to the neighborhood elementary, middle, and high school, using information on transit routes and schedules operated by Sacramento Regional Transit (RT) as of September 2, 2014. Travel times include walking to a transit stop, waiting for the vehicle, riding the vehicle, and walking to the destination. An average travel time during the morning peak period (6:30am - 8:30am) was calculated for each census block in the district. In cases where walking to school would be faster than public transit, travel times reflect only walking speed. The SCUSD boundary and RT routes are shown in Figure 1.

¹ This analysis is limited by a lack of information about which students actually rely on public transit. However, Research Brief 2 in this series highlights locations in the district that are especially likely to have a high demand for transit service.

TRAVEL TIMES TO NEIGHBORHOOD ELEMENTARY SCHOOLS

Travel times to SCUSD neighborhood elementary schools by walking or walking/public transit are shown in Figure 2. Darker shades indicate longer travel times, ranging from a less than 15 minute trip to school to greater than a 45 minute trip. Not surprisingly, travel times are lower in the vicinity of each school and increase when approaching the neighborhood attendance boundary.

The map allows us to see geographic differences in travel times to school. To assess how these differences play out across various racial/ethnic groups, we combined our travel time information with demographics taken from the 2010 US Census.²



Figure 2. Travel times to SCUSD neighborhood elementary schools by walking or walking/public transit.

Table 1 shows the number of potential students that reside within each travel time category, with separate results for each racial/ethnic group. The equity of public transit service can be assessed by comparing the proportions of students residing within each category for each demographic group with the same proportions for all potential students. The results for each group demonstrate only slight deviations from the overall distribution of students across the district. In general, students of color are more likely to reside in census blocks with shorter travel times to neighborhood schools. Approximately 50% of potential students reside within a 15 minute trip of their neighborhood school by walking or walking/public transit.

Travel time (min)	All potential students		White		Black		Asian		American Indian		Latino		POC	
<15	9,883	50%	2,230	49%	1,407	47%	1,472	47%	133	51%	3,990	51%	7,653	50%
15-30	7,173	36%	1,569	35%	1,194	40%	1,199	38%	82	31%	2,669	34%	5,604	36%
31-45	2,531	13%	619	14%	340	11%	387	12%	42	16%	985	13%	1,912	12%
>45	370	2%	94	2%	28	1%	92	3%	4	2%	121	2%	276	2%
Total	19 957		4 512		2 969		3 150		261		7 765		15 445	

Table 1. Travel time to SCUSD neighborhood elementary schools by total students in each race/ethnicity category.

Note: White = non-Hispanic/Latino, White alone. POC = people of color, total population minus White. Other categories do not differentiate by Hispanic/Latino status.

TRAVEL TIMES TO NEIGHBORHOOD MIDDLE SCHOOLS

Figure 3 shows travel times to SCUSD neighborhood middle schools by walking or walking/public transit. The results are similar to those for the neighborhood elementary schools, but much larger portions of the map are colored darker shades, indicating longer travel times. Travel times are longer because there are simply fewer middle schools than elementary schools.

² For each census block, we identified the number of potential students and their race/ethnicity. Elementary school students were considered to be ages 5-9.



Figure 3. Travel times to SCUSD neighborhood middle schools by walking or walking/public transit.

Table 2 shows the number of potential students that reside within each travel time category, with separate results for each racial/ethnic group.³ Similar to the elementary school results, the results for each group demonstrate only small deviations from the overall distribution of students across the district. In general, students of color are somewhat more likely to reside in census blocks with shorter travel times to neighborhood middle schools, while white students are somewhat more likely to reside further away.

The table reflects the results shown on the map–larger numbers of potential students reside in areas with longer travel times to middle schools, compared to the elementary school analysis.

lable 2. Iravel time to SCUSE	neighborhood middle	e schools by total studen	ts in each race/ethnicit	y category.

Travel time (min)	All potential students		White		Black		Asian		American Indian		Latino		POC	
<15	2,539	13%	529	13%	394	13%	481	14%	30	11%	953	13%	2,010	13%
15-30	5,589	28%	1,204	28%	933	30%	1,058	31%	72	27%	1,995	27%	4,385	28%
31-45	5,361	27%	956	23%	936	30%	892	26%	87	32%	2,240	30%	4,405	29%
>45	6,127	31%	1,541	36%	857	27%	1,024	30%	82	30%	2,244	30%	4,586	30%
Total	19,616		4,230		3,120		3,455		271		7,432		15,386	

Note: White = non-Hispanic/Latino, White alone. POC = people of color, total population minus White. Other categories do not differentiate by Hispanic/Latino status.

TRAVEL TIMES TO NEIGHBORHOOD HIGH SCHOOLS

Figure 4 shows travel times by walking or walking/public transit to SCUSD neighborhood high schools. With only five such schools, travel times by walking and public transit are quite long in general.



Figure 4. Travel times to SCUSD neighborhood high schools by walking or walking/public transit.

³ The number of potential students and their race/ethnicity reflect data from the 2010 US Census; middle school students were considered to be ages 10-14.

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The travel times shown in Table 3⁴ reveal that approximately 50% of high-school-aged students would have to travel more than 45 minutes to get to their neighborhood school by walking or walking/public transit, regardless of demographic group. Although there are still no major disparities, for the vast majority of high school students, travel by public transit will not be a convenient option.

Travel time (min)	All potential students		White		Black		Asian		American Indian		Latino		POC	
<15	1,347	6%	396	7%	237	6%	223	5%	17	5%	394	5%	951	5%
15-30	4,787	21%	1,138	21%	755	20%	870	20%	75	21%	1,642	21%	3,649	21%
31-45	6,087	26%	1,339	24%	1,109	29%	1,116	25%	115	32%	2,088	27%	4,748	27%
>45	10,858	47%	2,599	47%	1,760	46%	2,211	50%	148	42%	3,587	47%	8,259	47%
Total	23,079		5,472		3,861		4,420		355		7,711		17,607	

Table 3. Travel time to SCUSD neighborhood high schools by total students in each race/ethnicity category.

Note: White = non-Hispanic/Latino, White alone. POC = people of color, total population minus White. Other categories do not differentiate by Hispanic/Latino status.

CONCLUSION

This district-wide analysis shows very little evidence of racial/ethnic inequity in the Sacramento RT system, when considering access to neighborhood public schools. In general, the proximity of potential students to their neighborhood schools and the public transit options available to them is similar across racial/ethnic groups.

But the analysis highlights the substantial travel times that would be faced by many students—especially at the middle and high school levels—who choose to, or have no choice but to, take public transit to their neighborhood school. These students will face much longer travel times than students who are driven or who are able to drive themselves. Public transit users also face out-of-pocket costs that may be burdensome to low-income families.





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