

2015-16 Transportation Equity Analysis

Each year the Seattle Public Schools updates the Transportation Service Standards and bus walk zone boundaries for use in the upcoming school year. For the 2014-15 school year, an analysis was completed to ensure that there were no unintended consequences related to transportation services that would disproportionately impact low income and non-white students. This analysis included district wide, general education transportation service levels as well as changes to individual schools. The School Board authorized the Superintendent to make minor adjustments to the Transportation Service Standards (TSS) in order to alleviate disparities. In the 2014-15 school year, the Superintendent added three buses and several bus stops after the equity analysis.

The changes in boundaries and transportation for the 2015-16 school years are minimal and related to elementary and K-8 schools; therefore the 2015-16 analysis focuses on service to these students. Additionally, to identify the changes of bus service, the district uses the number of students who walk to school as a proxy for transportation services. If there is an increase in the percentage of student walkers, then transportation has declined. The rationale for using this data is that it is not impacted by annual routing strategies and allows for consistent service delivery and demographic analysis.

2015 -2016 Transportation Service Changes

For the 2015-16 school year, the Seattle Public Schools Board of Directors (Board) approved changes to the 2015-16 Transportation Standards that eliminated the final “grandfathering” of special routes from the student assignment plan transition and ended district-funded transportation for an estimated 70 students attending out-of-area (non-neighborhood) schools and 13 students in one walk zone. The changes and the estimated demographic effects are outlined below.

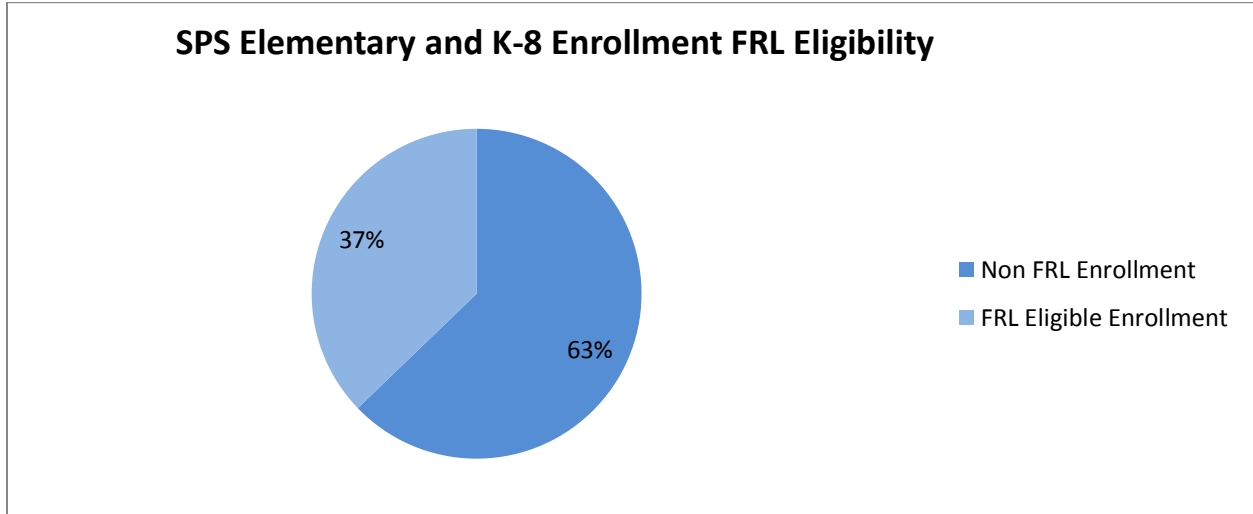
- *Ending out-of-area District funded transportation to Roxhill Elementary School and a walk zone bus stop not funded by the State for Graham Hill Elementary School*
- *Shuttles to Thornton Creek Elementary School, Concord Elementary School, and TOPS K-8 School*

This analysis is will be used to ensure that there were no unintended consequences related to transportation services that would disproportionately impact low income and non-white students.

Overview of Income and Ethnicity for Elementary/K-8 Students

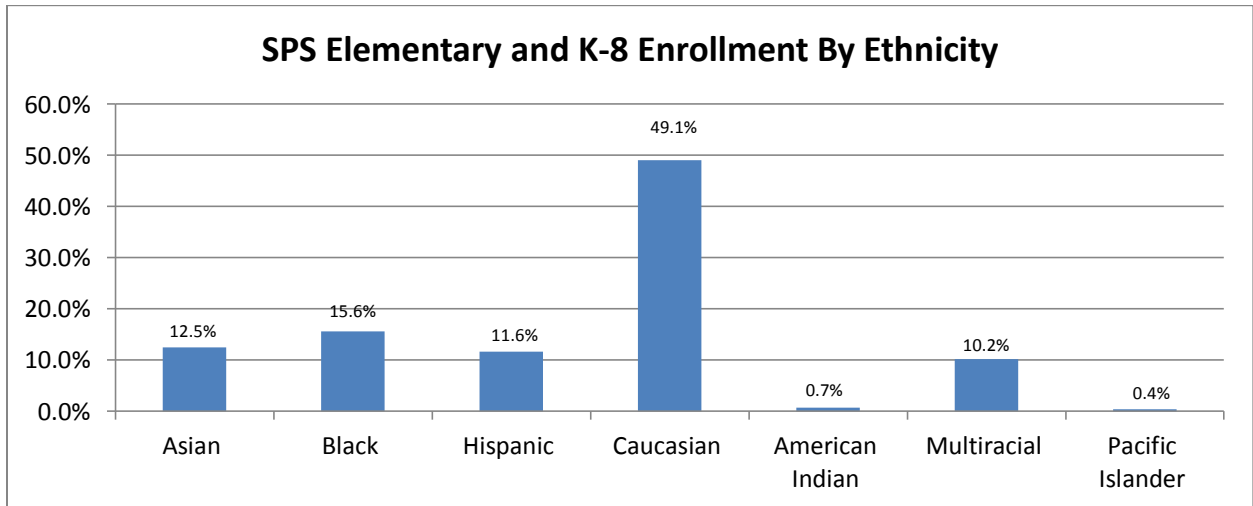
This equity analysis is comprised of two factors: income and ethnicity. The district uses Free and Reduced Lunch (FRL) eligibility to analyze service delivery for low income students. The demographic data is derived from self-identified ethnicity status selected at student enrollment.

Table 1: District Overview for Elementary and K-8 FRL Eligible Students



There are 29,951 Elementary and K-8 students enrolled in the district of which 37% (or 11,142) are Free and Reduced Lunch (FRL) eligible and meet low income standards criteria.

Table 2: District Overview of Elementary and K-8 Enrollment by Ethnicity



The Seattle Public Schools student population in elementary and K-8 is diverse. Of the total elementary/K-8 student population, 49.1% is Caucasian. Asian, Black, Hispanic, and Multiracial student populations each range from 10.2% - 15.6%. A smaller percentage of American Indian and Pacific Islander form the remaining 1.1% of the student population.

Analysis Summary: *Seattle Public Schools (SPS) District elementary and K-8 student enrollment constitutes a strong non-white base and substantial low income student families. Slightly over half the SPS elementary/K-8 student population identifies themselves as an ethnicity other than Caucasian, and thirty seven percent of all elementary/K-8 students are FRL eligible.*

Walk Zone for Elementary/K-8 Students by Free and Reduced Lunch Eligibility

The data below include total Elementary/K-8 school enrollment and the breakdown of students by income analysis and ethnicity. This analysis is used to help determine if bus transportation fairly serves lower income families and/or students of color.

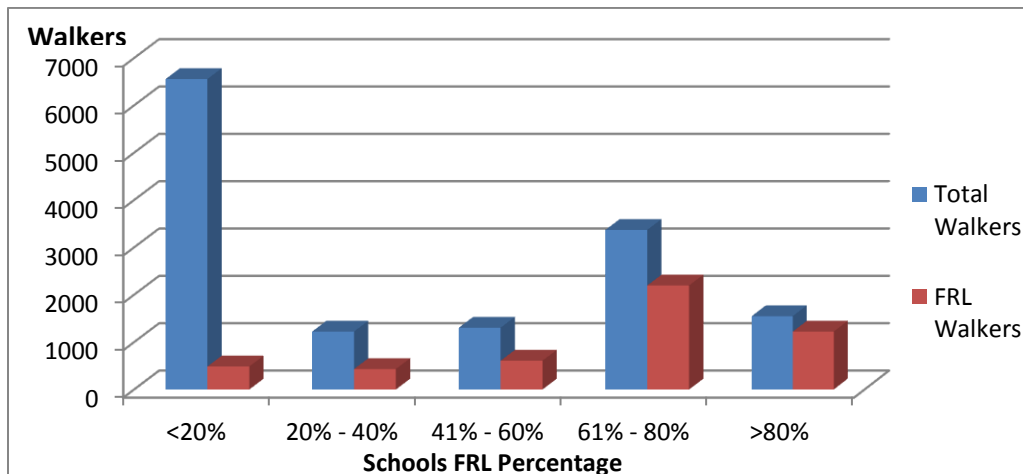
Table 3: Overview of 2014-15 Elementary/K-8 Student FRL and Walk Zone Data

Percentage of FRL Students per School	Number of Schools	Total Walk Zone Students	Percent of Enrolled Students in the Walk Zones	FRL Eligible Walking Students	Percentage of FRL Walk zone Students as a percentage of all Walk Zone Students
<20%	25	6,555	56%	484	7%
20% - 40%	15	2,139	33%	431	20%
41% - 60%	7	1303	52%	607	47%
61% - 80%	17	3368	55%	2194	65%
>80%	7	1547	51%	1220	79%
Totals:	71	14,912	50%	4936	33%

An illustration of this data: There are 25 elementary/k-8 schools with less than 20% of the students FRL eligible. The 25 schools have 6,555 walk zone students which represent 56% of the 25 schools' student population. There are 484 or 7% of the walk zone students in the 25 schools that are FRL eligible.

The chart below uses the data from Table 1 to provide an alternate view showing the percentage of FRL walkers to the total number of walk zone students.

Table 4: Elementary/K-8 Schools Comparison of Total Walkers to FRL Walkers



This chart shows a higher ratio of FRL walkers in the schools that have more than a 61% FRL eligible student population. It is reasonable to expect the schools with high FRL eligible student populations bear a higher percentage of FRL walkers, because the FRL eligible students are the majority of the student population.

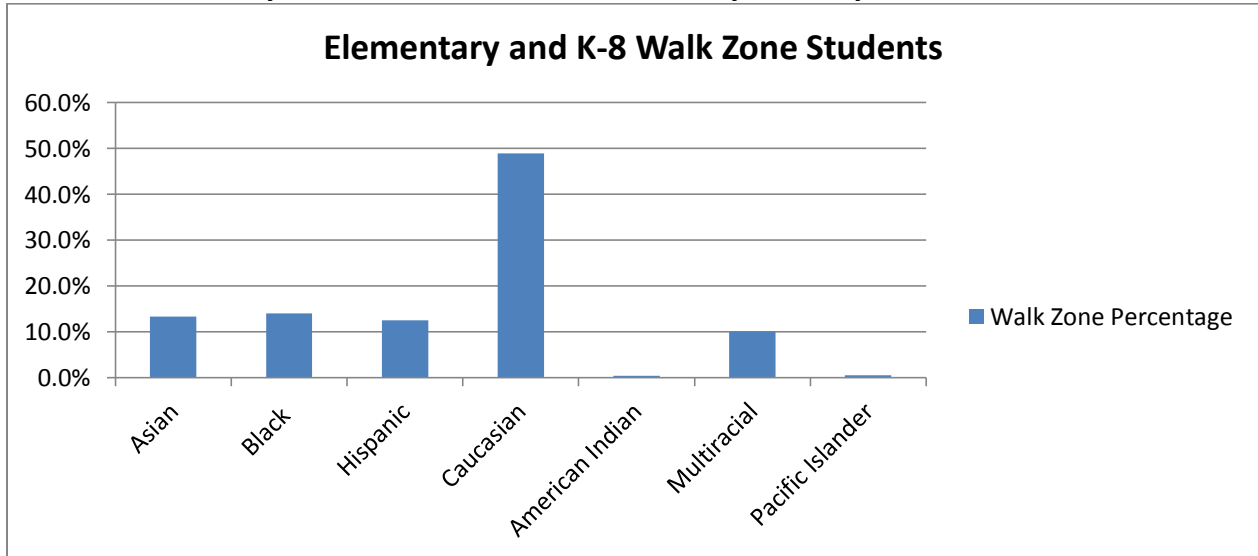
Summary Analysis: *The highest percentage of walkers attend schools with less than 20% of the enrollment FRL eligible and the least percentage of students receiving district transportation; this indicates that higher income schools have the most walking students. In general, the low income students in the walk zone are proportionate to the percentage of low income students attending their school.*

Overall, the District provides transportation to low income families at all K-8 and Elementary schools consistent with the proportion of the enrolled FRL students.

Walk Zone for Elementary/K-8 Students by Ethnicity

There are several factors that contribute to walk zone data, including proximity of schools to student populations, number of safe walk routes, and number of students enrolled with mandatory service delivery (e.g. Advanced Learning, Special Education, English Language Learners.)

Table 5: Elementary/K-8 School Walk Zone Students by Ethnicity



This chart measures student ethnicity within the walk zone. For example: over 49% of the walk zone students are Caucasian, and just over 14% are Black and 12.5% are Hispanic.

Table 6: Comparison of Elementary/K-8 Student population ethnicity to walk zone ethnicity

Elementary and K-8 Ethnicity / FRL Percentage							
Asian	Black	Hispanic	Caucasian	American Indian	Multiracial	Pacific Islander	FRL
13.8	15.9%	12.3%	46.8%	0.5%	10.2%	.5%	37.2%
Elementary and K-8 Walk Zone Ethnicity and FRL Percentage							
Asian	Black	Hispanic	Caucasian	American Indian	Multiracial	Pacific Islander	FRL
13.4%	14%	12.5%	49%	0.4%	10.1%	0.6%	33.1%

This table considers the balance in the percentage of walk zone minorities compared to district non-white enrollment for elementary and K-8 students. It shows the percentages of elementary/K-8 school district ethnicity and FRL eligibility are both closely related to the percentage of elementary and K-8 ethnicities and FRL eligibility in the walk zones. For example: 13.4% of the walk zone students are Asian which closely aligns to 13.8% of the Asian student population.

Table 7: District Elementary/K-8 Demographic Data compared to Walk Zone Demographic Data

Total Enrollment	FRL Eligible Enrollment	FRL Enrolled as a % of Total Enrollment	Total Walkers	FRL Eligible Walkers	FRL Walkers as a % of all walkers	Equity Analysis *
29,951	11,142	37.2%	14,912	4,936	33.1%	+
Total Enrollment	Non-white Enrollment	Non-white Enrollment as a % of Total Enrollment	Total Walkers	Non-white Walkers	Non-white Walkers as a % of all walkers	
29,951	15,935	52.7%	14,912	7607	51.0%	+

* A positive symbol indicates that service is either neutral or positive and there is no disproportionality or it has been reduced by the changes.

This table illustrates the percentage of FRL and non-white students compared to the percentage of FRL and non-white students in the walk zones to obtain an equity analysis.

Summary of Analysis:

- *Caucasian students are more likely to walk to school than non-white students. There are several factors that contribute to this data including proximity of schools to student populations, number of safe walk routes, and number of students enrolled with mandatory service delivery (e.g. Advanced Learning, Special Education, English Language Learners.)*
- *The demographics of the students in the walk zone are equivalent to the demographics of the student population. A slightly lower percentage of low income students are in the walk zone at 33.1% compared to the percentage of low income student population at 37.2%.*
- *37.2% of SPS elementary and K-8 students are FRL eligible and 33.1% of the 14,912 students who walk to school are FRL eligible. 51.09% of student walkers are non-white which aligns with 53.25% of the non-white student population.*
- *Seattle School District elementary and K-8 schools have vast differences in percentage of FRL and ethnicity enrollment. However, the percentage of students walking to school is steady overall.*

*For the purpose of this paper all references to the SPS District and schools is refers to Elementary and K-8

*Source information and data were obtained from SPS Transportation, Enrollment, and DoTs

School Level Analysis

The impact of the changes can be analyzed by school level analysis. The following table identifies the number of students affected by school, ethnicity, and low income (as measured by eligibility for “Free or Reduced Lunch”.)

Table 8: Students Impacted by changes in the 2015-16 Transportation Service Standards by Reduction of Grandfathering

PROGRAM	Am. Indian	Asian	Native Hawaiian/ Pacific Is	Asian Pacific Is	Black	Caucasian	Hispanic	Multi-Race	FRL	Total
Roxhill students at Highland Pk	-	-	-	-	1	-	26	-	27	27
Thornton Ck Shuttle	-	1	-	-	-	22	-	-	3	23
Graham Hill Walk-Zone Stop	1	-	-	-	3	1	8	-	13	13
Concord Shuttle	-	-	-	-	-	3	7	1	4	11
Tops Shuttle	-	1	-	-	4	4	-	-	2	9
Totals	1	2	-	-	8	30	41	1	49	83
Percent of Total	1.2%	2.4%	0.0%	0.0%	9.6%	36.1%	49.4%	1.2%	59.0%	100.0%

In 2014-15, the district made boundary changes that impacted student enrollment and transportation services. To mitigate these changes, the district added several bus stops and allowed students to take space available on specific routes. These changes are not grandfathered for the 2015-16 school year. Most the affected students are 5th graders and therefore will rise to middle school.

The 2015-16 boundaries again had minor changes that impacted transportation eligibility for families, although not as significant as previous years. If transportation is equitable, then it would be expected that the per cent of each category or total enrollment would be equal to or less than the per cent of walkers.

Roxhill Elementary School

Table 9: Roxhill Demographic Data Compared to Walk Zone Demographic Data

School Enrollment	FRL Eligible Enrollment	FRL Enrolled As A Percentage of Total Enrollment	Total Walkers	FRL Eligible Walkers	FRL Walkers As A Percentage of All Walkers	Equity Analysis *
365	292	80%	135	101	74.8%	+
School Enrollment	Non-white Enrollment	Non-white Enrollment as a percentage of Total Enrollment	Total Walkers	Non-white Walkers	Non-white Walkers As A Percentage of All Walkers	
365	324	88.8%	135	113	83.7%	+

* A positive symbol indicates that service is either neutral or positive and there is no disproportionality or it has been reduced by the changes.

Table 10: Roxhill Ethnicity and FRL Detail

Roxhill Elementary Student Ethnicity and FRL Percentage							
Asian	Black	Hispanic	Caucasian	American Indian	Multiracial	Pacific Islander	FRL
12.6%	28.5%	38.6%	11.2%	1.1%	6.8%	1.1%	80.0%
Roxhill Elementary Walk Zone Ethnicity and FRL Percentage							
Asian	Black	Hispanic	Caucasian	American Indian	Multiracial	Pacific islander	FRL
11.9%	32.6%	31.9%	16.3%	1.5%	5.9%	0.0%	74.8*

Summary of Analysis: Roxhill has a high FRL and Non-white student enrollment and the percentages of FRL and Non-white student walkers are proportionate to the schools FRL and Non-white enrollment.

Roxhill data indicates that proportionately more Caucasians, Native American and Blacks walk to school than would be predicted by their demographic percentage. For the 2014-15 school years, non-white families (primarily Hispanic) requested and received mitigation of boundary or TSS change impacts due to disproportionate impacts. Their school community has again requested mitigation. Although only 28.6 % of students are Hispanic, nearly 100% of those students impacted by the boundary and TSS changes are Hispanic, therefore there is a negative equity impact and mitigation is recommended.

*For the purpose of this paper all references to the SPS District and schools is refers to Elementary and K-8

*Source information and data were obtained from SPS Transportation, Enrollment, and DoTs

Thornton Creek Elementary School

Table 11: Thornton Creek Demographic Data Compared to Walk Zone Demographic Data

Enrollment	FRL Eligible Enrollment	FRL Enrolled As A Percentage of Total Enrollment	Total Walkers	FRL Eligible Walkers	FRL Walkers As A Percentage of All Walkers	Equity Analysis *
401	29	7.2%	88	2	2.3%	+
Total Enrollment	Non-white Enrollment	Non-white Enrollment as a percentage of Total Enrollment	Total Walkers	Non-white Walkers	Non-white Walkers As A Percentage of All Walkers	
401	105	26.2%	88	26	29.5%	+

* A positive symbol indicates that service is either neutral or positive and there is no disproportionality or it has been reduced by the changes.

Thornton Creek Elementary has low FRL and moderate non-white enrollment. The majority of students impacted by changes in transportation are Caucasian. Of the 88 student walkers, 26 are non-white students which slightly exceeds the schools percentage of non-white enrollment.

Table 12: Thornton Creek Ethnicity and FRL Detail

Thornton Creek Student Ethnicity and FRL Percentage							
Asian	Black	Hispanic	Caucasian	American Indian	Multiracial	Pacific Islander	FRL
4.2%	1.7%	6.5%	73.8%	0.2%	13.5%	0%	7.2%
Thornton Creek Walk Zone Ethnicity and FRL Percentage							
Asian	Black	Hispanic	Caucasian	American Indian	Multiracial	Pacific islander	FRL
2.3%	2.3%	9.1%	70.5%	0.0%	15.9%	0.0%	2.3%

Thornton Creek has a low percentage of FRL eligible students and Non-white student walkers are proportional to the FRL and Non-white student enrollment.

Summary of Analysis: *Thornton Creek is a largely Caucasian school with 2.3% of walk zone students FRL eligible. This school has potential for mitigation should the Non-white student population in the walk zone increase disproportionate to Non-white student enrollment. Thornton Creek data indicates that proportionately more Blacks, Hispanics, and Multiracial students walk to school than would be predicted by their demographic percentage. Due to the boundary changes, in the 2014-2015 school year a shuttle bus was assigned for the students living in the Jane Addams service area. At this time, there is no planned mitigation for the 2015-16 school year as students are expected to attend their neighborhood schools.*

*For the purpose of this paper all references to the SPS District and schools is refers to Elementary and K-8

*Source information and data were obtained from SPS Transportation, Enrollment, and DoTs

Concord Elementary School

Table 13: Concord Demographic Data Compared to Walk Zone Demographic Data

<i>Enrollment</i>	<i>FRL Eligible Enrollment</i>	<i>FRL Enrolled As A Percentage of Total Enrollment</i>	<i>Total Walkers</i>	<i>FRL Eligible Walkers</i>	<i>FRL Walkers As A Percentage of All Walkers</i>	<i>Equity Analysis *</i>
407	334	82.1%	322	260	80.7%	+
<i>Total Enrollment</i>	<i>Non-white Enrollment</i>	<i>Non-white Enrollment as a percentage of Total Enrollment</i>	<i>Total Walkers</i>	<i>Non-white Walkers</i>	<i>Non-white Walkers As A Percentage of All Walkers</i>	
407	361	88.7%	322	285	88.5%	+

** A positive symbol indicates that service is either neutral or positive and there is no disproportionality or it has been reduced by the changes.*

Concord has a high FRL and Non-white student enrollment and the percentages of FRL and non-white student walkers are proportionate to the schools demographic enrollment.

Table 14: Concord Ethnicity and FRL Detail

Concord Student Ethnicity and FRL Percentage							
<i>Asian</i>	<i>Black</i>	<i>Hispanic</i>	<i>Caucasian</i>	<i>American Indian</i>	<i>Multiracial</i>	<i>Pacific Islander</i>	<i>FRL</i>
9.1%	11.8%	61.7%	11.3%	1.2%	3.9%	1.0%	82.1%
Concord Elementary School Walk Zone Ethnicity and FRL Percentages							
<i>Asian</i>	<i>Black</i>	<i>Hispanic</i>	<i>Caucasian</i>	<i>American Indian</i>	<i>Multiracial</i>	<i>Pacific Islander</i>	<i>FRL</i>
10.2%	11.5%	60.6%	11.5%	1.6%	3.4%	1.2%	80.7%

The majority of students in the walk zone are proportionate to their schools demographic data.

Summary Analysis: *In the 2014-2015 school year, a group of students (mostly Hispanic) living outside the service area were provided a shuttle bus due to the changes in the TSS.*

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*Source information and data were obtained from SPS Transportation, Enrollment, and DoTs

TOPS K-8 School

Table 15: TOPS K-8 Demographic Data Compared to Walk Zone Demographic Data

<i>Enrollment</i>	<i>FRL Eligible Enrollment</i>	<i>FRL Enrolled As A Percentage of Total Enrollment</i>	<i>Total Walkers</i>	<i>FRL Eligible Walkers</i>	<i>FRL Walkers As A Percentage of All Walkers</i>	<i>Equity Analysis *</i>
491	151	30.8%	18	5	27.8%	+
<i>Total Enrollment</i>	<i>Non-white Enrollment</i>	<i>Non-white Enrollment as a percentage of Total Enrollment</i>	<i>Total Walkers</i>	<i>Non-white Walkers</i>	<i>Non-white Walkers As A Percentage of All Walkers</i>	
491	258	52.5%	18	5	27.8%	+

* A positive symbol indicates that service is either neutral or positive and there is no disproportionality or it has been reduced by the changes.

The number of non-white walkers is significantly less than their demographic data suggests. FRL walkers are proportionate to the demographic data. The TOPS K-8 School location is surrounded by busy arterial roads; the Traffic Safety Committee recommended reducing the walk zone for safety reasons. In the 2014-15 school year, a group of students living outside the service area was provided a shuttle bus due to the changes in the TSS. At this time, a shuttle bus is not planned for the 2015-16 school year.

Table 12: TOPS K-8 Ethnicity and FRL Detail

TOPS K-8 Student Ethnicity							
Asian	Black	Hispanic	Caucasian	American Indian	Multiracial	Pacific Islander	FRL
21.0%	16.9%	6.5%	47.5%	0.4%	7.7%	0%	30.8%
TOPS K-8 Walk Zone Ethnicity and FRL Percentages							
Asian	Black	Hispanic	Caucasian	American Indian	Multiracial	Pacific islander	FRL
11.8%	5.6%	0.0%	72.2%	0.0%	11.1%	0.0%	27.8%

Summary of Analysis: The majority of students in the walk zone are Caucasian. More Caucasian and Multiracial students are in the walk zone than the schools demographic data suggest. At this time there are no plans for mitigation in 2015-16 school year.

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*Source information and data were obtained from SPS Transportation, Enrollment, and DoTs

Graham Hill

Table 13: Graham Hill Demographic Data Compared to Walk Zone Demographic Data

<i>Enrollment</i>	<i>FRL Eligible Enrollment</i>	<i>FRL Enrolled As A Percentage of Total Enrollment</i>	<i>Total Walkers</i>	<i>FRL Eligible Walkers</i>	<i>FRL Walkers As A Percentage of All Walkers</i>	<i>Equity Analysis *</i>
369	250	67.8%	207	126	60.9%	+
<i>Total Enrollment</i>	<i>Non-white Enrollment</i>	<i>Non-white Enrollment as a percentage of Total Enrollment</i>	<i>Total Walkers</i>	<i>Non-white Walkers</i>	<i>Non-white Walkers As A Percentage of All Walkers</i>	
369	306	82.9%	207	173	83.6%	+

* A positive symbol indicates that service is either neutral or positive and there is no disproportionality or it has been reduced by the changes.

Graham Hill has a large FRL and Non-white enrollment with 67% of the enrollment FRL eligible and 82.9% minorities. There are slightly less low income students walking than their demographic data suggests. The numbers of Non-white student walkers are proportionate their schools demographic percentage.

Table 14: Graham Hill Ethnicity and FRL Detail

Graham Hill Student Ethnicity and FRL Percentage							
<i>Asian</i>	<i>Black</i>	<i>Hispanic</i>	<i>Caucasian</i>	<i>American Indian</i>	<i>Multiracial</i>	<i>Pacific Islander</i>	<i>FRL</i>
23.0%	35.0%	14.9%	17.1%	0.5%	9.5%	0%	67.8%
Graham Hill Student Walk Zone Ethnicity and FRL Percentage							
<i>Asian</i>	<i>Black</i>	<i>Hispanic</i>	<i>Caucasian</i>	<i>American Indian</i>	<i>Multiracial</i>	<i>Pacific islander</i>	<i>FRL</i>
29.5%	24.2%	17.4%	16.4%	0.5%	12.1%	0.0%	60.9%

In the 2014 – 2015 school year Graham Hill was provided an addition bus stop. As a result of ongoing crime data near Graham Hill School, the District requested that the Safe Walk Committee and OSPI consider this safety data and thereby reduce the area of the walk zone to fund this stop. At this time, Transportation plans to continue providing the additional bus stop for Graham Hill in the 2015 – 2016 school year.

Summary of Analysis: Graham Hill has a high percentage of low income families and non-white students. Transportation will continue to support safety measures recommended for student transportation to Graham Hill.

*For the purpose of this paper all references to the SPS District and schools is refers to Elementary and K-8

*Source information and data were obtained from SPS Transportation, Enrollment, and DoTs

Conclusion

Changes to boundaries and Transportation Service Standards (TSS) created the need to perform an equity analysis. As the equity analysis shows, overall the Transportation Service Standards as adopted provides equitable service as analyzed using both economic and racial demographic factors.

In the 2014-15 school year, Transportation provided additional services to five elementary and K-8 schools which had requested mitigation. This equity analysis for 2015-16 has been completed for the elementary/K-8, and a secondary review of those five schools has been completed. Transportation sought to discover any unintended consequences due to the TSS changes and determine appropriate action.

District staff is recommending the continuation of some mitigation for some schools for 2015-16. Solutions may include additional bus service, additional stops, stops within the 1 mile walk zone, and priority for space for available seating. Transportation will work with schools and families to provide mitigation options to the Superintendent prior to the start of the 2015-16 school year.