



# **Redistricting Analysis**

for the

**New Providence School District**

**July 2022**

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## Introduction

Statistical Forecasting LLC (“Statistical Forecasting”) completed a redistricting analysis for the New Providence School District. One scenario was created and analyzed for the affected elementary attendance areas. The purpose of the analysis is to project elementary school enrollments in the affected attendance areas from 2022-23 through 2026-27, a five-year period, using the revised elementary school attendance boundaries. The projected enrollments were then compared to the existing building capacities as referenced from the district’s Long Range Facilities Plan to determine surplus and/or inadequate seating in the district.

## Current and Proposed Attendance Areas

Figure 1 shows the district’s current elementary school attendance boundaries in 2021-22 and where each student lives. As shown in Table 1, a number of students do not attend their “home” school in 2021-22, which is based on their residence. Table 1 excludes pre-kindergarten students, students living outside of the school district’s boundaries and who are attending the New Providence School District, and students residing in New Providence but being educated out of district. The bolded values in the table reflect students who attend their “home” school. For instance, 647 students in the Roberts attendance area attend their home school while 33 students who live in the Roberts attendance area attend Salt Brook. When percentages are computed, 4.9% of students who live in the Roberts attendance area do not attend Roberts and attend Salt Brook instead, while 1.4% of students who live in the Salt Brook attendance area do not attend Salt Brook and attend Roberts instead. Figure 2 shows the location of where each student resides and the elementary school they attend. The forthcoming analysis is based entirely on students attending their assigned or zoned school according to their residence and does not account for students attending a different school within the district for special programs (e.g., gifted and talented, special education, English Language Learner, etc.).

**Table 1**  
**Comparison of Enrollments by Residence and Attendance**  
**2021-22**

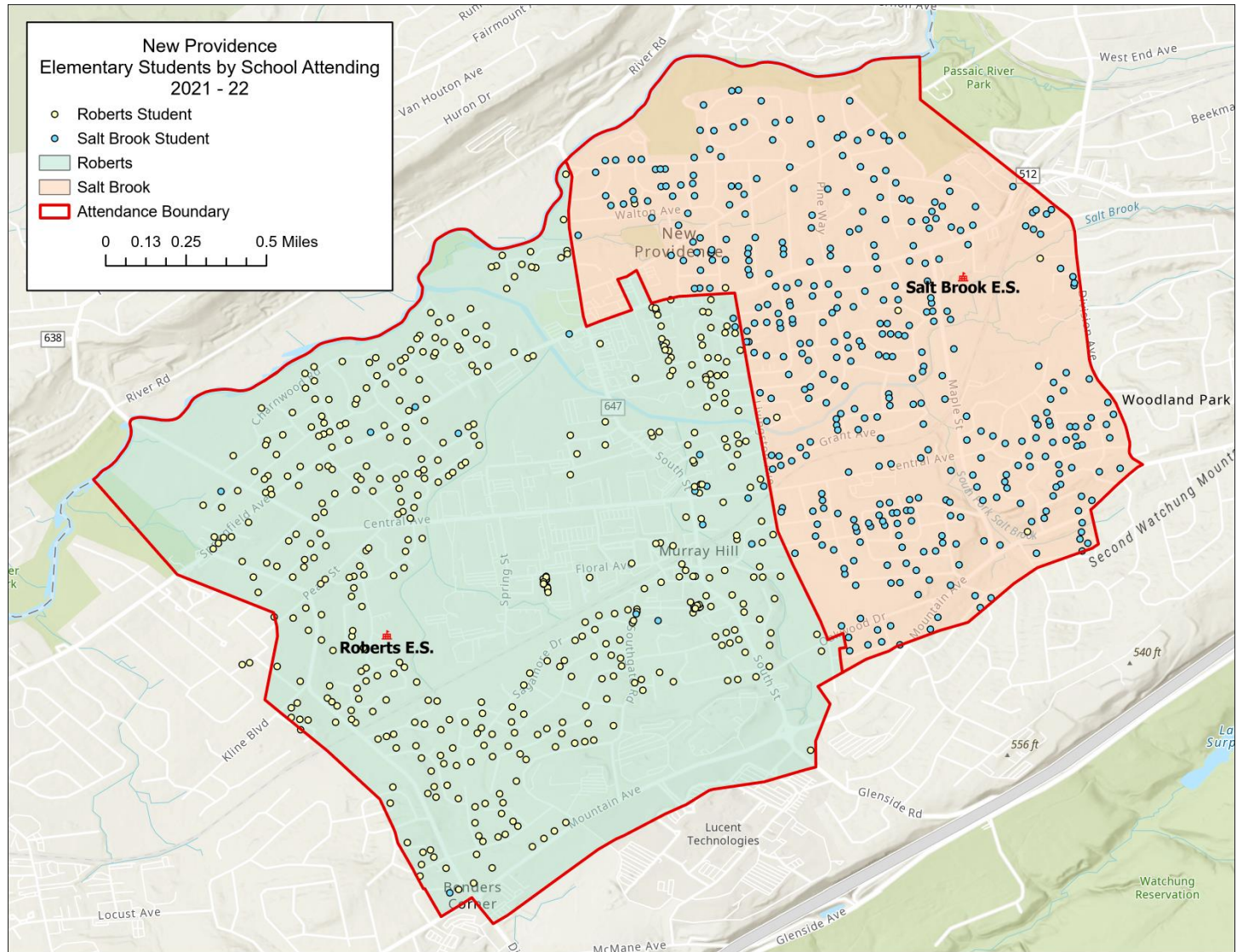
Residing	School	Attending	
		Roberts E.S. (K-6)	Salt Brook E.S. (K-6)
	Roberts E.S. (K-6)	647	33
	Salt Brook E.S. (K-6)	8	568

**Notes:** Bolded values reflect students who attend the school in which they are zoned to attend based on where they live, i.e. “home school.”

Pre-kindergarten students, students living outside of New Providence and who are attending the school district, and students educated out of district were excluded.



**Figure 2**  
**Elementary School Students by School Attending in 2021-22**





### *Proposed Scenario*

Figure 3 shows the new elementary attendance boundaries in the proposed scenario, as well as the areas where students would be changing their elementary school based upon their residence. The following represents the highlights of the changes to the elementary zones in the proposed scenario with respect to the status quo:

- Section A in the Roberts attendance area would attend Salt Brook.
- Section B in the Roberts attendance area would attend Salt Brook.
- Section C in the Roberts attendance area would attend Salt Brook.
- Section D in the Roberts attendance area would attend Salt Brook.

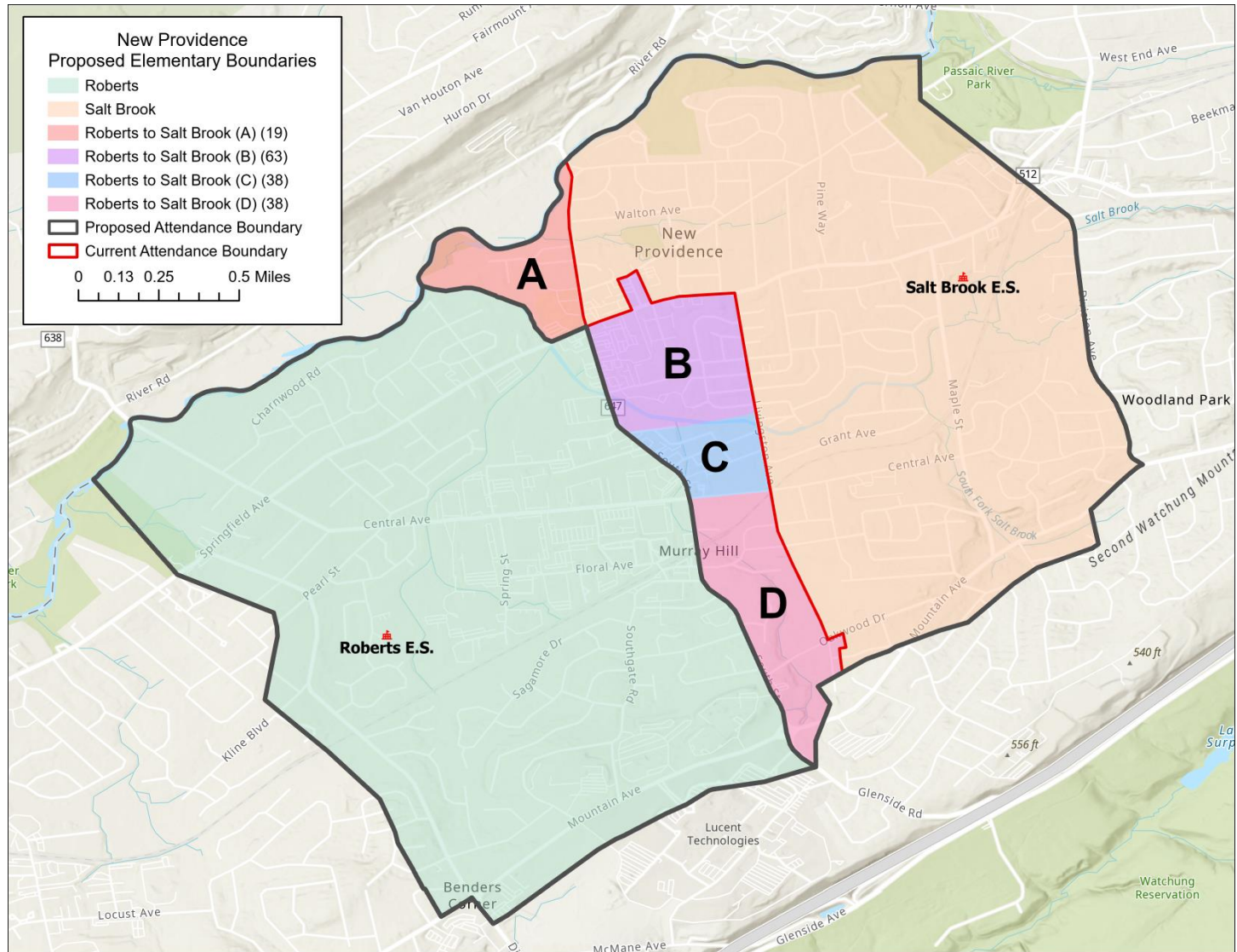
With respect to the rationale for the new boundaries, students in the Roberts attendance area residing near the Salt Brook-Roberts boundary were moved to the Salt Brook attendance area to relieve overcrowding in Roberts.

Table 2 shows the number of students in grades K-6 that would need to change schools based on the school district's 2021-22 enrollment. The table shows the maximum number of students if all students in the affected areas moved in 2021-22. However, it is the school district's intention to have a phased-in approach to move students, which will be discussed in the forthcoming section. New students, either those entering kindergarten or students moving into the district to attend elementary school, in Sections A and D would attend Salt Brook in the 2024-25 school year while new students in sections B and C would attend Salt Brook in the 2026-27 school year. Current students in Roberts would be able to complete their education in the school.

**Table 2**  
**Number of Elementary Students Changing Schools Based on 2021-22 Enrollment**

<b>Section</b>	<b>Current School</b>	<b>New School</b>	<b>Number of Students</b>
<b>A</b>	Roberts	Salt Brook	19
<b>B</b>	Roberts	Salt Brook	63
<b>C</b>	Roberts	Salt Brook	38
<b>D</b>	Roberts	Salt Brook	38
<b>Total</b>			<b>158</b>

**Figure 3**  
**New Providence Proposed Elementary School Attendance Areas**



## Disruption Factors

Disruption factors were computed for each of the elementary schools. A disruption factor is the percentage of students that would need to change schools as a result of the new attendance areas. The disruption factors were computed based on where students currently reside in 2021-22 and not where they are actually attending. A total of 158 of the district's 1,265 elementary school students would need to change schools, resulting in an overall disruption factor of 12.5% as shown in Table 3. While there would be no disruption in the Salt Brook attendance area, 23.2% of students at Roberts would be disrupted. The disruption factor is hypothetical, since not all students in Sections A-D will be changing schools simultaneously, as the district will be employing a phased-in approach.

**Table 3**  
**Disruption Factor by School**

School	Enrollment 2021-22 <sup>1</sup>	Proposed Scenario	
		Number Disrupted	Percent Disrupted
<b>Roberts E.S. (K-6)</b>	682	158	23.2%
<b>Salt Brook E.S. (K-6)</b>	583	0	0.0%
<b>Total</b>	<b>1,265</b>	<b>158</b>	<b>12.5%</b>

**Notes:** <sup>1</sup>Based on residence and not by actual attendance.

Pre-kindergarten students, students living outside of New Providence and who are attending the school district, and students educated out of district were excluded.



## Phased-In Approach

If the district instead implements a phased-in redistricting approach, current students in Roberts would be able to complete their education in the school. New students, either those entering kindergarten or students moving into the district to attend elementary school, would attend an elementary school based on the revised boundaries. This would limit the impact on the student population, as the new boundaries would be phased in one grade at a time. While Table 2 and Figure 3 show the maximum impact in each section if all grades (K-6) in 2021-22 are moved simultaneously, Table 4 shows the impact if entering kindergarten classes are only considered. The table shows the number of kindergarten students in each section from 2016-17 to 2021-22, as well as the average in each section over this time period.

**Table 4**  
**Number of Kindergarten Students in Sections A-D**  
**2016-17 to 2021-22**

Year	A	B	C	D
<b>2016-17</b>	4	7	5	6
<b>2017-18</b>	2	11	0	4
<b>2018-19</b>	2	12	5	2
<b>2019-20</b>	1	4	7	4
<b>2020-21</b>	1	11	6	4
<b>2021-22</b>	0	9	4	2
<b>Average (rounded)</b>	<b>2</b>	<b>9</b>	<b>5</b>	<b>4</b>

If the phased-in approach is utilized according to the timeline discussed previously, Table 5 shows the estimated number of students in each section that would be affected by the new boundaries in the next five years. No changes would occur until 2024-25. It was assumed that each entering kindergarten class would be the average number of students (rounded) shown from Table 4. In 2026-27, a total of 32 students would be attending Salt Brook instead of Roberts as a result of the new boundaries.

**Table 5**  
**Number of Students Affected by New Boundaries**  
**2022-23 to 2026-27**

Year	A	B	C	D	Total
<b>2022-23</b>	0	0	0	0	<b>0</b>
<b>2023-24</b>	0	0	0	0	<b>0</b>
<b>2024-25</b>	2	0	0	4	<b>6</b>
<b>2025-26</b>	4	0	0	8	<b>12</b>
<b>2026-27</b>	6	9	5	12	<b>32</b>

## **Elementary School Projections Using Proposed Boundaries**

Elementary enrollments were projected from 2022-23 through 2026-27, a five-year period, using the proposed boundaries for the purpose of comparing the projected enrollments with existing building capacities.

To complete this task, student addresses from the New Providence School District were geocoded or “pin-mapped” from 2016-17 through 2021-22 using mapping software. For the scenario under consideration, the proposed boundaries were used to tabulate the number of students in each grade who would have attended each school from 2016-17 to 2021-22. As discussed previously, this may differ from the number who attended each school, as some students do not attend their “home” school. Historical proportions of the number of kindergarten students in each elementary school were computed and multiplied by the projected districtwide kindergarten enrollments from the November 2021 demographic study. Grade 1-6 enrollments were then computed using cohort survival ratios based on the last five years of historical data.

It should be noted that the total enrollments in the district’s student address databases differ from the New Jersey Department of Education totals by 17-34 students per year, which does not allow for comparison of the results from this analysis and those from the November 2021 demographic study.

In Table 6, the projected enrollments are shown from 2022-23 through 2026-27 based on student residence and do not reflect additional children from new housing developments that are under construction in New Providence or that are proposed. The projections reflect the school district’s intention to move entering kindergarten students in Sections A and D in the 2024-25 school year and entering kindergarten students in Sections B and C in the 2026-27 school year. The projections do not take into account new elementary students who move into the district from other towns in the next five years and reside in Sections A-D.

Table 7 compares the building capacity of each school to its current enrollment, which is the actual enrollment based on attendance and not residence, as well as its projected enrollment in 2026-27 in the proposed scenario. Positive values indicate available extra seating while negative values indicate inadequate seating. In the proposed boundaries, both elementary buildings are projected to have a seating surplus in 2026-27. Salt Brook is projected to have a larger seating surplus (+144) than Roberts (+106) in 2026-27. In the November 2021 demographic study, it was estimated that there would be approximately 50 additional children from the approved housing developments that will be located in the Roberts attendance area. If 50 students are added to the 2026-27 enrollment projections for Roberts, the number of surplus seats would be reduced to 56.

**Table 6**  
**Projected Enrollments by New Attendance Areas with Phased-In Approach**  
**2022-23 to 2026-27**

<b>Roberts</b>									
<b>Year</b>	<b>PK</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>Total</b>
<b>2022-23</b>	28	69	92	86	98	109	95	111	<b>688</b>
<b>2023-24</b>	28	65	92	91	87	96	107	96	<b>662</b>
<b>2024-25</b>	28	57	87	91	92	86	95	108	<b>644</b>
<b>2025-26</b>	28	60	76	86	92	91	85	96	<b>614</b>
<b>2026-27</b>	28	46	80	75	87	91	90	86	<b>583</b>
<b>Salt Brook</b>									
<b>Year</b>	<b>PK</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>Total</b>
<b>2022-23</b>	0	57	68	74	82	103	97	85	<b>566</b>
<b>2023-24</b>	0	53	81	67	75	83	104	96	<b>559</b>
<b>2024-25</b>	0	58	76	80	68	76	84	102	<b>544</b>
<b>2025-26</b>	0	61	83	75	81	69	76	83	<b>528</b>
<b>2026-27</b>	0	74	87	82	76	82	69	75	<b>545</b>

**Table 7**  
**Comparison of Projected Enrollments to Building Capacities**  
**Proposed Scenario**

<b>School</b>	<b>Capacity<sup>1,2</sup></b>	<b>Status Quo</b>		<b>Proposed Scenario</b>	
		<b>Actual Enrollment 2021-22<sup>3</sup></b>	<b>Difference</b>	<b>Projected Enrollment 2026-27</b>	<b>Difference</b>
<b>Roberts E.S. (PK-6)</b>	689	693	<b>-4</b>	583	<b>+106</b>
<b>Salt Brook E.S. (K-6)</b>	689	606	<b>+83</b>	545	<b>+144</b>

**Notes:** <sup>1</sup>FES and District Capacities from Settembrino Architects, dated April 1, 2016

<sup>2</sup>As the capacities were last calculated in 2016, the actual capacities of the buildings in 2021-22 may have changed if the buildings' instructional spaces are being used differently than when the capacities were computed.

<sup>3</sup>Based on actual attendance provided by the NJDOE and not by residence.