



Henrico County Public Schools, VA Redistricting Project

Evaluating Option Adherence to Redistricting Criteria

Revised: 11/26/2019

Background

Henrico County Public Schools is in the process of comprehensive redistricting and outlined several guiding principles and criteria to evaluate when formulating options. In order to provide additional information to the Committees to determine the adherence of various options to the guiding principles and criteria, the following dimensions will be summarized.

Each option was scored on the following categories:

- student impact,
- utilization score,
- average student transportation distance,
- economic diversity score
- feeder pattern score.

These are data points to complement existing tables and Committee deliberations and are simply meant to provide additional information. Scores are available for the existing attendance zones at HCPS as well as the options developed by the Committee.

Student Impact

- Goal: identify how many students would be reassigned to a new school in the draft option.
- Students that are reassigned are summed for each option.

Utilization Score

- Goal: describe the extent to which an option distributes students evenly across schools to balance utilization.
- Each school receives a point value based on the difference between their utilization and the option utilization average.
 - The points are given as follows: 0-5% difference=0; 6-10% difference=1; 11-20% difference=2; 21-30% difference=3; and 31-40% difference=4.
 - For example, if School A has a utilization of 80% and the average for the option is 90%, that school will receive 1 point.
 - A 2 point penalty is added for any school that has utilization above 100%.
- To assign a score for the option, all points are added together to get a sum for the option.
 - For example, if Schools A through E have 1, 0, 0, 3, 2 points respectively, the score for the option would equal 6.

Average Student Transportation Distance

- Goal: measure the distance from home to school for each draft option.
- A network analysis was done using a GIS in order to determine the distance that students would have to travel from home to school. Most commonly, network analyses are used to find the shortest path between an origin and destination. We employed such a technique to model transportation distances between student homes and current schools as well as option schools, creating a network dataset that models transportation in Henrico County.

Economic Diversity Score

- Goal: identify the extent to which schools represent the economic composition of the district as a whole.
- Each school receives a point value based on the difference between their percent of students qualifying for free and reduced priced lunch and the percent of students qualifying for free and reduced priced lunch in the district as a whole.
 - The points are given as follows: 0-5% difference=0; 6-10% difference=1; 11-20% difference=2; 21-30% difference=3; and 31-40% difference=4.
 - For example, if School A has 30% of students that qualify for free and reduced price lunch and HCPS has 45% of students that qualify for free and reduced price lunch, then School A will receive 2 points.
- To assign a score for the option, all points are added together to get a sum for the option.

Feeder Pattern Score

- Goal: quantify the frequency of feeder pattern splits below 50% and below 25% for each draft option.
- Each school will receive a point value based on the percentage of its students that move together to the next school level.
 - The points are given as follows: splits 50% and greater=0; splits between 25% and 49%=1; and splits 24% and below=2.
 - For example, if ES School A splits 35% into MS School A and 65% into MS School B, then ES School A will receive 1 point.
- To assign a score for the option, all points are added together to get a sum for the option.

Assessment of Options A and B: Adherence to Guiding Principles and Redistricting Criteria

	Current Zones	Option A	Option B
Elementary			
Total students impacted	N/A	1,141	2,359
Utilization score	67	49	50
Average student transportation distance (miles)	1.462	1.463	1.477
Economic diversity score	98	109	111
ES to MS feeder score	17	13	25
Middle			
Total students impacted	N/A	1,275	982
Utilization score	10	9	13
Average student transportation distance (miles)	2.833	2.819	2.837
Economic diversity score	26	26	25
MS to HS feeder score	21	14	14
High			
Total students impacted	N/A	1,515	2,114
Utilization score	18	4	4
Average student transportation distance (miles)	2.677	2.702	2.729
Economic diversity score	17	17	18

Note: For scores, lower values indicate that the option better adheres to the guidelines. Points are added based on the extent to which a school differs from the district average, and therefore lower scores indicate the school more closely reflects the district average while higher scores indicate schools diverge from the district average.