

BEST PRACTICES IN DISTRICT REZONING

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In this report, Hanover Research summarizes approaches that school districts have used to determine school boundaries and school assignment processes.



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EXECUTIVE SUMMARY AND KEY FINDINGS

INTRODUCTION

Portland Public Schools (PPS) has sought the assistance of Hanover in identifying best practices for re-drawing school boundaries within urban school districts. This report summarizes the various approaches that school districts have used to determine school boundaries and school assignment processes, divided into two sections:

- **Section I: Best Practices Overview** summarizes strategies for projecting school enrollment and managing over- and under-enrollment, discusses potential criteria to consider when creating or revising school boundaries, identifies common school assignment mechanisms, discusses considerations for addressing segregation issues related to redistricting, and provides an overview of strategies to engage families and communities in the school boundary review process.
- **Section II: Case Studies** profiles four school districts that have recently undergone boundary change processes, highlighting criteria used to create new school boundaries and strategies used to solicit community feedback and communicate information about policy changes.

KEY FINDINGS

Hanover identified the following key findings related to school district rezoning:

- **School assignment processes should be feasible, transparent, efficient, and equitable.** Enrollment should not exceed school capacity, families should understand how assignments are made, and the assignment process should not disproportionately advantage or disadvantage certain groups.
- **Many urban school districts have turned to redistricting to address under-enrollment or overcrowding issues, but neither educators nor researchers have agreed upon best practices for redistricting.** However, common approaches to redistricting include:
 - **Using controlled choice mechanisms** in which students are assigned to a default school or set of schools (usually based on location) but may opt-out of the default school through a specific application process.
 - **Using economic game theory** to inform school assignment mechanisms and/or hiring economists or consultants to re-design school assignment processes.

- **Considering criteria such as sibling enrollment and proximity to schools** to determine school assignments. Additional common criteria that inform school boundary creation include school capacity, transportation, natural or physical barriers, diversity and equitable access to high-performing schools, student achievement, enrollment projections, and feeder patterns.
- **Districts must be aware of how student assignment mechanisms and redistricting may have a disproportionate effect on disadvantaged students.** High-performing schools are often unequally distributed throughout districts or may not be numerous enough to meet existing demand. Many school assignment processes have the potential to exacerbate inequality because low-income or at-risk students tend to choose or be zoned for low-performing schools close to their homes. Districts such as Washington, D.C. and Boston have attempted to **address equity issues by enabling students to access schools outside their neighborhoods**, such as by allocating a certain number of seats at high-performing schools to at-risk, non-neighborhood students or by creating assignment algorithms that include high-performing schools as potential choices for all students. Districts should also strive to improve school quality throughout the system to better serve all students.
- **Districts have used a variety of strategies to engage the community in revising school boundaries and assignment systems**, such as interactive websites, focus groups, surveys, community meetings and workgroups, and participatory advisory committees. Districts also use websites, communications materials in multiple languages, letters, public service announcements and billboards, school expos and fairs, community meetings, and published school rankings to inform parents about policy changes and school choices. However, districts should be aware that the process of revising school boundaries or school assignment plans is often difficult due to large demand for high-performing schools and the confusing and complex nature of school assignments.
- **Accurate enrollment projections are vital for effective long-term planning and enrollment management.** Districts can ensure accurate projections by using five-year projections integrated with data from multiple sources, such as local housing plans, land use, and transportation plans.

SECTION I: BEST PRACTICES OVERVIEW

This section summarizes strategies for projecting school enrollment and managing over- and under-enrollment, discusses potential criteria to consider when creating or revising school boundaries, identifies common school assignment mechanisms, discusses considerations for addressing segregation issues related to redistricting, and provides an overview of strategies to engage families and communities in the school boundary review process.

ENROLLMENT MANAGEMENT STRATEGIES

Districts typically use enrollment projections to predict which schools will be over- or under-enrolled.¹ This may necessitate building new schools or re-drawing school boundaries to send more students to under-enrolled schools. **Accurate enrollment projections are vital for effective long-term planning.** To ensure accuracy of enrollment projections, education and planning expert Kelley D. Carey recommends the following:²

- **Use five-year projections and planning integrated with data from multiple sources.** Districts should look at five-year historical trends to better understand local demographic cycles, and should not rely on long-term (i.e., twenty-year projections) for future enrollment predictions, as these projections may be limited by too many unknown economic and demographic factors. Districts should also take into account local five-year plans for housing development or other initiatives that may affect demographics. Carey recommends a **“rolling five-year strategy to bring together programs, demographics, and facilities.”**³ That is, districts should conduct computer mapping of school zones and students every year, integrated with proven five-year enrollment projections by grade and school. These data should be combined with data related to building renovation needs and capacities. Additional data that may inform enrollment projections include birth rates and cohort survival projections, local transportation and land use plans, and zoning policies.⁴ A full list of data needed for a five-year planning process is provided in Figure 1.1.
- **Ensure that planners have skills in computer mapping, demographics analysis, five-year planning, and involving the public.** Educators may not be trained in long-range planning processes or public engagement strategies.⁵ Therefore, districts may need to hire planners or other demographics experts to ensure the accuracy of

¹ *Enrollment and Student Assignment Planning Practices*. (Hanover Research, 2012).

² [1] Carey, K.D. “Why Enrollment Projections Go Wrong.” School Superintendents Association, April 2011. <http://www.aasa.org/SchoolAdministratorArticle.aspx?id=18586> [2] Carey, K.D. “Planning for Integration.” *American School Board Journal*, 194:10, October 2007. <http://search.ebscohost.com/login.aspx?direct=true&db=eue&AN=508004396&site=ehost-live> [2] *Enrollment and Student Assignment Planning Practices*, Op. cit.

³ Carey, “Why Enrollment Projections Go Wrong,” Op. cit.

⁴ *Practices for Anticipating District Growth*. (Hanover Research, 2015).

⁵ Carey, K.D. “Why Schools Need Planners.” November 2011. <http://www.ocde.us/Facilities/Documents/Why-Schools-Need-Planners.pdf>

enrollment projections. Districts should also ensure that planners for major construction or redistricting are able to engage the public in multiple and meaningful ways.⁶

Figure 1.1: Basic Data Needed for Five-Year Enrollment Planning Processes

DATA TYPE	DATA NEEDED
Demographics data	<ul style="list-style-type: none"> ▪ A demographics map showing land uses and planned developments; and ▪ A demographics map plotting students by their home address for the three school levels (all maps should be [digital] maps or they will not stay current with street changes, zone changes, and enrollment changes).
Facilities data	<ul style="list-style-type: none"> ▪ Data on number of standard and portable classrooms at each school site; ▪ Data on number of standard classrooms used at each building. List each standard classroom with its actual use and how many periods per day that use goes on; ▪ Data on standard classroom uses accepted by the district for all schools and what uses found are not standard; ▪ Known needs for renovations—not additions—at each school, and estimated costs; ▪ Building and site needs as to life safety code, building code, building integrity, health security, site preservation, support programs, core programs, special programs, and desirable options; ▪ Site acreage at each school that is buildable, along with playground area. Identify site problems with drainage, security, faculty and visitor and student parking, and bus parking and circulation; and ▪ Area of each core facility: media center, food service, and physical education, for example, with a comparison to state standards.
Enrollment data	<ul style="list-style-type: none"> ▪ Enrollment projections by grade for five years at each school; ▪ A school-zones map with overlays of elementary, middle, and high school zones on a streets map; ▪ District student transfer policies: Use computer mapping of students overlaid on attendance zones and [the district] enrollment database to determine how many students attend a school other than their zoned school at each facility along with their home school by the map plotting of all students; ▪ Data on how students are assigned to schools and what existing alternatives are;
Cost data	<ul style="list-style-type: none"> ▪ Cost to operate each school per year, not including teachers who will be needed whether the school is closed or not. It does include payroll costs for principal, secretaries, media personnel, food-service personnel and janitors, and utility expenditures.
Program data	<ul style="list-style-type: none"> ▪ Separate building and site needs including special program needs and wants; and ▪ Special needs of special programs (self-contained special education, magnet, etc.).

Source: Carey, Kelley D.⁷

⁶ For a more thorough discussion of public engagement strategies, see page 21 of this report.

⁷ Adapted from Carey, Kelley D. *School District Master Planning: A Practical Guide to Demographics and Facilities Planning*, Rowman and Littlefield Education, 2011, pp. 18-19, as cited in *Practices for Anticipating District Growth*, Op. cit.

As many urban school districts have experienced enrollment declines in the last decade, **most recent guidance on enrollment management in K-12 schools focuses on addressing enrollment declines.**⁸ A 2013 report by Boston Consulting Group recommends the following strategies for responding to enrollment declines:⁹

- **Understand and manage classroom costs:** Districts should be able to disaggregate spending data to better understand costs on a per-unit basis per student, course, grade, and teacher. This data can better clarify how specific actions, such as increasing class sizes at specific schools, would affect costs.
- **Plan in advance and take action early.** Districts should strive to take a multi-year view of their finances, rather than planning year-to-year. Processes for closing under-enrolled schools should start early in the year to allow time for engaging families and preparing students for the change.
- **Retain your best talent:** Districts should retain top teachers, leaders, and staff to ensure that high-performing schools continue to perform well.
- **Close severely underutilized schools:** Closing low-performing and underutilized schools can give districts the opportunity to shift students to higher-performing schools. A study of school closures in Chicago found that students who transferred from closed low-performing schools to high-performing schools performed better in math and reading after one year.¹⁰
- **Enable creative staffing and teaching with technology:** Schools may be able to use online or blended instruction to teach a greater number of students more efficiently. Schools may also be able to replace some staff, such as librarians, with non-certified paraprofessionals as a way to save money.

⁸ [1] McBride, L. et al. "Adapting to Enrollment Declines in Urban School Systems: Managing Costs While Improving Educational Quality." Boston Consulting Group, January 16, 2013. https://www.bcgperspectives.com/content/articles/education_public_sector_adapting_enrollment_declines_urban_school_systems/#chapter1 [2] DeMosp, A. "School Districts Get Creative When Enrollment Drops." District Administration, July 2013. <http://www.districtadministration.com/article/school-districts-get-creative-when-enrollment-drops> [3] "Urban School Districts Can Adapt to Enrollment Declines and Improve Educational Quality by Taking New Approaches to Cost Management." Yahoo! Finance, January 16, 2013. <http://finance.yahoo.com/news/urban-school-districts-adapt-enrollment-050100289.html> [4] McMilin, E. "Closing a School Building: A Systematic Approach." National Clearinghouse for Educational Facilities, September 2010. <http://www.ncef.org/pubs/closing.pdf> [5] Dillon, N. "The Hardest Choice." American School Board Journal, December 2006. <http://web.archive.org/web/20070701073421/http://www.asbj.com/specialreports/1206SpecialReports/S1.html>

⁹ McBride et al., Op. cit.

¹⁰ [1] de la Torre, M. and J. Gwyne. "When Schools Close: Effects on Displaced Students in Chicago Public Schools." University of Chicago, Urban Education Institute, October 2009. <https://ccsr.uchicago.edu/sites/default/files/publications/CCSRSchoolClosings-Final.pdf> [2] DeMosp, Op. cit.

- **Shrink fixed costs and convert to variable costs:** Districts may be able to reduce costs by reducing central administration expenses and outsourcing noncore functions to vendors.

For schools experiencing overcrowding rather than under-enrollment, education researchers, parent groups, and the National Center for Education Statistics suggest that **the following strategies may alleviate overcrowding issues:**¹¹

- **Modify how school structures are used:** Schools may use portable classrooms or use non-instructional spaces as temporary classrooms to ease overcrowding.
- **Create alternate schedules:** Staggered lunch schedules, year-round schedules, or split-day schedules can ease overcrowding by ensuring that not all students are in the building at the same time.
- **Lease buildings:** Leasing arrangements may be a temporary solution to overcrowding while districts build new facilities.
- **Reconfigure existing schools:** Redesigning grade configurations may be a potential solution to overcrowding issues. Some schools in Brooklyn, for example, established K-3 centers at middle schools that had extra capacity.¹²
- **Build new schools:** Educational researchers Ready, Lee, and Welner argue that building new schools is the best sustainable response to overcrowding concerns.¹³ They contend that common approaches such as increasing class sizes, providing temporary structures, or creating alternative schedules ultimately decrease educational quality, cause public health problems, and limit students' ability to participate in extracurricular activities. However, the authors do acknowledge that building new facilities is a tremendous cost for districts. Plans for new facilities should be based on the five-year planning strategies discussed previously in this section. Districts may be able to build new schools on existing school property or use innovative financing mechanisms, such as bonds or private sector partnerships, to support new schools.¹⁴

¹¹ [1] Ready, D.D., V.E. Lee, and K.G. Welner. "Educational Equity and School Structure: School Size, Overcrowding, and Schools-Within-Schools." *Teachers College Record*, 106:10, October 2004. http://www.colorado.edu/UCB/AcademicAffairs/education/faculty/kevinwelner/Docs/Ready_et_al_Educational_Equity_School_Structure.pdf [2] "Condition of America's Public School Facilities: 1999 - Overcrowding." National Center for Education Statistics, June 2000. <http://nces.ed.gov/surveys/frss/publications/2000032/index.asp?sectionid=8>

¹² Woloz, M. "Five Quick and Inexpensive Ways to End Overcrowding." *EPP Monitor*, Spring/Summer 2004.

¹³ Ready, Lee, and Welner, Op. cit.

¹⁴ Woloz, Op. cit.

Many urban school districts have recently turned to redistricting as a strategy to address overcrowding,¹⁵ but **neither educators nor researchers have agreed upon best practices for redistricting processes**. A 2003 study of school boundary and school assignment methods called for research to assess the effectiveness of school boundary and assignment policies in districts throughout the country.¹⁶ However, Hanover was unable to identify examples of such research; most recent research on school boundaries consists of descriptive studies, case studies, and economic theories, none of which have definitively pointed to the most effective redistricting strategies or policies. Therefore, rather than making best practice recommendations, the remainder of this report describes the various approaches school districts throughout the country have used to determine school boundaries and assignments. Where applicable, we provide recommendations made by education experts, associations, or government agencies, but PPS should keep in mind that there is not a general consensus in the education field regarding best practices for district rezoning.

CRITERIA FOR DETERMINING SCHOOL BOUNDARIES AND ASSIGNMENTS

District priorities play a large role in creating school boundaries and student assignment plans. Districts may wish to consider factors such as costs of busing students to school; desire to maintain neighborhood cohesion; need to ensure that siblings attend the same schools; and desire to maintain racial and socioeconomic balance across schools.¹⁷ A 2003 study of school boundary and school assignment methods in 15 urban school districts found that districts considered these and a variety of other criteria to create boundaries for school assignments.¹⁸ Common considerations included:

- **School capacity and enrollment;**
- **Natural boundaries or physical barriers** such as railroads or highways;

¹⁵ [1] Green, E.L. and N. Sherman. "School Boundary Lines Could Change in City." *Baltimore Sun*, March 30, 2015. <http://www.baltimoresun.com/news/maryland/education/bs-md-ci-school-zones-20150708-story.html> [2] Teale, C. "Alexandria City School Board Moves Forward with Redistricting Plan." *Alexandria Times*, May 28, 2015. <http://alextimes.com/2015/05/alexandria-city-school-board-moves-forward-with-redistricting-plan/> [3] Hennigan, G. "Iowa City School District Backs Off Redistricting Plans." *KCRG-TV9*, April 23, 2014. <http://www.kcrg.com/news/local/iowa-city-school-district-backs-off-redistricting-plans-151642415.html> [4] Taylor, K. "Race and Class Collide in a Plan for Two Brooklyn Schools." September 22, 2015. <http://www.nytimes.com/2015/09/23/nyregion/race-and-class-collide-in-a-plan-for-two-brooklyn-schools.html> [5] Lindenbaum, J. "APS Redistricting: Bring on the Trailers." *Curbed Atlanta*, April 10, 2012. <http://atlanta.curbed.com/archives/2012/04/10/aps-redistricting-bring-on-the-trailers.php> [6] Chesky, M. "Oklahoma City Public Schools Release Proposed Redistricting Maps." *KOCO 5 News*, March 24, 2014. <http://www.koco.com/news/oklahoma-city-public-schools-release-proposed-redistricting-maps/25140844> [7] Bottalico, B. "No Redistricting for Overcrowded Annapolis School." *Capital Gazette*, April 23, 2015. <http://www.capitalgazette.com/news/schools/ph-ac-cn-redistricting-0423-20150423-story.html>

¹⁶ Brown, A.K. and K.W. Knight. "School Boundary and Student Assignment Procedures in Large, Urban, Public School Systems." *Education and Urban Society*, 37:4, August 2005. <http://search.proquest.com/docview/202706601?accountid=132487>

¹⁷ Pathak, P.A. "The Mechanism Design Approach to Student Assignment." *Annual Review of Economics*, 3, 2011. <http://economics.mit.edu/files/9414>

¹⁸ Brown and Knight, Op. cit.

- **Neighborhood population** and size of residential buildings;
- **Anticipated growth**;
- **Students' proximity to schools and bus/travel time**;
- **Sibling enrollment at schools**;
- **Census tract and geo-code data**;
- **Existing student feeder patterns**;
- **Districts' capital plan** for school-related facilities and capital expenditures; and
- **Race,¹⁹ ethnicity, socioeconomic status**, and other demographic data.

Two of the districts in the study—Boston and Chicago—collaborated with universities to develop school assignment policies based on quantitative and mapping data. Several districts commented that the boundary selection process was difficult, emphasizing the need for flexibility and making compromises.

SCHOOL ASSIGNMENT MECHANISMS

This sub-section summarizes school assignment literature, most of which stems from economic game theory. This body of literature discusses potential mechanisms for incorporating student/family preferences and school priorities into students' school assignments. School priorities may include geographic or neighborhood considerations, such as assigning students to schools within a certain walking distance.

In selecting a student assignment mechanism, economists say that schools should consider:²⁰

- **Feasibility:** Schools should ensure that enrollment does not exceed school capacity and only eligible students are enrolled at each school.
- **Individual choice:** If students are assigned at schools that parents or families consider unacceptable, the family may choose an outside option such as a private or charter school, home schooling, or another option.

¹⁹ The 2007 Supreme Court Case *Parents Involved in Community Schools Inc. v. Seattle School District* limited the use of race as a deciding factor for school assignment. For a more detailed discussion of this issue, see page 18.

²⁰ Abdulkadiroglu, A. "School Choice." In *The Handbook of Market Design*, (Oxford University Press, 2013). <http://people.duke.edu/~aa88/articles/scsurvey-handbook.pdf>

- **Efficiency:** The school assignment process should promote student welfare to the greatest extent possible.

The Institute for Innovation in Public School Choice provides similar recommendations, arguing that school assignment models should be guided by:²¹

- **Transparency:** It should be easy to tell how the seats were distributed and what policies were used in making allocations.
- **Efficiency:** If there are two students applying to the same schools, both students should get an offer instead of one person getting two offers and the other person having to wait until the other one chooses.
- **Equitability:** The process should be fair, and no group should be intentionally or unintentionally disadvantaged.

Public school districts have used a variety of methods for school assignment. As traditional neighborhood-based student assignments may lead to segregation based on race or socioeconomic status, schools have explored various methods to offer students access to schools beyond their neighborhoods.²² Assignment methods are typically categorized as comprehensive choice systems or controlled choice systems:

- **Comprehensive choice system:** In this system, families are not assigned to a default school and can apply to any school in the district.²³ Few districts have implemented true comprehensive choice systems due to court-ordered desegregation guidelines.²⁴ Rather, most rely on controlled choice systems.
- **Limited or controlled choice system:** In this system, students usually have a default school but can opt out through an application or other process.²⁵ Students may also express preferences for schools by submitting rankings or preferences. Controlled

²¹ Quoted verbatim from “Q&A on School Choice and Enrollment: Neil Dorosin and Gaby Fighetti from The Institute for Innovation in Public School Choice.” Michael and Susan Dell Foundation, May 19, 2015.
<http://www.msdf.org/blog/2015/05/qa-school-choice-enrollment-processes-neil-dorosin-gaby-fighetti-institute-innovation-public-school-choice/>

²² Abdulkadiroglu, Op. cit.

²³ Pathak, “The Mechanism Design Approach to Student Assignment,” Op. cit.

²⁴ Abdulkadiroglu, A. and T. Sonmez. “School Choice: A Mechanism Design Approach.” *American Economic Review*, 93:3, June 2003.
[http://www.uibk.ac.at/economics/bbl/lit_se/papierews06_07/abdulkadiroglu_soenmez\(200_\).pdf](http://www.uibk.ac.at/economics/bbl/lit_se/papierews06_07/abdulkadiroglu_soenmez(200_).pdf)

²⁵ Pathak, “The Mechanism Design Approach to Student Assignment,” Op. cit.

choice systems can give parents some options while also maintaining diverse student bodies.²⁶

Common controlled choice mechanisms include:²⁷

- **Boston mechanism:** This method was developed by Cambridge and Boston Public Schools in the 1980s after eliminating neighborhood zones. In this method, a central clearinghouse collects students' school preference rankings and matches students to schools based on preferences and priority status, attempting to assign as many students as possible to first-choice schools. Priority status is determined based on how far away a student lives from a ranked school and whether a student's sibling attends the school. Because a number of students often tie for priority at certain schools, random tie-breaking is used to determine school assignments for students with equal priority. Variations of the Boston mechanism have been used in school districts such as Charlotte-Mecklenburg, North Carolina; Miami-Dade, Florida; Minneapolis, Minnesota; Providence, Rhode Island, and Tampa-St. Petersburg Florida.²⁸ However, this method is often criticized for its potential for manipulation; that is, students/families may improve their assignments by misrepresenting their preferences. Abdulkadiroglu and colleagues, economists who have redesigned school assignment mechanisms in school districts such as Boston and New York, provide the following explanation of the Boston mechanism's limitations:

“Since a student who ranks a school as her second choice loses her priority to students who rank it as their first choices, it is very risky for the student to “waste” her first choice at a highly sought after school if she has relatively low priority. Hence the Boston mechanism gives students and their parents a strong incentive to misrepresent their preferences by improving the ranking of schools for which they have high priority.”²⁹

- **Gale-Shapley student-optimal stable mechanism (SOM),** also known as a student-proposing deferred acceptance mechanism: In this method, a student “proposes” a first-choice school, and schools tentatively assign students to first-choice schools

²⁶ Ehlers, L. et al. “School Choice with Controlled Choice Constraints: Hard Bounds versus Soft Bounds.” *Journal of Economic Theory*, 153, 2014. <https://www.andrew.cmu.edu/user/isaemin/EHYY-JET.pdf>

²⁷ [1] Abdulkadiroglu, Op. cit. [2] Kesten, O. and M.U. Unver. “A Theory of School-Choice Lotteries.” *Theoretical Economics*, 10, 2015. <http://onlinelibrary.wiley.com/doi/10.3982/TE1558/pdf> [3] Kesten, O. and M.U. Unver. “A Theory of School-Choice Lotteries.” May 2010. <http://people.duke.edu/~aa88/matchingconference/Kesten.pdf> [4] Abdulkadiroglu and Sonmez, Op. cit. [5] Ehlers et al., Op. cit. [6] Pathak, “The Mechanism Design Approach to Student Assignment,” Op. cit. [7] Morrill, T. “Two Simple Variations of Top Trading Cycles.” *Economic Theory*, 60, 2015. [8] Pathak, P.A. and T. Sonmez. “School Admissions Reform in Chicago and England: Comparing Mechanisms by Their Vulnerability to Manipulation.” *American Economic Review*, 103:1, 2013. <http://economics.mit.edu/files/9410> [9] Abdulkadiroglu, A. et al. “Changing the Boston School Choice Mechanism.” National Bureau of Economic Research, January 2006. <http://www.nber.org/papers/w11965.pdf> [10] Pathak, P.A. “Lotteries in Student Assignment.” November 2006. https://www.gsb.stanford.edu/sites/default/files/documents/2007_01-16_Pathak_Lotteries.pdf

²⁸ Pathak and Sonmez, Op. cit.

²⁹ Abdulkadiroglu et al., Op. cit., p. 6.

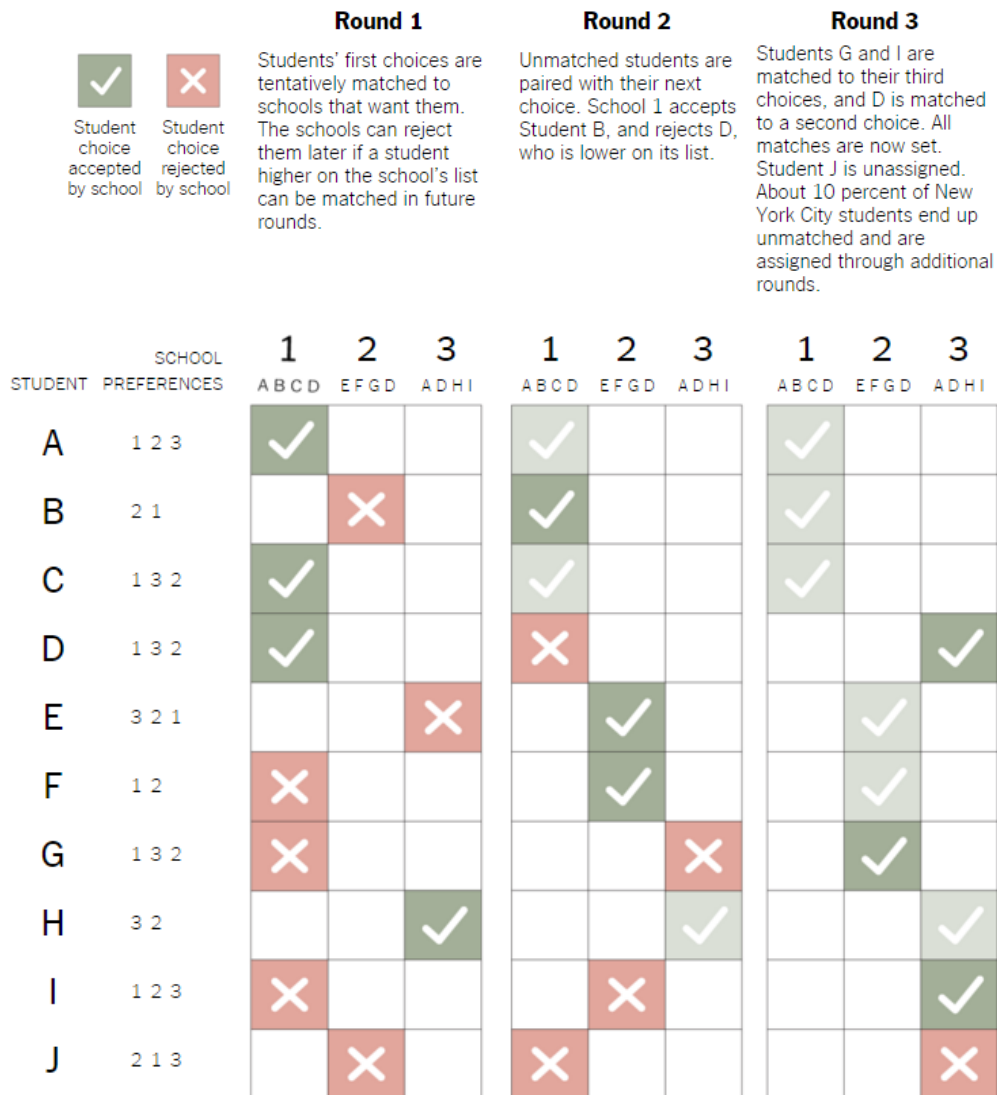
based on priority order (based on location, siblings, test scores, or other priority criteria). Students not assigned in the next round propose their next best choice. Schools assign remaining seats while considering students held over from previous steps and new applicants. Unlike the Boston method, students are *assigned tentatively* so that students with higher priorities may be considered in subsequent steps. Therefore, students do not lose seats to lower priority students and do not lose priority at a school to those who rank the school as a higher choice. This mechanism is considered to be “strategy-proof,” or not prone to manipulation like the Boston mechanism. The outcome of SOM can easily be explained to parents: if a student does not get into their first-choice school, it is because every enrolled student at the first-choice school has a higher priority than that student.³⁰ A graphic representation of the SOM process used by New York City’s public schools is provided in Figure 1.2 on the following page.

³⁰ Abdulkadiroglu, Op. cit.

Figure 1.2: New York Times Depiction of New York City’s SOM-Based Student Assignment Process

Matchmaking With the Help of Game Theory

In 2003, New York City changed its method for matching eighth graders to high schools with a system, called a deferred acceptance algorithm, that was designed by a team of professors, including one who later won a Nobel prize in economic science. The key feature was mutuality: Students submit a list of preferred schools in order, and schools prepare an ordered list of students whom they want or who meet their standards. After rounds of computer matching, schools and students are paired so that students get their highest-ranked school that also wants them. Here, in simplified form, is how it works. In this example, each school can take three students, although it can list more, and each student can list up to three choices.



Source: New York Times³¹

³¹ Tullis, T. "How Game Theory Helped Improve New York City’s High School Application Process." *New York Times*, December 5, 2014. http://www.nytimes.com/2014/12/07/nyregion/how-game-theory-helped-improve-new-york-city-high-school-application-process.html?_r=0

- **Top trading cycles (TTC) mechanism**, also known as the efficient transfer mechanism: While SOM makes tentative assignments based on student preferences, TTC makes tentative assignments based on school priorities.³² Again, priorities may be related to sibling enrollment, demographic balances, students' distance from school, or other criteria of importance to districts. This method consists of cycles in which one seat at a time is assigned to highest priority students. In each cycle, a student identifies their preferred school, and each school identifies a student with the highest priority. Each student is included in one cycle, and each cycle results in a student being assigned to a seat. If a student is unhappy with their assignment, priority at one school can be "traded" for priority at another school, depending on the student's priority status. This mechanism is also considered to be strategy-proof. If a student is not accepted to their first-choice school in this method, it is because every seat at the first-choice school was initially assigned to a higher priority student, and the student could not be transferred to the first choice because they did not have enough priority at other schools.³³
- **Serial dictatorship mechanism**, or random priority mechanism: In this mechanism, the school does not make priority-based assignments. Students are assigned to their preferred schools (among available schools) one at a time in a randomly drawn order. This method is considered to be strategy-proof due to its random selection process. However, students must be able to rank all possible choices for the mechanism to be strategy-proof. In Chicago's previous high school assignment method, students were only able to rank four out of nine possible choices, creating the need for "strategic calculations on which choices to list and which ones to drop."³⁴
- **First Preference First mechanism**: This method is a hybrid between the Boston mechanism and SOM. School assignments are based solely on student rankings of schools. When a student applies to their first-choice school, they are immediately offered a seat if they qualify. This method was widely used in England, but was banned in 2007 due to concerns about incentives for parents to distort their preferences as well as potential unfairness to participants who didn't attempt to "game" the system.³⁵

SOM appears to be the most commonly used and commonly recommended mechanism.³⁶

In fact, Dr. Lloyd Shapley, an early theoretical contributor to SOM, and Dr. Roth, one of several economists who developed a version of SOM used in New York City's public high

³² Abdulkadiroglu, Op. cit.

³³ Ibid.

³⁴ Pathak, P.A. "NBER Reporter 2014 Number 1: Research Summary - School Assignment and School Effectiveness." National Bureau of Economic Research, 2014. <http://www.nber.org/reporter/2014number1/pathak.html>

³⁵ [1] Pathak and Sonmez, Op. cit. [2] Pathak, "NBER Reporter 2014 Number 1: Research Summary - School Assignment and School Effectiveness," Op. cit.

³⁶ [1] Abdulkadiroglu et al., Op. cit. [2] Sonmez, T. "Policy and Practice Impacts." 2013. <http://www.tayfunsonmez.net/policy-impact/>

schools, both won a Nobel Prize for the SOM algorithm in 2012.³⁷ A number of school districts in the past decade have shifted to SOM due to desires to use assignment systems less prone to manipulation than the Boston mechanism. Boston Public Schools, for example, shifted to SOM in 2005 in an effort to “remove ‘incentives to game the system.’”³⁸ Denver Public Schools have also shifted to a version of the SOM model,³⁹ and all schools in England rely on SOM for public school assignments.⁴⁰ Ultimately, developing school assignment mechanisms, particularly in urban districts, is a complex task for which school districts often seek the guidance of economists or consultants.⁴¹

ADDRESSING SEGREGATION ISSUES

In addition to considering school priorities and student/family preferences in school assignment, school districts must be aware of potential equity and segregation issues associated with redistricting and school choice processes. Although a thorough discussion of segregation issues in K-12 education is beyond the scope of this report, this section identifies three areas that PPS may wish to be aware of as it undergoes its rezoning process: 1) potential effects of redistricting on education inequality; 2) U.S. Department of Education guidance for race-based school assignment policies; and 3) inter-district policies.

REDISTRICTING AND INEQUALITY

School districts should be aware of how the application of student assignment mechanisms and redistricting may have a disproportionate effect on disadvantaged students. For example, a 2014 *New York Times* article about New York City’s SOM school assignment process says that while the mechanism greatly increased the number of students assigned to first-choice schools, high-performing schools are still scarce within the district.⁴² **Low-income and low-performing children are more likely to be assigned to low-performing schools**, partly because they tend to rank lower-achieving schools as their top choices. The article’s author explains:

“It seems that most students prefer to go to school close to home, and if nearby schools are underperforming, students will choose them nevertheless. Researching other options is labor intensive, and poor and immigrant children in particular may not get the help they need to do it.”⁴³

³⁷ [1] Tullis, Op. cit. [2] “The Prize in Economic Sciences 2012 - Stable Matching: Theory, Evidence, and Practical Design.” Royal Swedism Academy of Sciences, 2012. http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/2012/popular-economicsciences2012.pdf

³⁸ Abdulkadiroglu et al., Op. cit., p. 2.

³⁹ [1] Pathak and Sonmez, Op. cit. [2] Pathak, “NBER Reporter 2014 Number 1: Research Summary - School Assignment and School Effectiveness,” Op. cit.

⁴⁰ Sonmez, Op. cit.

⁴¹ [1] Schulzke, E. “‘Controlled Choice’: Does Mixing Kids Based on Family Income Improve Education?” *Desertet News National*, April 10, 2014. <http://national.deseretnews.com/article/1265/controlled-choice-does-mixing-kids-based-on-family-income-improve-education.html> [2] Pathak, “The Mechanism Design Approach to Student Assignment,” Op. cit. [3] Abdulkadiroglu et al., Op. cit.

⁴² Tullis, Op. cit.

⁴³ Ibid.

In addition, a 2013 study by the Annenberg Institute for School Reform found that a large number of students in New York City—36,000 each year—do not participate in the high school choice process, requiring the New York City Department of Education (DOE) to assign them to schools.⁴⁴ The students are usually high-need students, such as new immigrants, special needs students, previous incarcerated students, homeless youths, or students with histories of behavioral problems. Unfortunately, these students are disproportionately assigned to low-performing high schools that are unequipped to serve their unique needs. The study's authors argue that the district must improve school performance overall and more equitably distribute students throughout the city, but they do not make recommendations for strategies to reduce the number of students left out of the school choice process.

Rezoning and redistricting process may also negatively affect disadvantaged students and families. **A 2014 study of the redistricting process in a major metropolitan city** (not identified by the study author) **found that the process actually increased racial and socioeconomic segregation in the district.**⁴⁵ To address over- and under-enrollment in several schools, the district considered several re-zoning options, including merging over- and under-capacity schools and re-zoning some white students to a predominantly black middle school. This option was preferred primarily by African-American families wanting to preserve their neighborhood schools, as well some middle-class white families already using these schools. This choice would have also increased racial and socioeconomic diversity within schools. However, the district ultimately decided to close two predominately black elementary schools and re-zone these students to other Title I schools. This resulted in a number of minority and low-income students being zoned out of more academically competitive schools into lower-performing schools and/or schools further away from their homes. In addition, many white middle-class families who had previously used the neighborhood schools were concerned about the district's lack of commitment to their neighborhoods and decided to enroll their students in charter schools.

The study's author makes several broad recommendations to address unequal impacts of redistricting:⁴⁶

- Districts may develop strategies to **make schools more attractive to middle-class families** who are zoned for, but frequently opt-out of neighborhood schools; and
- **School districts must work to ensure that minority and low-income students, families, and communities do not bear the burden of redistricting.**

⁴⁴ Arvidsson, T.S., N. Frutcher, and C. Mokhtar. "Over the Counter, Under the Radar: Inequitably Distributing New York City's Late-Enrolling High School Students." Annenberg Institute for School Reform, 2013. http://annenberginstitute.org/sites/default/files/OTC_Report.pdf

⁴⁵ Penn, D. "School Closures and Redistricting Can Reproduce Educational Inequality." *Center for Poverty Research Policy Brief*, 3:5, 2014. http://poverty.ucdavis.edu/sites/main/files/file-attachments/cpr_penn_redistricting_brief.pdf

⁴⁶ Quoted almost verbatim from Ibid., p. 2.

However, the author does not provide detailed guidance regarding strategies for making neighborhood schools more attractive or ensuring that redistricting does not disproportionately affect disadvantaged students. A 2013 evaluation of New York City's school assignment mechanism does provide several recommendations to improve student outcomes and promote equity within the school choice and assignment process, although these recommendations are specific to New York City's needs:⁴⁷

- **Remove residential preferences** for school assignment, as well as other screening procedures that are not essential to the mission of a school. The report's authors argue that prioritizing residential preferences is a problem because "parents of means" can choose a school through purchase of a home in certain neighborhoods, whereas lower-income families do not have this option.⁴⁸

- **Take significantly greater care to assure that economic, educational, and residential advantages of students' parents are not reflected in the quality of public schools to which students are assigned.** Potential strategies include:
 - *Using student test scores to inform the student assignment policy* and achieve a balanced distribution of students;

 - *Improving the web-based process by which parents and students express their preference for schools*, such as by providing more information on individual schools and developing tools to help parents determine the best choice for their child; and

 - *Strengthening district-wide policies that enhance the effectiveness of schools* and the teacher workforce.

DEPARTMENT OF EDUCATION GUIDANCE FOR RACE-BASED SCHOOL ASSIGNMENT POLICIES

The 2007 Supreme Court decision in *Parents Involved in Community Schools v. Seattle School District* invalidated programs in Seattle and Louisville that considered race as a primary factor in assigning students to schools, saying that the school districts had not demonstrated that they had seriously considered race-neutral alternatives to their policies.⁴⁹ In 2011, the U.S. Department of Education and U.S. Department of Justice released guidance to assist K-12 schools in interpreting the Court's decision.⁵⁰ Schools are

⁴⁷ Whitethurst, G. and S. Whitfield. "School Choice and School Performance in the New York City Public Schools - Will the Past Be Prologue?" Brookings Institution, October 2013.
<http://www.brookings.edu/~media/research/files/reports/2013/10/08-school-choice-in-new-york-city-whitehurst/school-choice-and-school-performance-in-nyc-public-schools.pdf>

⁴⁸ Ibid., p. 7.

⁴⁹ "Guidance on the Voluntary Use of Race to Achieve Diversity and Avoid Racial Isolation in Elementary and Secondary Schools." U.S. Department of Education and U.S. Department of Justice, 2011.
<http://www2.ed.gov/about/offices/list/ocr/docs/guidance-ese-201111.pdf>

⁵⁰ Ibid.

not prohibited from using race as a consideration for achieving diversity or avoiding racial isolation in school districts. However, the agencies state that **schools must “consider approaches that do not rely on the race of individual students before adopting approaches that do.”** These approaches may include:

- **Race-neutral approaches**, which take racial impact into account but do not rely on race as an express criterion; and
- **Generalized race-based approaches**, which use race as an express criterion but do not treat individual students differently because of race.

Districts may consider the race of individual students *only if* the district does so “in a manner that is narrowly tailored to meet a compelling interest,” that is, *to meet the goals of achieving diversity or avoiding racial isolation*. Race-based approaches should only be used if race-neutral or generalized approaches are unable to achieve the district’s compelling interests. Even when taking race into account, race cannot be the deciding factor in school assignment.

Finally, the agencies provide a set of key steps for implementing programs to achieve diversity or avoid racial isolation:⁵¹

- **Identifying the reason for the district plan:**
 - Determine how these compelling interests relate to the school district’s mission and unique circumstances.
 - Evaluate how the district will know when compelling interest has been achieved.
- **Implement the plan:**
 - Consider whether there are race-neutral approaches the district can use, such as looking at socioeconomic status or the educational level attained by parents. In selecting among race-neutral approaches, the district may take into account the racial impact of various choices. If it’s determined that race-neutral measures would be unworkable, consider whether using an approach that relies on the generalized use of racial criteria, such as the racial demographics of feeder schools or neighborhoods, would help to achieve your goals.
 - If race-neutral and generalized race-based approaches would be unworkable to achieve compelling interest(s), the district may then *consider approaches that take into account the race of individual students*. When doing so, evaluate each

⁵¹ Quoted almost verbatim from Ibid., p. 8.

student as an individual and do not make the student's race his or her defining characteristic. Periodically review the program to determine if the district continues to need to consider the race of individual students to achieve the compelling interest. It is important to ensure that race is used to the least extent needed to workably serve the district's compelling interest.

▪ **General considerations:**

- Continue to consider factors that the district ordinarily weighs in student assignment and other decisions, such as current and projected student enrollment, travel times, and sibling attendance issues. As the district reviews these factors in light of changes, such as increased or decreased demand at school sites, it should also examine its practices to achieve diversity or avoid racial isolation and modify them if needed.
- The district's process for students or parents to raise concerns about school assignments or other school decisions should be open to students or parents who wish to raise concerns about decisions made pursuant to efforts to achieve diversity or avoid racial isolation.
- It would be helpful to maintain documents that describe the district's compelling interest, and the process the district has followed in arriving at its decisions, including alternatives considered and rejected and the ways in which the chosen approach helps to achieve diversity or avoid racial isolation. These documents will help the district answer questions that may arise about the basis for the decisions.

INTER-DISTRICT POLICIES

Educational policies to address segregation and inequality by re-configuring boundaries have generally focused on boundaries within school districts.⁵² However, **more than 80 percent of racial and ethnic segregation in public schools in the United States is due to boundaries *between* school districts** rather than within districts.⁵³ This inequality between districts has led several researchers and education organizations to argue for the need for more inter-district desegregation programs.⁵⁴ For example, a 2011 report by the National School Boards Association states that school leaders "may want to consider inter-district

⁵² Wells, A.S. et al. "Boundary Crossing for Diversity, Equity and Achievement: Inter-District School Desegregation and Educational Opportunity." Charles Hamilton Houston Institute for Race & Justice, Harvard Law School, November 2009. http://www.charleshamiltonhouston.org/wp-content/uploads/2013/06/Wells_BoundaryCrossing.pdf

⁵³ [1] Ibid. [2] Siegel-Hawley, G. "Mitigating Milliken? School District Boundary Lines and Desegregation Policy in Four Southern Metropolitan Areas, 1990-2010." *American Journal of Education*, 120:3, May 2014.

⁵⁴ [1] Wells et al., Op. cit. [2] Siegel-Hawley, Op. cit.

policies to enhance the size and diversity of the participating student pool.”⁵⁵ However, inter-district policies may be complicated by legal, logistical, and political challenges related to transportation, resources, and community resistance.⁵⁶

Due to PPS’ interest in rezoning within its own district, this report does not provide case studies of inter-district policies to achieve diverse student bodies. However, case studies of inter-district desegregation programs are available in recent reports published by the Charles Hamilton Houston Institute for Race and Justice⁵⁷ and the American Journal of Education.⁵⁸

COMMUNITY ENGAGEMENT STRATEGIES

Parental and community engagement in school decision-making processes is vital, particularly in redistricting and rezoning processes. The 2003 study of school boundary processes in 15 school districts identified several promising community engagement strategies, including:

- **Focus groups** to determine parental preferences for school choice options;
- **Community meetings and workshops** to gather input and convey information;
- **Attendance boundary committees**, consisting of both staff and parents, to determine school boundaries. These committees were reported by several districts in Florida:
 - Miami-Dade County reported that its committee, composed of 17 non-school-board members, used a “grassroots, democratic-driven process” for decisions about boundary changes.⁵⁹ Regional superintendents would present information about schools targeted for boundary changes or reconfiguration, and the committee made recommendations based on public forums, board meetings, and analysis of demographic data.
 - Palm Beach County reported that its committee served in an advisory capacity to the Superintendent of Schools. The committee would hold community meetings to gather input regarding proposed changes to school boundaries. Final decisions were based on the district’s five-year capital plan; population growth

⁵⁵ Coleman, A.L., F.M. Negron, Jr., and K.E. Lipper. “Achieving Educational Excellence for All: A Guide to Diversity-Related Policy Strategies for School Districts.” National School Boards Association, 2011. p. 33. https://diversitycollaborative.collegeboard.org/sites/default/files/document-library/educexcellenceforall_printfriendly.pdf

⁵⁶ Coleman, Negron, Jr., and Lipper, Op. cit.

⁵⁷ Wells et al., Op. cit.

⁵⁸ Siegel-Hawley, Op. cit.

⁵⁹ Brown and Knight, Op. cit., p. 405.

data; land use and residential development plans within the municipality; and criteria such as transportation time, socioeconomic diversity, facility capacity, and feeder systems and transfers.

- Hillsborough County’s committee consisted of parents, “concerned citizens,” principals, and other district staff.⁶⁰ The committee focused on diversity, student proximity to schools, student safety, transportation requirements, projected population growth, community issues, geographic dividers, feeder patterns, and student needs to make boundary decisions.
- **Providing the community with demographic information and a set of steps for the boundary review process.** Broward County reported that its school boundary process occurs annually and lasts throughout almost the whole year. The district developed a boundary process flowchart and timeline to communicate information about the process to the public. Steps in the process included data gathering, boundary conferences, forums, public workshops, scenario development, analysis of community input, and public hearings.

A 2014 guidance document for Race to the Top grantees provides general recommendations for engaging the community to improve low-performing schools.⁶¹ These general engagement strategies can easily be applied to engaging the community the school zoning and districting process:

- **Make engagement a priority and establish an infrastructure.** Districts can develop mission statements and plans for engagement or create advisory groups dedicated to engaging parents and the community. Districts or schools may also wish to create staff positions for community engagement and/or ensure that hired staff have roots in the community and have backgrounds in communications or community organizing.
- **Communicate proactively in the community.** Districts should use a range of traditional and nontraditional communication tools, such as mailings, newsletters, blogs, email, open houses, workshops, and events such as barbecues or picnics. Schools should also make outreach materials accessible by providing materials in multiple languages, considering parent literacy and technology access, holding events in safe and welcoming places. Schools should also strive to remove barriers to participation by offering transportation and/or child care for community meetings or forums. Finally, districts must ensure that parents and communities are engaged early on in the process.

⁶⁰ Ibid., p. 407.

⁶¹ “Strategies for Community Engagement in School Turnaround.” Reform Support Network, March 2014. <http://www2.ed.gov/about/inits/ed/implementation-support-unit/tech-assist/strategies-for-community-engagement-in-school-turnaround.pdf>

- **Listen to the community and respond to its feedback.** Districts can gather feedback through conversations, public forums, surveys, or focus groups. Districts can show that that have listened to feedback by taking action in response to community input.

For more information about strategies that individual school districts have used to inform and engage parents in the school boundary and assignment process see Section II. In addition, links to tools and maps that districts have used to communicate information about school boundary changes are provided in Appendix A.

SECTION II: CASE STUDIES

This section profiles four school districts that have recently undergone boundary change processes: Boston Public Schools, Denver Public Schools, Seattle Public Schools, and Washington, D.C. Public Schools. We highlight criteria districts have used to create new school boundaries as well as strategies used to solicit community feedback and communicate information about policy changes. Figure 2.1 provides demographic information about each district, although profiled districts were not chosen based on demographic similarity to PPS.

Figure 2.1: Demographic Information for Profiled School Districts

SCHOOL YEAR 2012-2013 DATA ⁶²	BOSTON	DENVER	SEATTLE	WASHINGTON, D.C.	PORTLAND
Land area (square miles)	48.4	153.3	83.9	61.4	152
Population	625,087	634,265	620,778	632,323	460,248 (2010)
Percent of population under 18	17%	22%	16%	17%	19% (2010)
Total public school enrollment	63,780	84,424	49,870	80,231	48,459
School district enrollment	57,100	72,618	49,870	45,557	45,218
Number of district schools	127	162	96	117	78
Charter school enrollment	6,680	11,806	0	34,674	1,764
Number of charter schools	26	41	0	101	8
Percent of students eligible for meal subsidies	75%	72%	40%	77%	49%
Percent of students bused	52% (2012)	34%	42% (2011)	<1%	Unknown

Source: 21st Century School Fund,⁶³ school district data,⁶⁴ and census data⁶⁵

Profiled districts have used **controlled choice systems that prioritize neighborhood schools**. Denver, Seattle and Washington, D.C. use neighborhood attendance zones to determine school assignment, although each district **provides options for students to access schools outside their neighborhoods**. Boston has eliminated zones altogether, instead implementing a home-based model that prioritizes access to schools within a one-mile radius of students’ homes while ensuring that students have the ability to select high-performing schools if none exist in their neighborhoods. Profiled districts generally rely on school location and sibling priority to determine school assignments, and also consider

⁶² Data for PPS is from school year 2014 to 2015.

⁶³ Adapted from “Student-Assignment Policies in Other Cities.” 21st Century School Fund, November 19, 2013. p. 5. <http://dme.dc.gov/sites/default/files/dc/sites/dme/publication/attachments/Policy%20Brief%202%20-%20Other%20Cities%20Final%20Draft.pdf>

⁶⁴ [1] “About Portland Public Schools.” Portland Public Schools, 2014. <http://www.pps.k12.or.us/about-us/> [2] “School Profiles - Reports.” Portland Public Schools, 2014. <http://www.pps.k12.or.us/departments/data-analysis/9837.htm> [3] “Portland Public Schools Enrollment Forecasts.” Portland State University Population Research Center, August 2014. http://www.pps.k12.or.us/files/data-analysis/PSU-PPS_Report_1314.pdf [4] “Annual Budget.” Portland Public Schools, June 23, 2014. http://www.pps.k12.or.us/files/budget/2014_15_PPS_Adopted_Budget1.pdf

⁶⁵ “Portland (city) QuickFacts.” U.S. Census Bureau, October 14, 2015. <http://quickfacts.census.gov/qfd/states/41/4159000.html>

factors such as diversity, physical barriers, transportation, and distribution of at-risk students when determining school boundaries and priorities.

Districts have used a **variety of strategies to engage the community** in revising school boundaries and assignment systems, such as interactive websites, focus groups, surveys, community meetings and workgroups, and participatory advisory committees. Districts use websites, communications materials in multiple languages, letters, public service announcements and billboards, school expos and fairs, community meetings, and published school rankings to inform parents about policy changes and school choices. Despite community engagement strategies, however, the process of revising school boundaries or school assignment plans is often difficult due to large demand for high-performing schools and the confusing and complex nature of school assignments.

BOSTON PUBLIC SCHOOLS

Boston Public Schools' (BPS) school assignment process was redesigned in 2004 and again in 2013.⁶⁶ As mentioned in Section I, the district switched from the so-called Boston mechanism to SOM-based assignment in 2004.

In this algorithm, half of schools' seats were allotted for students with neighborhood or "walk-zone" priority, while half of seats were allotted for students without neighborhood priority.⁶⁷ From 1989 to 2013, zoning was **based on a three-zone system** originally implemented to desegregate the city's schools. The 2004 re-design process proposed a new system with four, six, or 12 zones, but BPS chose to retain the three-zone system under the new assignment algorithm.⁶⁸ However, this system was often cumbersome and confusing to parents—families had to select from approximately two dozen school choices over a large geographical area. In addition, this system often led to disadvantaged students being assigned to low-performing schools because these schools were closer to their homes.⁶⁹

As part of a mayor-led effort to improve families' confidence in school choice process and provide better school options close to families' homes, the district began searching for a new school assignment plan in 2012.⁷⁰ The mayor appointed a 27-member advisory committee—divided into data, equality, and community sub-committees—to identify and propose changes to the existing school assignment system. The committee conducted an intensive, year-long research process to develop a new plan, working closely with university

⁶⁶ [1] Abdulkadiroglu et al., Op. cit. [2] Dur, U. et al. "The Demise of Walk Zones in Boston: Priorities vs. Precedence in School Choice." October 2014. <http://economics.mit.edu/files/10007>

⁶⁷ Dur et al., Op. cit.

⁶⁸ Vaznis, J. "Boston School Committee Expected to Take Historic Vote on Student Assignment." *Boston Globe*, March 13, 2013. <http://www.bostonglobe.com/metro/2013/03/13/boston-school-committee-expected-take-historic-vote-student-assignment/WNqa3hYG1YNFgkTnEqV8NI/story.html>

⁶⁹ [1] Seligson, S. "Boston School Assignment Plan Marks New Era." BU Today, March 26, 2013. <http://www.bu.edu/today/2013/boston-school-assignment-plan-marks-new-era/> [2] Seelye, K.Q. "No Division Required in This School Problem." *New York Times*, March 12, 2013. <http://www.nytimes.com/2013/03/13/education/no-division-required-in-this-school-problem.html>

⁷⁰ Vaznis, "Boston School Committee Expected to Take Historic Vote on Student Assignment," Op. cit.

researchers and holding over 70 community meetings to solicit feedback on proposed plans.⁷¹

The new plan, designed by a doctoral student at the Massachusetts Institute of Technology, is a **home-based school assignment model that eliminated zones altogether**.⁷² The system still uses an SOM-based assignment algorithm, but does not consider walk-zone priority.⁷³ Under the new plan, parents receive customized lists of schools to choose from based on where the family lives. **Every school on the list is located within a one-mile radius of the family's home, but the list must include at least two top-performing schools** (in the top 25 percent) and at least four schools in the top 50 percent of the district's performance.⁷⁴ If schools within the one-mile radius do not meet these qualifications, the list will include the next nearest high-performing schools. In addition, lists may include schools further than one mile if the population of an area exceeds the number of available seats at a school. The algorithm guarantees a minimum of six choices, but each family typically receives a list of approximately 10 to 16 schools.⁷⁵ Families may rank as many choices as they wish.

In addition to considering school performance and neighborhood, the new plan makes assignments based on the following priorities:

- **Sibling priority:** Students that have siblings at the same school are given priority;
- **Feeder patterns:** Students attending certain early education or middle schools have priority at certain pathway/feeder schools; and
- **English language learning students and students with disabilities:** These students have access to a wider cluster of schools due to program availability.

BPS has used a variety of public outreach strategies to inform families about the new school assignment method and school choices, including:⁷⁶

- **Public service announcements and billboards** (see Figure 2.2).

⁷¹ [1] Seligson, Op. cit. [2] Seelye, Op. cit.

⁷² [1] Seelye, Op. cit. [2] "Student Assignment Policy." Boston Public Schools, 2014. <http://www.bostonpublicschools.org/assignment> [3] "How BPS Assigns Students." Boston Public Schools, 2015. <http://www.bostonpublicschools.org/Page/654> [4] "The Home-Based School Choice Plan." Boston Public Schools, 2015. <http://www.bostonpublicschools.org/Page/1024> [5] "How School Assignment Works In Boston." WBUR, November 20, 2014. <http://learninglab.wbur.org/topics/how-school-assignment-works-in-boston/>

⁷³ Pathak, P.A. and P. Shi. "Demand Modeling, Forecasting, and Counterfactuals: Part 1." January 2015. <http://arxiv.org/pdf/1401.7359v4.pdf>

⁷⁴ [1] "Student Assignment Policy," Op. cit. [2] "How School Assignment Works In Boston," Op. cit.

⁷⁵ [1] Vaznis, J. "Boston Parents Acclimate to School Choice System." Boston Globe, January 27, 2014. <https://www.bostonglobe.com/metro/2014/01/27/new-school-assignment-plan-causes-some-confusion-among-parents/GLORWdD0zdw3SvkAdpnSfM/story.html> [2] "Learn about Your School Choices." Boston Public Schools. <http://www.bostonpublicschools.org/domain/29>

⁷⁶ [1] "Learn about your school choices," Op. cit. [2] Vaznis, "Boston Parents Acclimate to School Choice System," Op. cit.

- **A total of 24 informational meetings** in neighborhoods throughout the city.
- **BPS' school registration website:**⁷⁷ The website allows parents to view their customized lists after entering their address and child's grade. Parents can also search for schools on a variety of criteria, from location to school hours to uniform policy.⁷⁸ In addition, the BPS' website explains the school assignment process and choices in thorough detail.⁷⁹ Documents describing the district's K-8 and high schools are available in eight languages.⁸⁰ BPS' website provides the following advice on navigating the registration process:⁸¹
 - Apply within the first registration period;
 - Select at least five choices;
 - List schools in order of true preference; and
 - Choose a variety of schools.
- **Annual school showcases and information sessions:** K-8 and high school showcases provide information about families' various school options. In addition, school registration information sessions take place in each neighborhood annually in November through January.⁸²

⁷⁷ "Discover BPS." Boston Public Schools. <http://www.discoverbps.org/>

⁷⁸ Scola, N. "How Boston Is Building the Hotels.com of Public Schools." Next City, November 14, 2013. <https://nextcity.org/daily/entry/how-boston-is-building-the-hotels.com-of-public-schools>

⁷⁹ "Student Assignment Policy," Op. cit.

⁸⁰ "Publications." Boston Public Schools, 2015. <http://www.bostonpublicschools.org/Page/304>

⁸¹ "When to Make Choices and Register." Boston Public Schools. <http://www.bostonpublicschools.org/Page/653>

⁸² "Learn about your school choices," Op. cit.

Figure 2.2: Example of Billboard Sponsored by Boston Public Schools to Advertise New School Choice Plan and Website



Source: Next City⁸³

Initial registration under the new system went smoothly,⁸⁴ but software glitches led to a delay in 9,000 students receiving their school assignments; some students did not receive assignments until just three weeks before classes started. For the 2015 school year, over six thousand students were assigned to schools that were not their first choices.⁸⁵

DENVER PUBLIC SCHOOLS

In 2010, Denver Public Schools began introducing the concept of “**shared enrollment zones**”—geographic areas in which students are guaranteed a seat at one of several schools but not at one particular school.⁸⁶ The district’s stated reasons for using shared boundary zones include:⁸⁷

- Increasing access to high-performing schools;
- Increasing access to transportation options;

⁸³ Scola, Op. cit.

⁸⁴ Vaznis, “Boston Parents Acclimate to School Choice System,” Op. cit.

⁸⁵ [1] “Boston Public Schools Superintendent Apologizes For Delayed Release Of School Assignment Lists.” iSchoolGuide, September 2, 2015. <http://www.ischoolguide.com/articles/24224/20150902/boston-public-schools-superintendent-release-school-assignment.htm> [2] Fox, J.C. “BPS Superintendent Chang Pledges Smooth Start despite Wait-List Woes.” Boston Globe, August 20, 2015. <https://www.bostonglobe.com/metro/2015/08/20/bps-superintendent-chang-pledges-smooth-start-despite-wait-list-woes/KITfTS9K0wenIXZH5wVAYM/story.html>

⁸⁶ [1] Robles, Y. and E. Gorski. “Denver Public Schools Looks to Better Integrate Schools through ‘Enrollment Zones.’” *Denver Post*, June 13, 2015. http://www.denverpost.com/news/ci_28305017/dps-looks-better-integrate-schools-through-enrollment-zones [2] “Shared Enrollment Zones.” Denver Public Schools. <http://face.dpsk12.org/community/shared-enrollment-zones/>

⁸⁷ Adapted from “Shared Enrollment Zones,” Op. cit.

- Prioritizing neighborhood students;
- Providing access to different types of school programs; and
- Helping schools to better plan for the right number of students.

The district's superintendent argues that the larger shared zones will promote integration and school choice within the district, saying:

"The narrower you draw your boundaries, the more likely you are to see schools that are less diverse. The broader you draw the zone, the more likely you are to draw greater diversity."⁸⁸

The district uses an **"opt-in" school choice process**, meaning that students are assigned to their default neighborhood or zoned schools, unless they decide to participate in the district's choice system.⁸⁹ Both district schools and charter schools are included in the school choice process. Families in shared enrollment zones have extra incentive to participate in the choice process, because their children would otherwise be randomly assigned to a school within the zone.

Through a centralized, annual application process, either paper or online, families can list up to five school choices in order of preference.⁹⁰ Final assignments are primarily based on **neighborhood and sibling priority**. Students are guaranteed a spot at their neighborhood school, but if a student lists a non-neighborhood school as the first choice, they may lose their guaranteed spot at their neighborhood school.⁹¹ The district states that it makes school assignments based on the following priority order:⁹²

- Students who, for various reasons, have a new residence school within Denver and wish to remain at the current school;

⁸⁸ Zubrzycki, J. "School Board Moves a Step Away from Neighborhood Middle Schools in Northwest Denver." Chalkbeat Colorado, June 18, 2015. <http://co.chalkbeat.org/2015/06/18/school-board-moves-another-step-away-from-neighborhood-middle-schools-in-northwest-denver/#.Vjfv3LerSUK>

⁸⁹ [1] Gross, B., M. DeArmond, and P. Denice. "Common Enrollment, Parents, and School Choice: Early Evidence from Denver and New Orleans." Center on Reinventing Public Education, May 2015. <http://www.crpe.org/sites/default/files/cpe-report-common-enrollment-denver-nola.pdf> [2] Zubrzycki, J. "In Denver Enrollment Zones, Charter Middle Schools Are Clear Favorite (and 4 Other Takeaways)." Chalkbeat Colorado, April 6, 2015. <http://co.chalkbeat.org/2015/04/06/in-denver-enrollment-zones-charter-middle-schools-are-clear-favorite-and-4-other-takeaways/#.VjjS27erTIW>

⁹⁰ Zubrzycki, "In Denver Enrollment Zones, Charter Middle Schools Are Clear Favorite (and 4 Other Takeaways)," Op. cit.

⁹¹ "2015-2016 SchoolChoice Enrollment Guide - Elementary Schools." Denver Public Schools, 2015. http://webforms.dpsk12.org/departments/communications/Guide_Elementary_web.pdf

⁹² Quoted verbatim from "Choice Brochure Document." Denver Public Schools. p. 3. <http://www.dpsk12.org/manila/departments/sts/ChoiceApplicationInformation.pdf>

- Students wishing to return to their residence school;
- Denver resident siblings of students currently enrolled and projected to be enrolled in the school for the next school year;
- Students residing in approved special transportation areas to those schools where transportation is provided;
- Other district resident applicants;
- Non-resident siblings of students projected to be enrolled in the school for the next school year; and
- Other non-resident applicants.

In addition, many magnet programs, innovation schools, traditional schools, and charter schools may develop their own priority criteria for selecting students.⁹³ Some schools, for example, may give priority to children of school staff.

The district uses several strategies to communicate information about school choice to families:

- **Enrollment guides and school rankings:** The district publishes annual guides in English and Spanish to assist parents in selecting district and charter schools.⁹⁴ The guide uses a “School Performance Framework” to code each school by performance: red for “on probation,” orange for “priority watch,” yellow for “on watch,” green for “meeting expectations,” and blue for “exceeding expectations.” These ratings are based on measures for academic growth, academic proficiency, college and career readiness, student engagement, enrollment rates, and parent satisfaction.⁹⁵ In addition, school profiles in the enrollment guide provide information about transportation, before- and after-school programming, breakfast and lunch, uniforms, and English language acquisition services.⁹⁶ An example of a school profile is provided in Figure 2.3 on the following page. Most parents in Denver rely heavily on the district’s performance rankings to select schools.⁹⁷

⁹³ “2015-16 Individual School Priorities.” Denver Public Schools, 2015. <http://schoolchoice.dpsk12.org/how-to-enroll-in-a-school/individual-school-priorities-pages/>

⁹⁴ [1] Gross, DeArmond, and Denice, Op. cit. [2] “2015-2016 SchoolChoice Enrollment Guide - Elementary Schools,” Op. cit. [3] “2015-2016 SchoolChoice Enrollment Guide - Middle and High Schools.” Denver Public Schools, 2015. http://webforms.dpsk12.org/departments/communications/Guide_Secondary_web.pdf

⁹⁵ “School Performance Framework.” Denver Public Schools. <http://spf.dpsk12.org/>

⁹⁶ [1] “2015-2016 SchoolChoice Enrollment Guide - Middle and High Schools,” Op. cit. [2] “2015-2016 SchoolChoice Enrollment Guide - Elementary Schools,” Op. cit.

⁹⁷ Gross, DeArmond, and Denice, Op. cit., p. 15.

Figure 2.3: Sample Denver Public Schools Enrollment Guide Profile of an Elementary School

COLFAX Elementary is a neighborhood school that puts children first so they can grow and excel. We teach Early Childhood Education through fifth grade, with instruction in English and Spanish. Our curriculum and after-school programs are designed to meet the needs of our students and community. Parents and community members are welcomed and encouraged to become a part of our learning team.

PROGRAMS:

- Preschool (ECE) • Preschool (ECE) in Spanish • Full-Day Kindergarten

- Full-Day Kindergarten in Spanish • PE • Computer Lab • Visual Arts

- Vocal Music • Dance • Library • Yoga • 21st-Century Learning Center

- Fit Fun & Literacy • Open World Learning • Tutoring

- ECE Model 1 Center-Based Program for ECE

-  Standard
-  PM
- 
- 
- 
- 



Principal: Eleanor Conger-Milnes
 Contact: (720) 424-8740
<http://colfax.dpsk12.org>
 1526 Tennyson St.

Grades Served: ECE to 5
 Estimated Enrollment: 423

Learn More
 Tours: 11/19, 9 a.m.;
 12/5, 1 p.m.; 1/17, 10 a.m.

SCHOOL PERFORMANCE FRAMEWORK RATINGS:

> OVERALL



> STUDENT ACADEMIC GROWTH



-  Breakfast
-  Lunch
-  Uniform
-  English Language Acquisition services

Source: Denver Public Schools⁹⁸

⁹⁸ “2015-2016 SchoolChoice Enrollment Guide - Elementary Schools,” Op. cit., p. 49.

- **Interactive website:** The district’s SchoolMatch website allows parents to search for school features important to them and review lists of matched schools. Parents may search for schools based on a variety of criteria, such as language or physical education services, meals offered, before- and after-school programming, performance rankings, special programs, athletics, and honors courses.
- **School fairs:** The district’s “Great Schools Expo” allows parents to speak with representatives from schools throughout the district to learn more about school options.⁹⁹
- **School visits:** Parents may schedule visits at individual schools to meet the principal, take a tour, or schedule a classroom visit.¹⁰⁰

In 2015, around 25,000 students participated in the school choice process, with around 95 percent being placed in one of their top five schools, while 78 percent were placed in their first-choice schools.¹⁰¹ Although a significant number of students were not placed in first-choice schools, district staff argue that this does not mean the system is not working. It simply means that some schools, especially certain charter schools, are much more popular than others and not all students can be assigned to their top choices.¹⁰² Ultimately, **an uneven supply of high-quality schools throughout the district can lead to dissatisfaction with school choices** when demand for high-quality schools exceeds the supply.¹⁰³ Parents at recent community meetings regarding school zones in Denver expressed concern over proposed middle school zoning plans, saying that new enrollment zones will not meet the demand for high-quality middle schools in the area.¹⁰⁴

A recent evaluation of the district’s school choice process lauded the simple enrollment process, but pointed out several problems.¹⁰⁵

- **Low-income students** are more likely than middle-income students to be assigned to their first choice schools, but this is because they **tend to select lower-quality schools** based on transportation.

⁹⁹ [1] “Discover a World of Opportunity at the DPS Great Schools Expo!” Denver Public Schools, 2015.

<https://www.dpsk12.org/expo/> [2] Gross, DeArmond, and Denice, Op. cit.

¹⁰⁰ “How to Choose a School.” Denver Public Schools. <http://schoolchoice.dpsk12.org/how-to-choose-a-school/>

¹⁰¹ Zubrzycki, “In Denver Enrollment Zones, Charter Middle Schools Are Clear Favorite (and 4 Other Takeaways),” Op. cit.

¹⁰² Ibid.

¹⁰³ Gross, DeArmond, and Denice, Op. cit.

¹⁰⁴ Zubrzycki, J. “Denver Parents Push for More Space in Neighborhood Middle Schools.” Chalkbeat Colorado, May 19, 2015. <http://co.chalkbeat.org/2015/05/19/denver-parents-push-for-more-space-in-comprehensive-middle-schools/#.VjjS3berTIV>

¹⁰⁵ DeGrow, B. “Report Finds Denver’s ‘SchoolChoice’ System Improves Enrollment, More Focus Needed on Performance.” Education Watchdog, January 20, 2015. <http://watchdog.org/194131/school-choice-study-denver/>

- **The higher the district ranks a school on performance, the less likely a student will be assigned to that school as a first choice.** Parents tend to prefer high-performing schools. However, researchers argue that the district’s performance ranking methods are flawed because too much emphasis is placed on year-to-year academic growth measures rather than proficiency measures that would be more meaningful for parents. A survey of Denver parents found that parents wanted more information about school culture, teachers’ approaches, and relationships between adult staff and students, and parents tend to find school visits to be the most helpful in identifying preferred schools.¹⁰⁶

SEATTLE PUBLIC SCHOOLS

Seattle Public Schools has made two major revisions to its school assignment plan in recent years—first in 2009 and again in 2013.¹⁰⁷ The 2009 change moved the district to a **neighborhood-based system** in an effort to simplify school assignments and address over- and under-enrollment,¹⁰⁸ using a version of the Boston mechanism to assign students to schools.¹⁰⁹ In this plan, each student is assigned to an elementary, middle, and high school based on their residence, but may apply to be admitted to a school in another area or a city-wide magnet school.¹¹⁰ **Attendance areas were based on demographic data and projections, proximity to school and walk zones, physical barriers, bus routes, and diversity.**

As a result of overcrowding and enrollment projections that predicted an increase of more than 10,000 students in the next decade, the district created new attendance boundaries for elementary and middle schools in 2013,¹¹¹ but did not change its neighborhood-based assignment policy.¹¹² A key component of the 2013 revision was changing around 20 percent of elementary school boundaries. Elementary schools were previously clustered around nine middle schools, but the new plan assigned some elementary schools to new middle schools to ease overcrowding.¹¹³

¹⁰⁶ Gross, DeArmond, and Denice, Op. cit., p. 19.

¹⁰⁷ [1] Higgins, J. “Seattle Redraws School Maps to Ease Overcrowding.” *Seattle Times*, September 18, 2013. <http://www.seattletimes.com/seattle-news/education/seattle-redraws-school-maps-to-ease-overcrowding/> [2] Higgins, J. “Seattle School Board OKs Boundary Plan.” *Seattle Times*, November 21, 2013. <http://www.seattletimes.com/seattle-news/education/seattle-school-board-oks-boundary-plan/> [3] Shaw, L. “Seattle Schools Return to Neighborhood-Based System.” *Seattle Times*, November 18, 2009. <http://www.seattletimes.com/seattle-news/seattle-schools-return-to-neighborhood-based-system/>

¹⁰⁸ Shaw, Op. cit.

¹⁰⁹ Pathak and Sonmez, Op. cit.

¹¹⁰ “Student-Assignment Policies in Other Cities,” Op. cit.

¹¹¹ [1] Higgins, “Seattle Redraws School Maps to Ease Overcrowding,” Op. cit. [2] “Growth Boundaries.” Seattle Public Schools, October 13, 2015. <http://sps.ss8.sharpschool.com/cms/one.aspx?portalId=627&pageId=17293>

¹¹² “Superintendent’s Procedures for Student Assignment.” Seattle Public Schools, December 10, 2014.

http://sps.ss8.sharpschool.com/UserFiles/Servers/Server_543/File/Migration/Families&Communities/3130SP.pdf

¹¹³ Higgins, “Seattle Redraws School Maps to Ease Overcrowding,” Op. cit.

The district's boundary review process was guided by the following principles:¹¹⁴

- Ground decisions in data;
- Create boundaries that reflect equitable access to services and programs;
- Maximize walkability;
- Enable cost-effective transportation;
- Maintain key elements of the current student assignment plan, including diversity, choice, and feeder patterns;
- Minimize disruptions by aligning new boundaries with current attendance area boundaries when feasible;
- Be mindful of fiscal impact; and
- Be responsive to family input to the extent feasible.

The district began phasing in the new boundaries in 2014 and will continue until construction and renovation of new schools is completed in 2020.¹¹⁵ The district holds community meetings each year to provide information about boundary changes and answer questions.¹¹⁶ In addition, the district's process for revising school boundaries involved several community engagement efforts, including:

- **A dedicated website** describing the boundary review process;
- **Informal meetings** and discussions to share ideas; and
- **Community meetings** throughout the district, with interpreters provided at each meeting.

¹¹⁴ Adapted almost verbatim from "Guiding Principles." Seattle Public Schools, 2013. http://www.seattleschools.org/UserFiles/Servers/Server_543/File/District/Departments/Enrollment%20Planning/Growth%20Boundaries/GB_guiding-principles-050813.pdf

¹¹⁵ [1] "Project Archive - Summary of the 2013 Growth Boundaries Project." Seattle Public Schools. <http://sps.ss8.sharpschool.com/cms/One.aspx?portalId=627&pageId=2756479> [2] "Maps for Future Years." Seattle Public Schools. <http://sps.ss8.sharpschool.com/cms/One.aspx?portalId=627&pageId=17300>

¹¹⁶ "Upcoming Community Meetings." Seattle Public Schools, September 21, 2015. <https://www.seattleschools.org/cms/One.aspx?portalId=627&pageId=2297605>

In September 2015, the School Board introduced amendments to the approved boundary changes due to parents' feedback—parents of students at a certain elementary school wanted their students to be assigned to their previously zoned middle school rather than the new middle schools.¹¹⁷ In addition, the Board is considering adjustments to its student assignment plan to address tiebreakers and other confusing aspects of the plan.¹¹⁸

Seattle school assignments are primarily based on attendance zones but families can request that their students be assigned to a school outside their attendance area through an annual open enrollment process.¹¹⁹ Parents may list several choice options that can include traditional schools as well as “option schools” such as STEM, college prep, or language immersion schools.¹²⁰ Assignments are based on school capacity, neighborhood zones, sibling priority, feeder patterns, and transportation zones.

A 2013 report by the 21st Century School Fund noted that the district has created extensive grandfathering policies and modifications to its student assignment plan and new school boundaries, creating additional costs for the district and confusion for families as the district must communicate policy changes on an annual basis.¹²¹

WASHINGTON, D.C. PUBLIC SCHOOLS

Washington, D.C. Public Schools conducted a ten-month planning process (see Figure 2.4 on the following page) from 2013 to 2014 to revise student assignment policies and school boundaries, resulting in a new student assignment plan beginning in the 2015 to 2016 school year.¹²² The goal of the process was to redraw boundaries to minimize over- or under-crowding, address travel and safety issues, prevent transfers to charter or suburban schools, and change confusing zoning policies that had resulted from school closures.¹²³ The

¹¹⁷ “Proposed Changes to Approved Boundaries.” Seattle Public Schools, September 25, 2015. <http://sps.ss8.sharpschool.com/cms/One.aspx?portalId=627&pageId=2411705>

¹¹⁸ [1] *Ibid.* [2] “Growth Boundaries,” *Op. cit.*

¹¹⁹ “Open Enrollment for School Choice (1).” Seattle Public Schools, 2015. <https://www.seattleschools.org/cms/One.aspx?portalId=627&pageId=19543>

¹²⁰ “Seattle Public Schools’ Option Schools.” Seattle Public Schools, February 20, 2015. <https://www.seattleschools.org/cms/One.aspx?portalId=627&pageId=19699>

¹²¹ “Student-Assignment Policies in Other Cities,” *Op. cit.*

¹²² “Student Assignment and School Boundaries Review Process.” Government of the District of Columbia, Office of the Deputy Mayor for Education, 2015. <http://dme.dc.gov/book/student-assignment-and-school-boundaries-review-process>

¹²³ [1] Brown, E. “D.C. Releases Proposed School Boundaries and Far-Reaching Student Assignment Policies.” *Washington Post*, April 5, 2014. https://www.washingtonpost.com/local/education/dc-releases-proposed-school-boundaries-and-far-reaching-student-assignment-policies/2014/04/05/368521e0-bc46-11e3-96ae-f2c36d2b1245_story.html [2] Brown, E. “D.C. Releases New Boundaries Proposal with Emphasis on Neighborhood Schools.” *Washington Post*, June 12, 2014. https://www.washingtonpost.com/local/education/dc-releases-new-boundaries-proposal-with-emphasis-on-neighborhood-schools/2014/06/12/828e30b0-f245-11e3-914c-1fbd0614e2d4_story.html

boundary review process was the first major boundary change for D.C. schools in 40 years.¹²⁴

The Office of the Deputy Mayor for Education worked with an advisory committee of parents, community members, and other experts to review student assignment policies, district school boundaries, and feeder patterns. The advisory committee contracted the 21st Century School Fund to assess current school assignment policies and demographic projections in the district and analyze school choice policies in other cities. These data informed the committee's policy recommendations.¹²⁵ In addition, the **committee solicited community feedback through several methods:**¹²⁶

- **Focus groups:** The advisory committee conducted 22 focus groups for 177 participants, mostly parents of school-age children. An additional focus group was added late in the process to ensure participation from a traditionally underserved area of the city.¹²⁷
- **Community working group meetings:** Community working groups were held in three locations throughout the city to provide information about the school boundary review process and solicit community input.
- **Online forum:** An online forum provided a venue for the public to review materials from advisory committee meetings and share ideas.
- **City-wide community dialogues:** After proposed policy recommendations were released, the advisory committee held three community meetings throughout the city. At each meeting, breakout groups discussed how the proposed policies would affect specific high schools and corresponding feeder schools.¹²⁸

¹²⁴ Chandler, M.A. and A.C. Davis. "Bowser Announces 'tweaks' to D.C. School Boundary Plan." *Washington Post*, February 27, 2015. https://www.washingtonpost.com/local/education/bowser-announces-tweaks-to-dc-school-boundary-plan/2015/02/27/b5f33f34-be2f-11e4-bdfa-b8e8f594e6ee_story.html

¹²⁵ [1] "Student Assignment and Choice Policy in the District of Columbia." 21st Century School Fund, October 25, 2013. http://dme.dc.gov/sites/default/files/dc/sites/dme/publication/attachments/Policy%20Brief%201%20-%20DC%20Student%20Assignment%20and%20Choice%20Policy%20DRAFT_0.pdf [2] "Student-Assignment Policies in Other Cities," Op. cit. [3] "The Landscape for Student Assignment and School Choice in D.C." 21st Century School Fund, January 2014. http://dme.dc.gov/sites/default/files/dc/sites/dme/publication/attachments/Policy%20Brief%203_The%20Landscape%20for%20Student%20Assignment%20and%20School%20Choice_Jan%20DRAFT_0.pdf

¹²⁶ "Getting Involved and Timeline." Government of the District of Columbia, Office of the Deputy Mayor for Education, 2014. <http://dme.dc.gov/book/student-assignment-and-school-boundaries-review-process/getting-involved-and-timelin>

¹²⁷ "D.C. Student-Assignment Focus Groups." 21st Century School Fund, March 17, 2014. http://dme.dc.gov/sites/default/files/dc/sites/dme/publication/attachments/Fcus%20Grp%20Rpt%20Anlys%20FINAL%20DRAFT_3-17.pdf

¹²⁸ "Join the Conversation: Student Assignment and DCPS School Boundaries Review Process." D.C. Public Schools, 2014. http://dme.dc.gov/sites/default/files/dc/sites/dme/publication/attachments/June%20Meetings%20flier_0.pdf

- **Online survey:** An online survey solicited community feedback on the initial draft of policy recommendations.

Figure 2.4: Washington, D.C. Public Schools Timeline for School Boundary Review Process

ACTIVITY TYPE	OCT. 2013	NOV. 2013	DEC. 2013	JAN. 2014	FEB. 2014	MAR. 2014	APR. 2014	MAY 2014	JUN. 2014	JULY. 2014	AUG. 2014	SEPT. 2014
Boundary revision	Advisory committee meetings							Proposed policies released	Meeting	Final report	Final meeting	Final plan released
Research	Technical research and analysis					Develop recommendations		Proposed policies released	Revise recommendations			
Community engagement	Focus groups, surveys, and small group meetings					Working group meetings		City-wide meetings				

Source: Office of the Deputy Mayor for Education¹²⁹ and D.C. Public Schools¹³⁰

Information about the new school boundaries was communicated to parents and the public through:

- **Press releases;**¹³¹
- **Online materials and maps:** Documents such as the new student assignment plan,¹³² frequently asked questions,¹³³ implementation plan, and boundary tweaks¹³⁴ were posted on the Office of the Deputy Mayor for Education’s website. Important documents, such as flyers for community meetings and the document describing the new boundary plan, were provided in six languages: English, Spanish, French, Amharic, Chinese, and Vietnamese.¹³⁵ An interactive map provided by the Washington Post allowed parents to look up specific addresses or schools re-

¹²⁹ “Timeline Table.” Government of the District of Columbia, Office of the Deputy Mayor for Education, 2014. <http://dme.dc.gov/node/734972>

¹³⁰ “Boundaries and Feeder Planning.” District of Columbia Public Schools, 2014. <http://dcps.dc.gov/boundaries>

¹³¹ [1] “DC Advisory Committee on Student Assignment Releases Its Final Recommendations.” DC Advisory Committee on Student Assignment, August 21, 2014. <http://dme.dc.gov/sites/default/files/dc/sites/dme/publication/attachments/Advisory%20Committee%20Press%20Release%20-%20Final.pdf> [2] “Mayor Gray, Citing Need to Continue Progress on Education Reform, Accepts Committee’s Final Recommendations on Student Assignment Policies and DCPS Boundaries.” Government of the District of Columbia, Executive Office of the Mayor, Office of Communications, August 21, 2014. http://dme.dc.gov/sites/default/files/dc/sites/dme/publication/attachments/DCPS_Boundaries_Press%20Release%20COS-Comms%20FINAL.pdf

¹³² “Student Assignment and School Boundaries - DCPS Summary of SY15-16 Implementation Plan - October 2014.” Government of the District of Columbia, Office of the Deputy Mayor for Education, November 3, 2014. <http://dme.dc.gov/node/945162>

¹³³ [1] Ibid. [2] “Implementation Plan March 2015.” Government of the District of Columbia, Office of the Deputy Mayor for Education, June 2, 2015. <http://dme.dc.gov/node/1072102>

¹³⁴ “Boundary and School Assignment Tweaks (February 2015).” Government of the District of Columbia, Office of the Deputy Mayor for Education, February 27, 2015. <http://dme.dc.gov/node/1018112>

¹³⁵ [1] “Getting Involved and Timeline,” Op. cit. [2] “Final Recommendations on Student Assignment Policies and DCPS School Boundaries - August 2014.” Government of the District of Columbia, Office of the Deputy Mayor for Education, August 21, 2014. <http://dme.dc.gov/node/885172>

assigned to new zones.¹³⁶ Finally, the district's Enrollment Boundary Information System allows families to search for schools assigned to their home address,¹³⁷ and the district's LearnDC website allows parents to review comprehensive profiles of each school.¹³⁸

- **Parent letters:** Parent letters, also available in six languages, provided an overview of boundary changes.¹³⁹

Despite community engagement throughout the boundary review process, the Washington Post reported that redrawing school boundaries was “emotional and politically heated because of a dramatic variation in the quality of the city's schools.”¹⁴⁰ The advisory committee's initial recommendations proposed replacing neighborhood schools with lottery admissions, which was met with enormous resistance.¹⁴¹ The final approved plan **preserved a neighborhood school system while providing pathways for children to gain access to schools outside their immediate neighborhoods.** Key components of the new school assignment and boundary plan include:¹⁴²

- Assigning each home address to one elementary, middle, and high school, eliminating previous policies that allowed students to be zoned to multiple schools;
- Converting existing K-8 schools to elementary schools and assigning older students to three new neighborhood middle schools;
- Allowing students in re-zoned schools to stay in their former school if they have a sibling attending the school;
- Opening a new application-only middle school in an underserved area of the city;
- Creating smaller attendance zones for some in-demand schools;

¹³⁶ Mellnik, T., E. Chow, and K. Park. “D.C.’s New School Boundaries for 2015.” Washington Post, August 21, 2014.

<http://www.washingtonpost.com/wp-srv/special/local/dc-school-zones/>

¹³⁷ “EBIS - Enrollment Boundary Information System.” District of Columbia Public Schools.

<http://dcatlas.dcgis.dc.gov/schools/>

¹³⁸ “LearnDC.” Government of the District of Columbia, Office of the State Superintendent of Education.

<http://learndc.org/>

¹³⁹ [1] “DCPS Parent Letter.” Government of the District of Columbia, Office of the Deputy Mayor for Education, August 21, 2014. <http://dme.dc.gov/node/885142> [2] “DCPS Parent Letter - October 2014.” Government of the District of Columbia, Office of the Deputy Mayor for Education, November 5, 2014.

<http://dme.dc.gov/node/946332> [3] “Getting Involved and Timeline,” Op. cit.

¹⁴⁰ Chandler and Davis, Op. cit.

¹⁴¹ Brown, “D.C. Releases New Boundaries Proposal with Emphasis on Neighborhood Schools,” Op. cit.

¹⁴² [1] Chandler, M.A. and M. DeBonis. “D.C. Mayor Gray Adopts New School Boundary Recommendations.”

Washington Post, August 21, 2014. https://www.washingtonpost.com/local/education/dc-mayor-gray-adopts-new-school-boundary-recommendations/2014/08/21/9fed7d4a-249b-11e4-8593-da634b334390_story.html [2]

Brown, “D.C. Releases Proposed School Boundaries and Far-Reaching Student Assignment Policies,” Op. cit. [3]

Brown, “D.C. Releases New Boundaries Proposal with Emphasis on Neighborhood Schools,” Op. cit.

- Allowing students zoned for Title I schools to attend preschool in these schools, replacing a previous preschool lottery system; and
- Setting aside 10 percent of elementary school seats, 15 percent of middle school seats, and 20 percent of high school seats for out-of-boundary students to better distribute at-risk and disadvantaged students by giving at-risk students priority status for out-of-boundary seats in affluent schools.

The school assignment system uses a lottery in which students can rank up to 12 school choices. Families submit rankings via the My School DC online portal, which also allows students to search for schools by grade and location and find key information about schools, such as transportation options and average reading and math scores for each school.¹⁴³

Students are given priority status for school assignment based on:¹⁴⁴

- **In-boundary preference for pre-school students:** Priority is given to preschool students to attend schools in their neighborhood.
- **Sibling preference:** Students with a sibling attending a specific school for the current or upcoming year are given preference for that school.
- **Proximity preference:** Students who are zoned for an elementary school that is more than a half mile from their home are given preference in the lottery for a school that is within a half mile of their home address.

D.C. mayor Muriel Bowser, elected after the school boundary review process was completed, was concerned that the new boundaries would still lead to increased racial disparities in the district, arguing that the new boundaries relied too heavily on physical barriers, such as green spaces and rivers, to determine attendance zones.¹⁴⁵ In 2015, she implemented several “tweaks” to the new attendance boundaries to allow students to have more access to sought-after high schools.¹⁴⁶ Changes included extending the phase-in policy

¹⁴³ “My School DC.” D.C. Public Schools. <http://www.myschooldc.org/>

¹⁴⁴ “My School DC Lottery and Enrollment Policy Handbook.” D.C. Public Schools, February 23, 2015. <http://dcps.dc.gov/sites/default/files/dc/sites/dcps/publication/attachments/Lottery%20Policy%20Handbook4.pdf>

¹⁴⁵ Chandler and Davis, Op. cit.

¹⁴⁶ [1] Ibid. [2] “Frequently Asked Questions - Tweaks to the Student Assignment Policies and DCPS School Boundary Recommendations.” Government of the District of Columbia, Office of Mayor Muriel Bowser, February 27, 2015. <http://dme.dc.gov/sites/default/files/dc/sites/dme/publication/attachments/Boundary%20Tweaks%20FAQ%20282%29.pdf> [3] “Mayor Bowser Unveils Tweaks to Student Assignment Plan; Announces State Superintendent of Education.” Government of the District of Columbia, Office of Mayor Muriel Bowser, February 27, 2015. http://dme.dc.gov/sites/default/files/dc/sites/dme/publication/attachments/Boundaries%20Release%2028February%202015%29%20_0.pdf [4] “Grandfather and Boundaries Graphic.” Government of the District of Columbia, Office of Mayor Muriel Bowser, February 27, 2015. <http://dme.dc.gov/sites/default/files/dc/sites/dme/publication/attachments/grandfather%20and%20boundaries%20graphics.pdf>

for families assigned to new middle schools; and allowing certain middle school students to have two high school options.

APPENDIX A: TOOLS AND MAPS

This table lists examples of maps and other tools that school districts mentioned in this report have used to communicate information about school assignment processes and boundaries.

Figure A.3.1: School District Tools and Maps Communicating Information about School Boundaries and

SCHOOL DISTRICT	RESOURCE DESCRIPTION
Boston Public Schools	<ul style="list-style-type: none"> ▪ School registration website¹⁴⁷ and school choice information available on district website,¹⁴⁸ including a description of the assignment plan available in several languages,¹⁴⁹ advice on registering,¹⁵⁰ and answers to frequently asked questions¹⁵¹ ▪ School listing and map¹⁵²
Denver Public Schools	<ul style="list-style-type: none"> ▪ School choice information available on district website,¹⁵³ including general information about the school assignment process, shared enrollment zone information,¹⁵⁴ list of individual school priorities,¹⁵⁵ a school finder search function¹⁵⁶, and answers to frequently asked questions¹⁵⁷ ▪ Annual enrollment guides in English and Spanish for elementary, middle, and high schools, including school performance rankings¹⁵⁸ ▪ SchoolMatch website¹⁵⁹
Seattle Public Schools	<ul style="list-style-type: none"> ▪ Archived information about 2013 boundary review process¹⁶⁰ ▪ Maps of school boundaries by year through 2020¹⁶¹ ▪ Instructions for the open enrollment process¹⁶²

¹⁴⁷ “Discover BPS,” Op. cit.

¹⁴⁸ [1] “Learn about your school choices,” Op. cit. [2] “How BPS assigns students,” Op. cit.

¹⁴⁹ “The Home-Based School Choice plan,” Op. cit.

¹⁵⁰ “When to Make Choices and Register,” Op. cit.

¹⁵¹ “Frequently Asked Questions.” Boston Public Schools. <http://www.bostonpublicschools.org/Page/223>

¹⁵² “School Listings.” Boston Public Schools. <http://www.bostonpublicschools.org/domain/175>

¹⁵³ [1] “How to choose a school,” Op. cit. [2] “New Student Enrollments.” Denver Public Schools. <http://schoolchoice.dpsk12.org/how-to-enroll-in-a-school/new-student-enrollment/>

¹⁵⁴ “Shared Enrollment Zones,” Op. cit.

¹⁵⁵ “2015-16 Individual School Priorities,” Op. cit.

¹⁵⁶ “Find Your Neighborhood Denver Public Schools.” Denver Public Schools. <http://schoolfinder.dpsk12.org/>

¹⁵⁷ “FAQs.” Denver Public Schools. <http://schoolchoice.dpsk12.org/contact/frequently-asked-questions-2/>

¹⁵⁸ [1] “2015-2016 SchoolChoice Enrollment Guide - Elementary Schools,” Op. cit. [2] “2015-2016 SchoolChoice Enrollment Guide - Middle and High Schools,” Op. cit.

¹⁵⁹ “SchoolMatch.” Denver Public Schools. <http://schoolmatch.dpsk12.org/>

¹⁶⁰ “Project Archive - Summary of the 2013 Growth Boundaries project,” Op. cit.

¹⁶¹ [1] “Growth Boundaries,” Op. cit. [2] “Maps by Year.” Seattle Public Schools. <http://sps.ss8.sharpschool.com/cms/one.aspx?portalId=627&pageId=17296>

¹⁶² “Open Enrollment for School Choice (1),” Op. cit.

SCHOOL DISTRICT	RESOURCE DESCRIPTION
<p>Washington, D.C. Public Schools</p>	<ul style="list-style-type: none"> ▪ Various communication materials and reports regarding the boundary review process, including: timeline,¹⁶³ parent letters in multiple languages,¹⁶⁴ final recommendations,¹⁶⁵ information about boundary tweaks,¹⁶⁶ and boundary change implementation plan¹⁶⁷ ▪ Searchable boundary information system to identify schools assigned to specific home addresses¹⁶⁸ ▪ My School DC website, an online portal where families can search for schools and submit school choice preferences¹⁶⁹ ▪ Washington Post boundary map¹⁷⁰ ▪ LearnDC website, which provides comprehensive school profiles developed by the D.C. Office of the State Superintendent of Education¹⁷¹

¹⁶³ "Getting Involved and Timeline," Op. cit. [2] "Timeline Table," Op. cit.

¹⁶⁴ [1] "DCPS Parent Letter," Op. cit. [2] "DCPS Parent Letter - October 2014," Op. cit.

¹⁶⁵ "Final Recommendations on Student Assignment Policies and DCPS School Boundaries - August 2014," Op. cit.

¹⁶⁶ [1] "Boundary and School Assignment Tweaks (February 2015)," Op. cit. [2] "Frequently Asked Questions - Tweaks to the Student Assignment Policies and DCPS School Boundary Recommendations," Op. cit.

¹⁶⁷ [1] "Implementation Plan March 2015," Op. cit. [2] "Student Assignment and School Boundaries - DCPS Summary of SY15-16 Implementation Plan - October 2014," Op. cit.

¹⁶⁸ "EBIS - Enrollment Boundary Information System," Op. cit.

¹⁶⁹ "My School DC," Op. cit. [2] "My School DC Lottery and Enrollment Policy Handbook," Op. cit.

¹⁷⁰ Brown, "D.C. Releases Proposed School Boundaries and Far-Reaching Student Assignment Policies," Op. cit.

¹⁷¹ "LearnDC," Op. cit.

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