

GRADE-LEVEL FEASIBILITY: EXECUTIVE SUMMARY

Prepared for Alexandria City Public Schools

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In the following document, Hanover Research summarizes key findings from a series of studies that evaluated the feasibility of different PK-12 grade level configurations.

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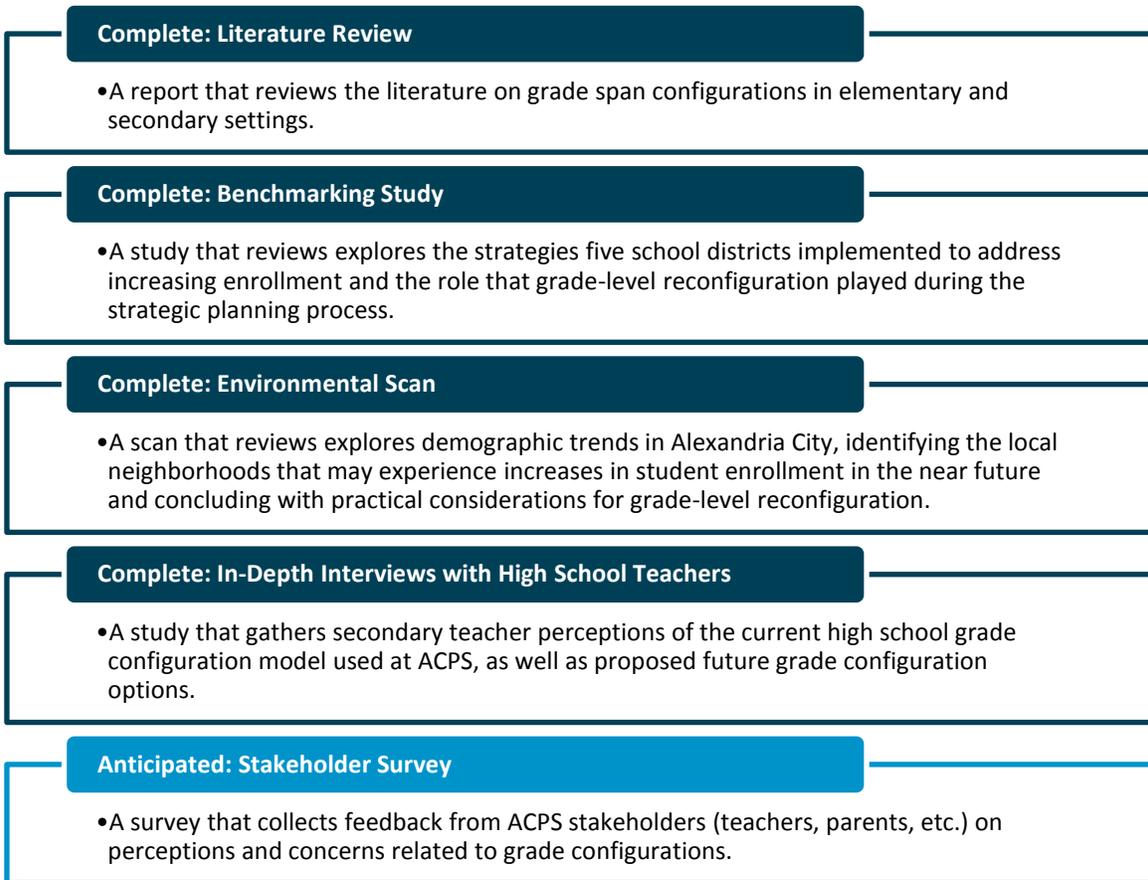
EXECUTIVE SUMMARY

INTRODUCTION

The following document comprises an executive summary of key findings from a series of reports by Hanover Research (Hanover) delivered to Alexandria City Public Schools (ACPS) that assess the feasibility of PK-12 grade level configurations. In the last decade, ACPS experienced large increases in student enrollment, creating overcrowding and space constraints at the Division’s schools. To confront this challenging trend of overpopulation, ACPS has considered reconfiguring grade levels across schools and/or building an additional facility. Overall, ACPS aims to identify solutions to address the increasing student populations by establishing a long-term plan for grade-level feasibility and sustainability.

Hanover’s research agenda to date included four distinct projects, and is anticipated to include a survey within the next twelve months. Figure A provides an overview of the research agenda.

Figure A: Hanover’s Research Agenda



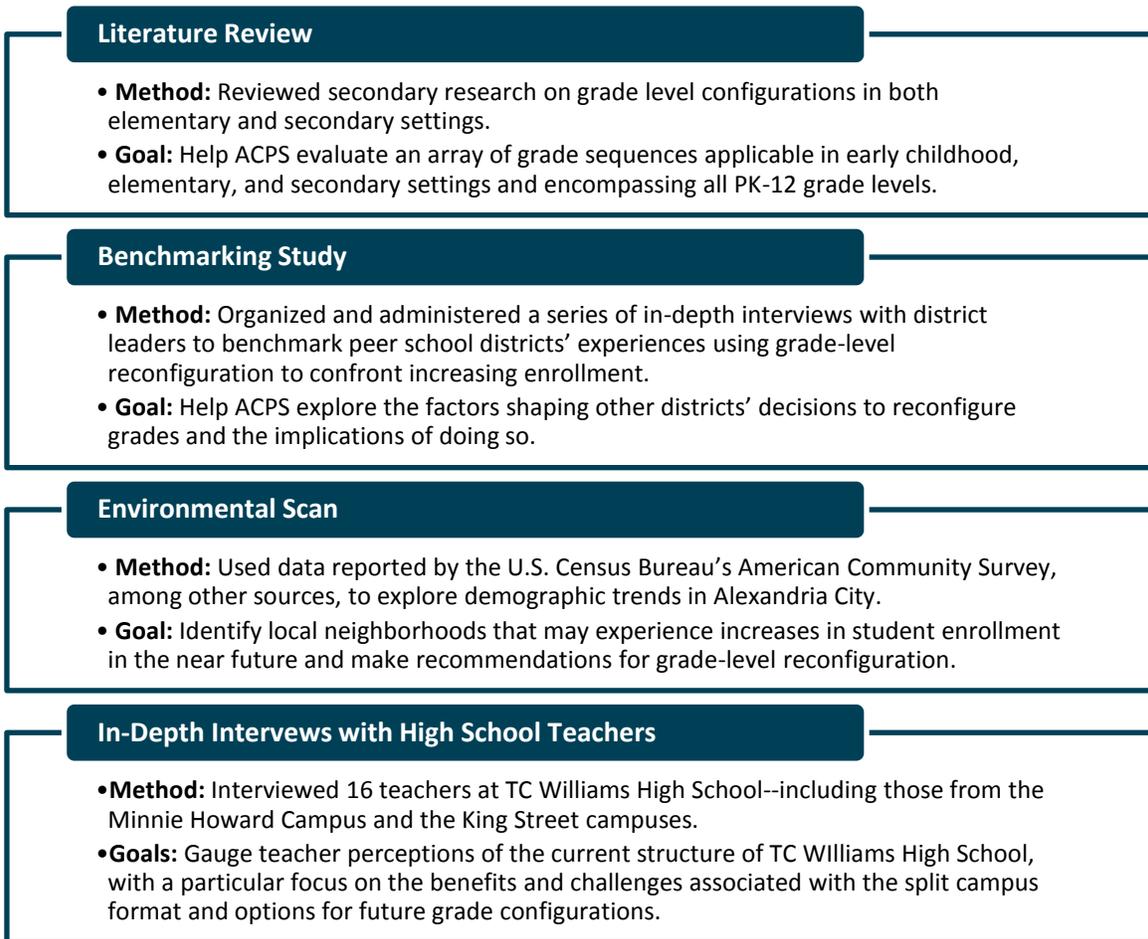
This summary proceeds in two sections. Section I reviews the methodologies of the studies completed to date, linking research approach with the research agenda's goals. Section II synthesizes these studies' key findings as they correspond with prominent themes, such as what demographic trends in ACPS' local neighborhoods may impact school enrollment, how districts typically address rising enrollment, best practices in deciding whether to reconfigure grades to address rising enrollment, and features of effective grade level configurations.

SECTION I: A REVIEW OF METHODOLOGIES

To assess the feasibility of PK-12 grade level configurations, Hanover took a comprehensive, multi-methods research approach. In this section, Hanover describes each of the projects' methodologies in detail, linking research approach with the research agenda's goals.

Below, Figure 1.1 briefly summarizes the methodology and goal of each project.

Figure 1.1: Summary of Research Methodologies



LITERATURE REVIEW

In November 2016, Hanover conducted a review of secondary research on grade level configurations in both elementary and secondary settings. When possible, this review relied on data-driven studies. Hanover reviewed several online databases to identify high-quality studies to address this topic, including ProQuest, EBSCOHost, ERIC, and the U.S. Department of Education. Secondary anecdotal literature supplements research-based findings from these studies throughout the report to offer a holistic assessment of the

major grade configuration models available to public school districts similar to ACPS. Overall, the central aim of this review is to help ACPS evaluate an array of grade sequences applicable in early childhood, elementary, and secondary settings and encompassing all PK-12 grade levels.

BENCHMARKING STUDY

In November 2016 through February 2017, Hanover organized and administered a series of in-depth interviews with district leaders to benchmark peer school districts' experiences using grade-level reconfiguration to confront increasing enrollment. The following sub-sections detail three components of this environmental scan's methodology (see Figure 1.2).

Figure 1.2: Methodological Components



Overall, the central aim of this benchmarking study was to help ACPS explore the factors shaping other districts' decisions to reconfigure grades and the implications of doing so.

SAMPLE DEVELOPMENT

To draft an initial sample of target school districts for outreach, Hanover identified school districts associated with the fastest-growing U.S. Metropolitan Statistical Areas (MSAs) based on an analysis of population change from April 1, 2010, to July 1, 2015. This analysis used data reported by the U.S. Census Bureau.¹ Analysts then used the National Center for Education Statistics' (NCES) database search tool to identify the public K12 education providers serving these regions and enrolling at least 10,000 students.² This step produced a total of 60 potential school districts likely to have experienced increases in student populations in recent years.

SAMPLE OUTREACH

After identifying these school districts, interview outreach (conducted via email) targeted districts similar to ACPS in size as defined by: student enrollment between 10,000 and 30,000 students and/or 50 or fewer total schools. Outreach efforts also focused on districts that considered or employed grade-level reconfiguration as a strategy for managing increasing enrollment. Ultimately, Hanover conducted phone interviews with respondents across five school districts, two of which requested complete anonymity (see Figure 1.3 for details).

¹ "American FactFinder - Advanced Search." U.S. Census Bureau. <http://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>

² "Search for Public School Districts." National Center for Education Statistics. <https://nces.ed.gov/ccd/districtsearch/>

Figure 1.3: Summary of Qualitative Data Collection

PARTICIPANT	PARTICIPANT TITLE	DISTRICT	STATE
Josh Hensley	Planning Coordinator	Aurora Joint District 28	CO
Terry Worcester	Director of Planning and Design	Scottsdale Unified School District	AZ
Scott McCully	Executive Director for Planning and Student Placement	Charlotte-Mecklenburg Schools	NC
Respondent 1	--	Anonymous District 1	--
Respondent 2	--	Anonymous District 2	--

IN DEPTH INTERVIEW GUIDE DESIGN

In collaboration with ACPS, Hanover developed an interview guide that contained questions tailored to district responses to growing enrollment. The complete guides are available in the interview protocol previously delivered to ACPS.

In brief, these questions focused on:

- Recent changes in enrollment
- Solutions districts used to address increasing enrollment
- Why districts chose to reconfigure grades
- How districts chose to reconfigure grades
- Challenges districts faced when reconfiguring grades
- Outcomes from reconfiguring grades

ENVIRONMENTAL SCAN

In February 2017, Hanover used data reported by the U.S. Census Bureau’s American Community Survey to explore demographic trends in Alexandria City. The following sub-sections detail three components of this environmental scan’s methodology (see Figure 1.4).

Figure 1.4: Methodological Components



Overall, the central aim of this study was to identify the local neighborhoods that may experience increases in student enrollment in the near future and make practical considerations for grade-level reconfiguration based on those demographic trends.

AMERICAN COMMUNITY SURVEY (ACS) DATA

All data used to assess demographic trends in Alexandria City were derived from the American Community Survey (ACS).³ The ACS is a survey administered by the U.S. Census Bureau to a subpopulation of residents every month, containing a range of questions that focus on age, sex, race, education, income, occupation, and many other personal characteristics.⁴ Estimates were taken from five ACS 5-Year Summary Files that contain aggregated demographic data from 2011 to 2015 for small geographic areas. These data were extracted from the U.S. Census Bureau’s American FactFinder database.

GEOGRAPHIC SCOPE

To provide ACPS with the most detailed analysis of regional population change, Hanover analyzed data that reflect two geographic levels: Zip Code Tabulation Areas (ZCTAs) and census tract estimates. ZCTAs are closely related to the U.S. Postal Service’s ZIP Code service areas; however, because the Postal Service uses ZIP Codes to inform mail delivery routes—not to define population features—ZCTAs allow the Census Bureau to segment population and housing data into more clearly-demarcated geographic zones. Census tracts are “small, relatively permanent statistical subdivisions of a county or equivalent entity that [...] have a population size between 1,200 and 8,000 people.”⁵ Census tracts are typically embedded within ZCTAs and are often bordered by “visible or identifiable features.”⁶ Census tracts are regularly understood as neighborhood-level communities that range in geospatial size depending on the density of their resident populations.⁷

Unfortunately, the American FactFinder does not match a state’s ZCTAs to other geographic units, including Virginia’s counties or school divisions. To determine which ZCTAs correspond with ACPS’s geographic domain, Hanover consulted the Missouri Census Data Center’s (MCDC) Geographic Correspondence Engine, a database that allows users to match geocodes.⁸ The six ZCTAs that correspond with ACPS as reported by the MCDC are illustrated in a map provided in Panel A in Figure 1.5 on the next page.⁹ In total, 38 census tracts, otherwise referred to as neighborhoods, lie within Alexandria City’s ZCTAs (see Panel B in Figure 1.5). A map of these census tracts can be found [here](#).

³ “American Community Survey: Methodology.” U.S. Census. <https://www.census.gov/programs-surveys/acs/methodology.html>

⁴ “ACS Information Guide.” U.S. Census Bureau. <https://www.census.gov/programs-surveys/acs/about/information-guide.html>

⁵ “Geographic Terms and Concepts - Census Tract.” U.S. Census Bureau. https://www.census.gov/geo/reference/gtc/gtc_ct.html

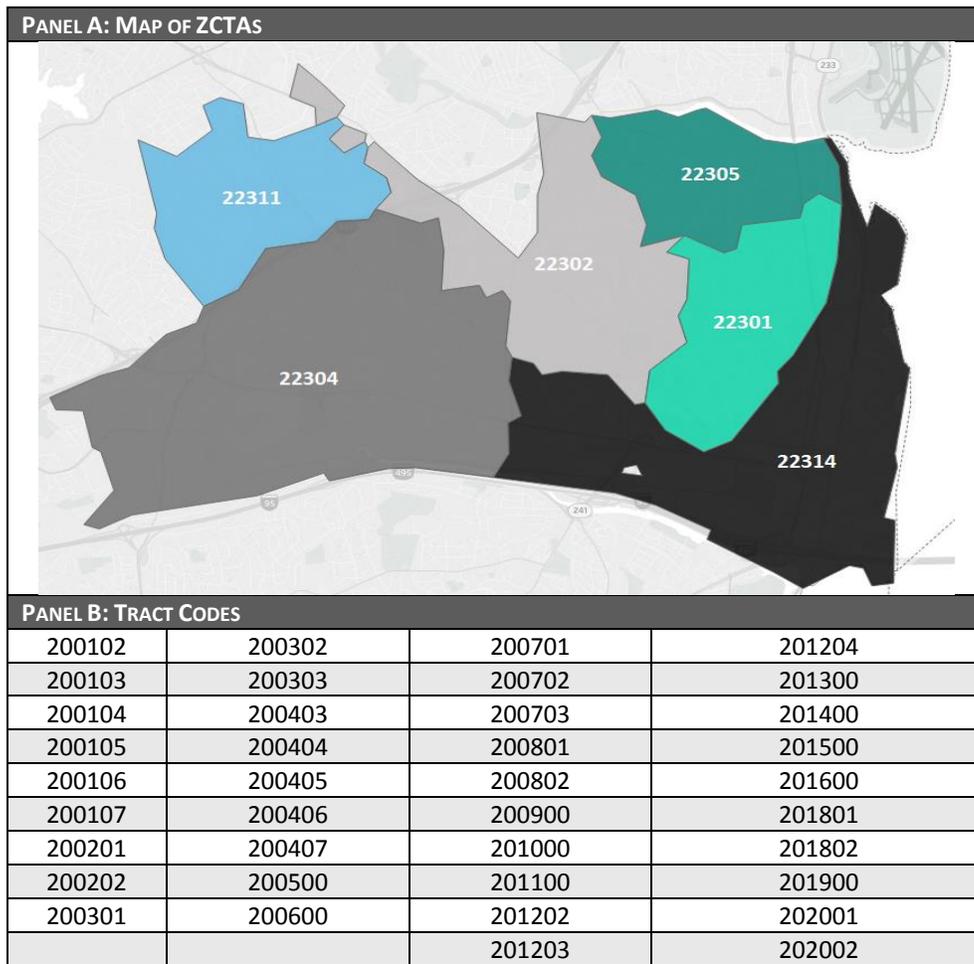
⁶ *Ibid.*

⁷ *Ibid.*

⁸ “Geographic Correspondence Engine.” Missouri Census Data Center. <http://mcdc.missouri.edu/websas/geocorr12.html>

⁹ It should be noted that the boundaries of two ZCTAs, areas 22206 in Shirlington and 22312 in Lincolnia, overlap with ACPS but are excluded from this list because the proportion of their boundaries that lie within ACPS are relatively small.

Figure 1.5: ZCTAs and Census Tracts in Alexandria City Public Schools



Source: Missouri Census Data Center,¹⁰ map made using Tableau software.

VARIABLE OF INTEREST AND ANALYTICAL STRATEGY

Using the American Factfinder, Hanover collected multiple ACS data files that contain demographic measures relevant to ACPS’s interest in grade-level feasibility and potential reconfiguration. In total, the data reflect five-year trends in family residency and fertility estimates, student-aged population and race estimates, income estimates, and mobility estimates. For every ACS measure, Hanover discussed population change over time, citing how these rates of change, if held constant, can be used to understand population growth in the years to come. For a more in-depth examination, Hanover identified top areas (ZCTAs and census tracts, where appropriate) with large and fast growth. Aside from an analysis of this data, information obtained from secondary sources about population change and projected growth in the region were included in the discussion to help contextualize findings.

¹⁰ Ibid.

IN-DEPTH INTERVIEWS WITH HIGH SCHOOL TEACHERS

This study focused on gathering perceptions of current teachers surrounding the impact of the split campus model and Ninth Grade Academy on both the Minnie Howard and King Street campuses.

SAMPLE DEVELOPMENT & OUTREACH

This report involved qualitative research findings from 16 in-depth interviews with TC Williams High School teachers conducted during fall 2017. Hanover recruited interview participants using a list provided by ACPS. In conducting outreach, Hanover made best efforts to recruit teachers from a variety of subjects, and with different levels of tenure at the district. In two cases, participants answered interview questions in a written format rather than over the phone. All teachers interviewed for the study remain anonymous.

INTERVIEW GUIDE DESIGN

In collaboration with ACPS, Hanover developed an interview guide that contained questions tailored to TC Williams High School's current design and structure. A complete in-depth interview guide is provided in the interview protocol previously delivered to ACPS. Questions presented to teachers focused on two major themes:

- Perceptions of the current split campus model
- Thoughts on potential future grade configuration options

SECTION II: KEY FINDINGS AND THEMES

Hanover’s multi-method research approach uncovered several findings on the feasibility of PK-12 grade level configurations. The following section synthesizes these studies’ key findings as they correspond with several prominent themes, such as: what demographic trends in ACPS’ local neighborhoods may impact school enrollment, how districts typically address rising enrollment, best practices in deciding whether to reconfigure grades to address rising enrollment, and features of effective grade level configurations (see Figure 2.1).

Figure 2.1: Themes



IDENTIFYING DEMOGRAPHIC TRENDS IN ACPS

The following sub-section identifies demographic trends in in Alexandria City and discusses how those demographic trends may impact specific neighborhoods and schools.

POPULATION GROWTH

Alexandria City experienced growth in family residency as well as sizable increases in student-aged populations from 2011 to 2015. Alexandria City’s six ZCTAs grew by a total of over 3,000 families from 28,311 in 2011 to 31,375 in 2015. During the same period, the population ages 0 to 17 increased from 22,128 to 25,557 persons, an increase of 15.5 percent.

	2011	28,311 families	22,128 people age 0 to 17
	2015	31,375 families	25,557 people age 0 to 17
	Percent Increase	10.8%	15.5%

While Alexandria City experienced sizable growth in residency, this growth was unevenly experienced across different geographies. Area 22311 (Alexandria West) witnessed some of the largest percent increases in total families from 2011 to 2013 but experienced a sharp decline in families between 2013 and 2014 prior to experiencing growth again by 2015. Area 22305 in Potomac West experienced the most consistent growth in family residency. At the same time, area 22304 in Van Dorn made large gains in those ages 0 to 4 and 12 to 17, with increases of 588 and 524 persons, respectively.

CHANGING DEMOGRAPHICS

The racial composition of Alexandria City’s ZCTAs among those ages 0 to 17 drastically differ and have grown even more segregated during the 2011 to 2015 period. In 2015, 42.3 percent of persons ages 0 to 17 residing within all six of Alexandria City ZCTAs identified as white, 25.5 percent as black, 22.6 percent as Hispanic, 4.6 percent as Asian, and 5.0 percent as another race. This same year, 72, 58, and 55 percent of area 22301 (Del Ray), 22302 (central Alexandria), and 22314’s (Old Town) population was majority white, respectively. Approximately 44 and 41 percent of area 22305 (Potomac West) and 22311’s (Alexandria West) population was majority Hispanic. Only area 22304 (Van Dorn) has continued to maintain racial balance. Beyond these recent trends, white residents are expected to continually make up a smaller portion of Alexandria City’s residents between 2020 and 2040 per projection estimates released by the Virginia Employment Commission (VEC).

Such segregation is likely to increase the difficulty of maintaining racial balance and equity among ACPS’s schools. Given these projections and current patterns in the racial composition of the student-aged population, ACPS is likely to witness increases in students of color, yet may encounter racial segregation across schools as a reflection of neighborhood segregation.

Disparities in the median household income of Alexandria City’s ZCTAs have also grown wider over time, which may impact inequalities in student access to resources across neighborhoods and schools. Inequalities in household income are even more apparent at the neighborhood level, in which low-income census tracts saw reductions in median incomes while high-income tracts saw increases in median income. Taken together, spatial unevenness in racial makeup and socioeconomic status across Alexandria City’s communities may pose challenges to the division as it considers grade level reconfiguration. Should division leaders choose to reorganize grades, ACPS must consider how such reconfiguration will impact the balance of students across schools and equitable access to opportunity.

Figure 2.2: District Example: Charlotte-Mecklenburg Schools

Maintaining equity in educational offerings is a priority of Charlotte-Mecklenburg Schools (CMS) when planning for grade-level reconfiguration and the construction of new schools. CMS uses a blind lottery to assign students to its full and partial magnet schools. In these cases, students record their first, second, and third priority schools. The district has since expanded the capacity of the most popular schools to accommodate “students who really have a desire to be in [those] program[s].” Overall, the district has not received any major concerns or pushback from the community on these policies.

IMPACTS ON ACPS

The three high-growth areas within the city are ZCTA 22304 in Van Dorn, ZCTA 22305 in Potomac West, and ZCTA 22311 in Alexandria West. ACPS may wish to monitor these areas due to their large growth, and consider how grade reconfiguration or other strategies to address rising enrollment may help ease enrollment pressure on local schools. See Figure 2.3, on the following page, for details.

Figure 2.3: Three High Growth Areas in Alexandria City

COMMUNITY	DEMOGRAPHIC TRENDS	IMPLICATIONS	SCHOOLS IN THE COMMUNITY
<p>ZCTA 22304 in Van Dorn</p>	<ul style="list-style-type: none"> ▪ Population Growth: Between 2011 and 2015, family residency grew by over 10 percent with an increase of 929 more families. The birth rate and the population ages 0 to 4 and 12 to 17 has also steadily increased during this period. ▪ Racial Composition: Should the division reconfigure grade levels in area 22304, ACPS should consider the community’s racial composition, which displays the greatest racial balance compared to other ZCTAs in Alexandria City. ▪ Median Income: The median income has remained fairly stable from \$70,145 in 2011 to \$76,071 in 2015; although, this median income is much lower compared to the median incomes of Alexandria City’s other communities. A closer look at the median incomes of the neighborhoods within area 22304 reveal wide discrepancies across census tracts. 	<p>Maintaining equity in student socioeconomic status across the community’s schools may prove challenging should these discrepancies in median incomes persist.</p>	<ul style="list-style-type: none"> ▪ Francis C. Hammond Middle ▪ James K. Polk Elementary ▪ Patrick Henry Elementary ▪ Samuel W Tucker Elementary
<p>ZCTA 22305 in Potomac West</p>	<ul style="list-style-type: none"> ▪ Population Growth: Between 2011 and 2015, family residency grew by over 20 percent with an increase of 593 families. In addition to large family growth, the birth rate continued to rise. ▪ Racial Composition: From 2011 to 2015, the racial composition of area 22305 shifted from a white-majority to a Hispanic-majority population ages 0 to 17. ▪ Median Income: The community declined in the percent of households earning annual incomes less than \$50,000 while increased in the percent of households with incomes of \$150,000 or more. 	<p>Overall, these trends suggest that a considerable amount of demographic change has occurred while the community has grown. Such change may make it difficult to ensure equitable racial and socioeconomic representation should ACPS reconfigure grade levels across schools.</p>	<ul style="list-style-type: none"> ▪ Cora Kelly Magnet Elementary ▪ Mount Vernon Elementary
<p>ZCTA 22311 in Alexandria West</p>	<ul style="list-style-type: none"> ▪ Population Growth: Between 2011 and 2015, family residency grew by about 400 families, with large increases in family residency in the northern part of the community. ▪ Racial Composition: Approximately 85 percent of the those aged 0 to 17 residing within area 22311 are non-white, a majority of whom are Hispanic. ▪ Median Income: The community’s median household income has remained the lowest of all six ZCTAs from \$65,700 in 2011 to \$61,829 in 2015, and was the only ZCTA estimate to decline during this five-year period. 	<p>Many children residing within this community are likely to face racial and socioeconomic disadvantages than those in Alexandria City’s other communities.</p>	<ul style="list-style-type: none"> ▪ John Adams Elementary ▪ William Ramsey Elementary

TEACHER PERCEPTIONS OF THE CURRENT CONFIGURATION OF TC WILLIAMS HIGH SCHOOL

In addition to demographic pressures, ACPS must consider the challenges associated with the current configuration of TC Williams High School. The following pages summarize teacher perceptions surrounding the School’s current split campus model.

SCHOOL UNITY

Teachers at Minnie Howard benefit from a smaller and more intimate teaching environment. Participants consistently refer to the ninth-grade campus as ‘close-knit’ and position this as an advantage for student learning.

Despite noting a strong sense of community, almost all teachers view Minnie Howard campus as its own entity and not part of TC Williams. Teachers are quick to note that students also feel a sense of separation from the high school. As a result of the disconnect between the ninth-grade campus and main campus, teachers express concern that rather than thinking of Minnie Howard as high school, “most students think of it as an extension of their middle school years.” This, teachers feel, lowers student expectations and has a negative impact on student performance and achievement. Furthermore, some teachers note a lack of consistency in administration between the two campuses, as well as a lack of attention given to the Minnie Howard campus due to the shared administration.

“THE REAL TC WILLIAMS”

Teachers describe the ninth-grade campus at Minnie Howard as a way station, not perceived as the ‘real’ high school

“Holding Place” “Stop over”
“Dead zone”

In general, teachers believe that **the intimacy and focus of the ninth-grade academy can be recreated in a larger school** through holding ninth grade orientation sessions, spatially grouping students into wings, or social grouping into academies.

STUDENT BEHAVIOR AND MATURITY

Both Minnie Howard and King Street teachers acknowledge the benefits of giving ninth graders their own space and attention to transition into high school life and expectations. However, while acknowledging the benefit of having a space to transition, most teachers feel the transformation into mature high school students is ultimately delayed by the current ninth-grade academy structure. **Most teachers agree that ninth-graders would benefit from the presence of older peers to set expectations and demonstrate appropriate behavior.**

COMMUNICATION

Teachers at the ninth-grade campus praise the ability of the smaller school to facilitate communication and collaboration between teachers within the school. Participants highlight that teachers from different disciplines, who might not be expected to work together in a

larger building, are coming together to align on ninth-grade curriculum and create a comprehensive and supportive learning experience for their students. **However, teachers at both Minnie Howard and King Street note a lack of communication that prevents vertical planning and expectation-setting for students across grade levels.**

LOGISTICS: SCHEDULING AND TRANSPORTATION

The split campus model has a limited impact on core subject courses and teaching, largely because Grade 9 students are able to travel to the King Street campus for those courses that

“SCHEDULING COMPLICATIONS”

Teachers note that scheduling complications tend to arise when there are changes to the schedule at either school due to testing or assemblies.

“... [I]f King Street’s got something else going on... we’ve got to babysit 300 kids for a period during the day.”

“When... the ninth graders don’t come because of whatever reason, I have to reteach everything we have just done.”

are not offered at Minnie Howard. However, teachers report challenges in scheduling related to electives, as well as for those students who fail a class during ninth grade. Students “cannot repeat ninth grade classes for all subject areas easily,” one teacher noted, and summer may be the only option to retake certain courses.

Teachers also report scheduling conflicts due to testing and assemblies that sometimes result in wasted or lost class time. Transportation challenges, such as traffic buses encounter en route between the two campuses, can also result in lost class time.

Some teachers report that the split campus model hinders participation in afterschool activities and clubs, although participation in athletics is notably not affected by the split.

RESOURCES AND RELATIONSHIPS

Teachers at Minnie Howard also note that, while students are able to access resources by traveling back and forth between the two campuses, the Grade 9 campus is smaller and not equipped with many of its own resources. For example, teachers

expressed interest in establishing more resources at Minnie Howard for electives and afterschool programming. **In general, teachers at each campus expressed a desire for their own campus to be equipped with its own resources, have its own administrators, and hold decision-making power.**

Finally, as a result of a smaller, tight-knit community, students in the ninth-grade campus receive more time and attention from teachers than they would at a comprehensive high school. However, teachers at Minnie Howard note that while they are able to provide

additional attention to Grade 9 students during the current school year, relationships suffer over time, as students move to the King Street campus and lose touch.

REVIEWING DISTRICT STRATEGIES TO ADDRESS RISING ENROLLMENT

Districts like ACPS have used several capital and non-capital strategies to accommodate increases in local population like those described above, including:



Grade reconfiguration: School districts may choose to reconfigure grades to better meet the instructional needs of a growing student body. Two of the three districts in the benchmarking study that reconfigured grade levels chose to combine K-5 elementary and 6-8 middle schools into single K-8 schools. One instituted the change to accommodate a growing student body, while the other made the change to use facility space across the district more efficiently. The third district that reconfigured grade levels separated K-8 schools into K-5 elementary and 6-8 middle schools to encourage instructional focus.



Space renovations: School districts may also choose to make internal building modifications, expand schools, or renovate schools. Two anonymous school districts in the benchmarking study rearranged classrooms, offices, and/or other facility spaces within schools as a first step to maximize the usage of space.



Portable units: Another strategy to address enrollment growth is the use of mobile or portable units to expand space. However, while mobile units may provide quick and temporary facilities space, and while research has not identified any detrimental effects of their use for learning, several studies have documented some health and safety hazards to their use. Nevertheless, none of the three districts in the benchmarking study that introduced portable units discussed such complications.



New school zone boundaries: Altering school zone boundaries is a non-capital strategy to curb enrollment pressure. Adjusting school boundaries helps to redistribute student populations across schools where one school may be above enrollment capacity while another has excess space. Researchers warn, however, that frequent “non-promotional school change” negatively affects students’ academic achievement, their social adjustment, and the school environment.



Restructured class schedules: Extending the school day or creating a year-round schedule is another non-capital strategy that districts facing over-enrollment consider. Indeed, proponents of a year-round academic calendar often cite the benefit of facilities efficiency in addition to other academic benefits.



Increased online learning: Offering more online learning opportunities shift the focus of strategic enrollment planning from facilities space to instructional practice.

Rather than relying solely on grade level reconfiguration, ACPS leaders may wish to consider how the division could use a combination of the above strategies over the short- and long-term to address rising enrollment and counteract the growing spatial unevenness in racial makeup and socioeconomic status in Alexandria City communities.

CHOOSING TO RECONFIGURE GRADES

Districts that choose to reconfigure grades as a strategy to accommodate increases in local population should understand that the empirical data does not universally support any specific configuration as “the best” for students. Instead, much of the support (or not) for a grade span model is based on anecdotal and descriptive literature. Nevertheless, districts can reorganize schools in several ways to reflect their internal capabilities and the needs of their student population, which can positively influence student outcomes despite the inconclusive literature. In many cases, reforming a school’s organization or management style can represent a potentially cost-effective way to stimulate student performance and other indicators of success. Compared to policy changes regarding teacher tenure or the implementation of new standards, for example, school organization is a high-impact, low-cost reform that schools can enact to drive district-wide improvements in targeted areas such as achievement scores or non-academic growth.

Before reorganizing grade configurations, districts may wish to consider several key questions (see Figure 2.4). It is critical for district leaders to consider the potential benefits and challenges, both in terms of cost and student impact, of reorganizing buildings and grade spans. Experts believe that “school districts poised on the brink of making these decisions must consider factors beyond simply what is best for the students. They also must consider projected enrollments, transportation costs, number of transitions to be made by students, size of school, and overall school goals.”¹¹ Moreover, education practitioners note that grade spans that are effective in some districts may be less effective in others, cautioning district administrators to consider the context of reform efforts.

¹¹ Howley, C.B. “Grade-Span Configurations.” The School Superintendents Association. <http://www.aasa.org/SchoolAdministratorArticle.aspx?id=10410>

Figure 2.4: Key Questions to Ask When Considering New Grade Configurations

- Will the grade configuration increase or decrease parent involvement?
- How many students will be enrolled at each grade level and what implication does this have on course offerings and instructional grouping?
- How many transition points will occur? How will these be addressed?
- How will the presence or absence of older students affect younger students?
- Is the design of the school building suited to this grade configuration?
- What is the cost and length of student travel?
- What are the opportunities for interaction between age groups?
- What are the effects of the grade configuration on curriculum? Is there better continuity and articulation in curriculum with fewer gaps and overlaps?
- Are there stronger ties among schools, students, and parents?

Source: Barton and Klump¹²

FEATURES OF EFFECTIVE CONFIGURATIONS

To reorganize schools in a way that reflect their internal capabilities and the needs of their student population, districts like ACPS may wish to consider grade configuration *models* and the configuration *process*. By considering grade configuration models, districts can develop a strong understand of the models that exist, which models are most common, and the features of models that can impact student achievement. By considering grade configuration processes, districts can better understand how to implement grade configurations in a way that accounts for the needs and interests of their community stakeholders.

CONFIGURATION MODELS

State-level data on grade level configurations suggests that there is no limit to the division of grades that is possible, and common models range from wide-scale schools that serve up to seven grade levels to single- or two-grade buildings.

However, the most *common* grade configurations for public schools nationally and in ACPS' region are generally PK/K-5 at the elementary level and 9-12 at the high school level. Three-year middle schools are the most common model nationally and regionally, although K-8 schools are becoming more popular. The number of K-8 schools nationally has increased substantially over the past 20 years from 2,500 schools in 1994 to 6,500 schools in 2014.

¹² Barton, R. and J. Klump. "Figuring Out Grade Configurations." *Principal's Research Review*, 7:3, May 2012. p. 6. <http://educationnorthwest.org/sites/default/files/resources/PRR-Figuring-Out-Grade-Configurations.pdf>



Grades PK/K-5	25,309 schools nationally (2014)	38 percent of elementary schools
Grades 9-12	16,361 schools nationally (2014)	13 percent of secondary schools
Grades PK/K-8	6,553 schools nationally (2014)	10 percent of elementary schools

Although the research does not universally support any specific configuration as “the best” for students, some studies do suggest that some configurations are better than others. For example, researchers have found that young students do not benefit from isolated early childhood experiences in PK-K schools. Likewise, students do not benefit from isolated intermediate experiences in 5-6 schools. On the following page, Figure 2.5 summarizes these research findings for all major grade level configurations.

Figure 2.5: Summary of Research Findings for Grade Level Configurations

GRADE LEVELS													
PK	K	1	2	3	4	5	6	7	8	9	10	11	12
Students do not appear to benefit from isolated early childhood experiences. Students in standalone pre-primary schools do not gain skills as fast over the course of the school year as their peers in elementary schools. Generally, researchers find that more time is dedicated to instruction when Kindergarten is included in elementary grade spans.													
PK	K	1	2	3	4	5	6	7	8	9	10	11	12
PK	K	1	2	3	4	5	6	7	8	9	10	11	12
PK/K-5 schools are the most common grade configuration for public schools at the elementary level. However, the data indicates that Grade 6 students have higher academic outcomes and better behavior in elementary school settings. In two separate studies, researchers found that Grade 6 students who attended K-6 schools outperformed their peers in Grades 6-8 schools in ELA and math on end-of-year assessments. Moreover, when comparing infraction rates for Grade 6 students between the two school settings, researchers found that these students, when attending a middle school, acquired more infractions than peers in elementary schools. However, districts transitioning to a K-6 grade configuration will need to consider how they will address increased student enrollment in elementary schools.													
PK	K	1	2	3	4	5	6	7	8	9	10	11	12
Intermediate schools are not supported by the literature. Students in Grades 5-6 perform better as part of larger elementary grade spans, and there is no evidence that intermediate schools are better equipped to provide students with dedicated social and emotional supports resources than more standard elementary school settings.													
PK	K	1	2	3	4	5	6	7	8	9	10	11	12
Despite the wealth of literature and recent school district trends favoring K-8 schools, studies comparing student outcomes at K-8 schools and middle schools have found conflicting results. Several studies found improved academic and behavior outcomes for K-8 students compared to middle school students, while others found no difference in outcomes between K-8 and middle school students. Other studies, however, found grade span is not associated with negative outcomes. Rather, classroom quality or the social environment may be better predictors of student outcomes.													
PK	K	1	2	3	4	5	6	7	8	9	10	11	12
PK	K	1	2	3	4	5	6	7	8	9	10	11	12
Relatively few studies have compared junior high and middle school grade configurations to each other or to other secondary configurations. One study found that the 7-8 pattern was superior to the 6-8 model, as students in Grade 7 were more likely to have higher test scores and less likely to have disciplinary infractions. Other studies, however, have found grade span itself is not associated with negative academic or behavioral outcomes. Rather, classroom quality or the social environment may be better predictors of student outcomes.													
PK	K	1	2	3	4	5	6	7	8	9	10	11	12
Ninth grade academies are often difficult for schools to implement, as academies have distinct administrative structures and programmatic characteristics, which can be difficult to implement without substantial district support and resources. Moreover, research on their effects is inconclusive. While some studies have found that students attending such academies have higher achievement levels than students in typical high schools, other studies have found no differences.													
PK	K	1	2	3	4	5	6	7	8	9	10	11	12
7-12 schools are not generally supported by the literature. Proponents of the 7-12 model argue that it is effective because it minimizes school transitions and allows middle grades students to access high school facilities and advanced coursework. However, research and anecdotal accounts of the model's outcomes have been mixed. Adopters of the model have acknowledged that middle and high school students have different needs, and typically use school-within-school models to serve 7-8 and 9-12 students separately on the same campus.													
PK	K	1	2	3	4	5	6	7	8	9	10	11	12
9-12 schools are by far the most prevalent type of secondary school configuration. The empirical evidence supporting the use of alternative secondary school configurations, like Ninth grade academies, is limited.													

BEST PRACTICE FEATURES OF CONFIGURATION MODELS

A focus on school quality and effective educational practices should underpin any grade reconfiguration effort. Regardless of the grade span configuration used in a district, leaders should focus on implementing best practice features of K-12 education, such as:

- **Alignment in Grades K-3:** Comprehensive PreK-3 alignment is critical to ensure successful transitions into formal schooling and maintain student achievement. A dedicated PreK-3 framework ensures that curricula and pedagogy are aligned across early childhood and early elementary classrooms, and this sequences points to the efficacy of including early childhood grades with elementary sequences.
- **Support of Student Transitions:** Transition programs, which address students' concerns and expectations about new schools, should align with overall K-12 articulation efforts; teachers and administrators at each school level should coordinate efforts to address transition issues.
- **Developmentally Appropriate Instruction:** Districts should strive to meet students' academic and developmental needs at all ages. High-impact schools will address the developmental and academic needs of students regardless of how grades are organized, and this will ultimately boost outcomes.

CONFIGURATION PROCESSES

Once a grade configuration is selected, implementing new configurations can initially be disruptive or frustrating for teachers, students, and parents as schools adjust to serving new student populations. This section reviews strategies that other districts have used to facilitate the implementation of new grade configurations, including: engaging stakeholders, considering costs and resources, and committing to student achievement and well-being.



Districts typically review the grade configuration literature and solicit feedback from stakeholders when deciding whether to adopt new grade configurations. Experts recommend that districts first review the literature on grade configurations and visit or speak with other districts with the same configuration to learn about the benefits and disadvantages of potential configurations. After selecting potential configurations based on the research literature and regional trends, districts should assess stakeholders' views on these potential configurations by administering surveys, interviews, or focus groups. Districts have also created boundary review committees, consisting of parents, teachers, and staff, which have reviewed district plans for grade configuration and school boundary zones.

District's experiences also suggest that engaging with stakeholders after the process is completed is likewise valuable. In Colorado, Aurora Joint District 28's (APS) stakeholders were generally pleased with the change from Grades K-5 to K-8 schools. However, a primary

challenge the district faced to combining elementary and middle school grades was preparing students for the transition, particularly those that were moving from a middle to a K-8 school. As a planning coordinator in the district’s planning department explained, students already in traditional middle schools struggled with switching to a K-8 school because they had developed different expectations surrounding school and instructional culture.

Consider costs and resources needed



Cost considerations are a key issue for districts to weigh when considering new grade spans. Transportation costs could increase or decrease depending on the details of the new configuration. Schools may also need to add classrooms, purchase additional furniture, or modify their facilities to meet the needs of older or younger students; space is often a limiting factor for districts that wish to modify their grade configurations.

Scottsdale Unified School District (SUSD) in Arizona, for example, found that efficiently managing facilities and costs was difficult when restructuring K-8 schools into K-5 schools to meet population needs. Ultimately, the restructure left SUSD with extra classrooms. The district decided to use this space for the instruction of small-scale programs, such as special education programs, pull-out instruction, or classes for the community. Meanwhile, CMS has found that PK-8 schools required more features than previous K-5 schools. After prior attempts to shift middle schoolers into buildings that were previously used as elementary schools, administrators learned that while such buildings were not fully utilized, the spaces within the schools still lacked the features and amenities needed to accommodate instruction for middle grade students. Finally, APS found that switching to K-8 models required teachers to obtain new certifications to be able to teach in both Grades K-6 or Grades K-8. **Thus, if ACPS decides to reconfigure grades, leaders should weigh how different configurations would impact their human resources (e.g., staff), fiscal resources, and facilities.**

Commit to student achievement and wellbeing



Educators, researchers, and district leaders emphasize that a commitment to “sound educational practices” should be the underlying goal of any grade reconfiguration. Districts should a) be aware of the developmental issues facing students at different grade levels and ensure that the curriculum, class schedules, and behavioral expectations meet students’ needs, b) consider whether staff and teachers need additional training to serve new student populations, and c) ensure articulation between K-12 curricula.

Some stakeholders may worry that administrators are not considering student achievement and well-being adequately. At APS, for example, a few stakeholders expressed concern that their younger children would attend school with much older students in K-8 schools. **Thus,**

as part of the stakeholder engagement process, ACPS may wish to reassure parents, teachers, and students of this commitment to student achievement and wellbeing.

TEACHER PERCEPTIONS OF FUTURE GRADE CONFIGURATION OPTIONS

The results of the In-Depth Interviews with High School Teachers suggest that **ACPS should consider implementing one large or two smaller comprehensive high schools**. In general, teachers expressed a preference for a 9-12 grade configuration among upper-secondary students. Teachers stress a sense of community and feel that ninth graders should be in the presence of older grades to learn appropriate behavior and academic expectations. Dividing students by grade level leads to perceptions of the lower school not being “real” high school, a lack of vertical planning among teachers, and logistical challenges.

PERCEPTIONS OF THE 9-10/11-12 GRADE CONFIGURATION PROPOSAL

Teachers who find the current ninth-grade academy problematic express concern over a 9-10/11-12 configuration and feel that it would create even more complications for the district in terms of school unity, scheduling electives, and continuity of curriculum. **While a few teachers suggest ninth graders would benefit from having an older grade to look up to, many teachers feel the format would instead hold back tenth graders.** Teachers also suggest that the proposal configuration would limit the availability of electives at both campuses.

Teachers note that certain student populations may not benefit if the campuses are split into a 9-10/11-12 configuration without providing comprehensive, consistent resources at each campus. Several teachers emphasize the importance of addressing the needs of students who require additional support or an alternative educational environment, and express uncertainty that a 9-10/11-12 configuration would allow for this. Furthermore, several teachers highlight the International Academy specifically, and wish to maintain this program throughout the high school grades.

CONCERNS SURROUNDING DIVERSITY

Many teachers acknowledge concerns around dividing the district up into two high school populations, but express different views on the attainability of diverse and equitable schools. Several frame concerns as justified, and feel that two high schools would breed unhealthy competition and racial/socio-economic segregation, while others position this a problem that can be avoided through proper planning and ignoring opinions that are not in the best interest of the students.

CONCERNS FOR EQUITY

Teachers are divided as to whether the district can be equitably divided into two, integrated high schools.

“I would be concerned a bit if there were two different high schools.... [D]oes that segregate students socioeconomically?”

“You can control district lines. You can control what teachers you hire at each school, and provide the same thing equally, but you can’t change the nature of a ninth and tenth grader.”

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