ARLINGTON PUBLIC SCHOOLS

MEMORANDUM

DATE: June 18, 2018

TO: Members of the School Board

VIA: Patrick K. Murphy

FROM: Lisa Stengle

SUBJECT: Enrollment Projections Question from Arlington County Board Member

For the 2019-28 CIP process, Arlington County has requested a detailed list of the assumptions made by APS in their demographic projections for student growth.

RESPONSE:
The assumptions below were used in the Fall 2017 10-Year Projections for 2018-27 school year. Unless otherwise noted, each methodological step is applied by the APS Department of Planning and Evaluation.

Cohort Transition Ratio - APS projections use a cohort transition ratio, by school of attendance[1], to capture the enrollment patterns of a cohort of students as they transition from grade to another grade by individual school. It is calculated by dividing the number of students in a particular cohort (i.e., grade) by the number of students from the previous cohort in the previous school year. A cohort transition ratio greater than one means there are more students entering school than enrolled in the previous grade. A cohort transition ratio less than one means there are less students returning to school than in the previous grade. Because grade-specific transition ratios may vary from one year to the next, APS uses a three-year average in its projection methodology specific to each school. The most recent three-year cohort transition ratio is applied to current and future school enrollments to produce the ten-year projections by grade for each school.

September 30th Official Enrollment Count – APS cohort transition rate, by school of attendance, is based on the official APS enrollment counts done every September 30th. The Fall 2017 cohort transition rates by school were based on the September 30 enrollment from 2015 through 2017.

Forecasted Housing Units Impact – APS entered a data sharing agreement with Arlington County Government's Community Planning, Housing, and Development (CPHD) office in 2017. The Fall 2017 projections were the first APS projections to utilize CPHD's assessment of net new housing units, by type, likely to be habitable within the next ten years. The three housing types provided by CPHD include Single Family, Town House, Garden, and Multi-Family units. APS uses the residential unit forecast to estimate the number of students likely to be generated from those net new units in future years. The estimate of future students resulting from future net new housing is based on applying a student generation rate which is specific to a particular

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[1] The cohort transition ratio can also be done by place of residence. This is an approach used to analyze the impact of school attendance boundary changes.

housing type. It is assumed that it will take two years for residential projects to be fully occupied. The estimate assumes that half of a future project's units will be occupied in its forecasted year and half will be occupied in the following year.

The forecasted housing unit data provided APS does not include levels of affordability, such as a Committed Affordable Unit (CAF) designation.

Student Generation Rates - The Student Generation Factor estimates the number of students likely to be produced by new housing. This ratio derives from the existing relationship between housing units by type in Arlington County and the number of enrolled students who reside in those units as of September 30. The ratio is calculated by dividing the number of students who reside in each housing unit type and attendance boundary area by the total number of housing units of the same corresponding type and attendance boundary area. The result of this division is the average number of enrolled students that reside in each housing type in a certain attendance boundary area. The housing unit inventory used for this purpose is from the Master Housing Unit Database (MHUD) provided by Arlington County Government's CPHD office. The September 30 enrolled student data is provided by the APS September 30th Official Enrollment Count.

Kindergarten Capture Rates - APS uses historic resident births data from the Virginia Division of Health Statistics to compute the 3-year average percentage of births that produce kindergarten enrollment 5-years later. This 3-year "capture" rate of 70% is based on historic resident birth information from 2010 to 2012 in comparison to actual KG enrollment on September 30th for school years 2015 to 2017. The births information is for children born from parents with Arlington County addresses, but that could be born in Arlington County and non-Arlington County hospitals.

Kindergarten Projections from Actual Births - The kindergarten estimates for the projection years of 2018 to 2020 are based on applying the 70% capture rate to the Virginia Division of Health Statistics births data from 2013 to 2015. The 2018 to 2020, kindergarten projections resulting from this process represent a County-wide kindergarten figure for each respective year. These County-wide kindergarten figures are distributed among the Elementary School attendance boundaries based on their historical 3-year average share of kindergarten enrollment. To this figure is added the projected number of kindergarten students likely to be produced from net new residential units in relevant Elementary School attendance boundaries. It is assumed that it will take two years for residential projects to be fully occupied. The source for the net new residential development information is the Arlington County Government's CPHD.

Kindergarten Projections from Forecasted Births – The kindergarten estimates for projection years 2021 to 2027 are based on births forecasts for the years 2016 to 2022 from Arlington County Government's CPHD. To these births forecasts are applied the 70% kindergarten capture rate to estimate the number of APS enrolled kindergarten students 5-years later. These County-wide kindergarten enrollee figures are further disaggregated by Elementary School attendance boundaries by multiplying them by their relevant 3-year average share of kindergarten enrollment. To this figure is added the projected number of kindergarten students likely to be produced from net new residential units in relevant Elementary School attendance boundaries. It is assumed that it will take two years for residential projects to be fully occupied. The source for the net new residential development information is CPHD.

Pre-Kindergarten Enrollment Projections - PreK projections are provided by the APS Department of Teaching and Learning. The Pre-K Projection is held constant for the 10-year projections period.

All assumptions used in the APS enrollment projections will be revisited in the Summer of 2018 in preparation for new Fall 2018 10-Year Projections for the 2019-28 school years.