



Version 1.0  
**ANNUAL SCHOOL TEST GUIDELINES**

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# About the AST and the AST Guidelines

## ➤ Annual School Test

Each year, no later than July 1, the Planning Board is to review and certify the results of an Annual School Test to evaluate the adequacy of public school facilities in Montgomery County. The findings from the test are used to establish the adequacy status of each school service area for the purpose of prospective development application reviews and dictate applicable payment standards accordingly.

## ➤ Annual School Test Guidelines

The newly adopted Growth & Infrastructure Policy requires the Planning Board to also approve a set of guidelines that explain the methodologies and procedures used by Planning Staff to conduct the Annual School Test and relevant measures.

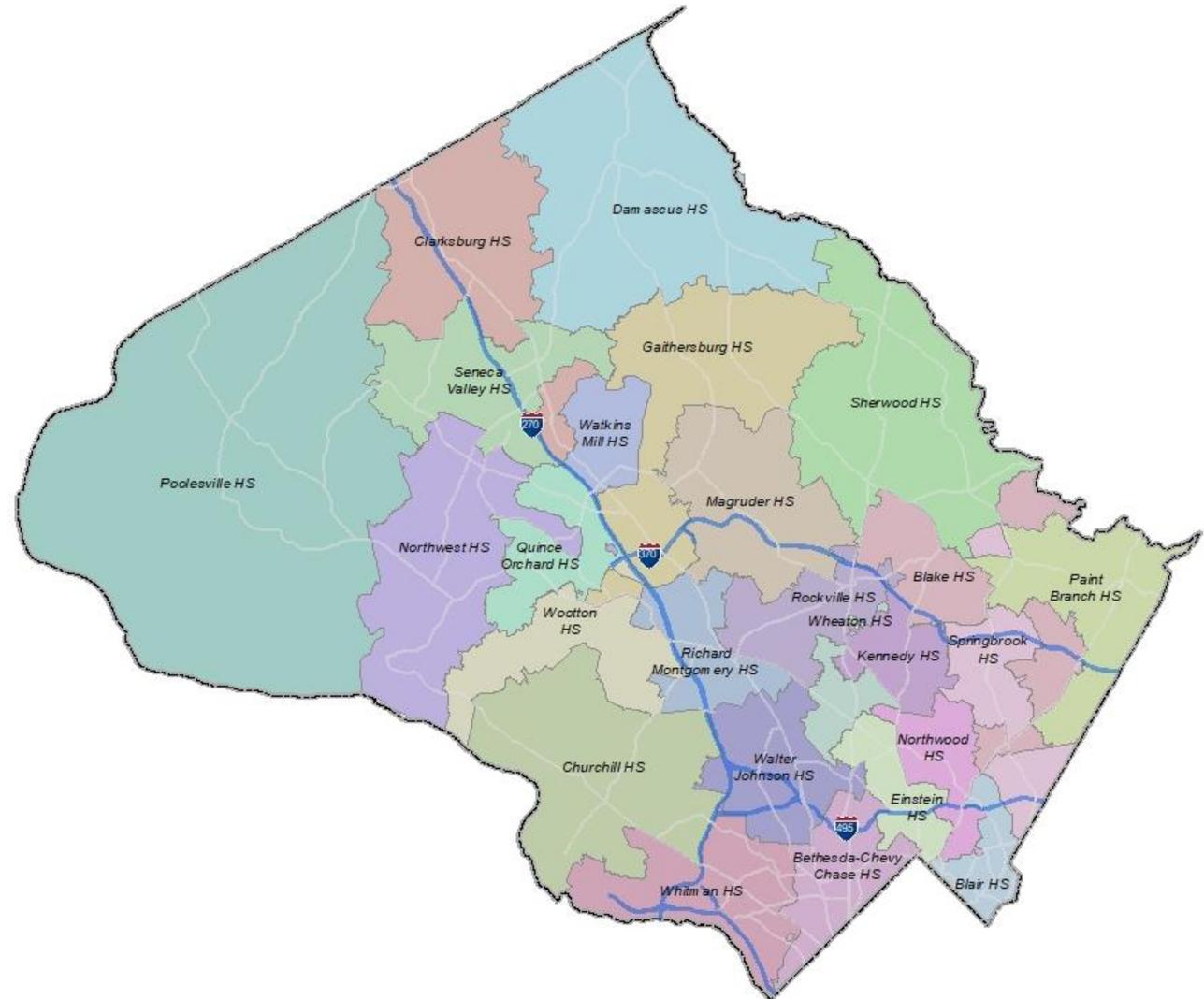


# Geographic Units

# School Service Areas

## ➤ High School Service Areas (School Year 2020-2021)

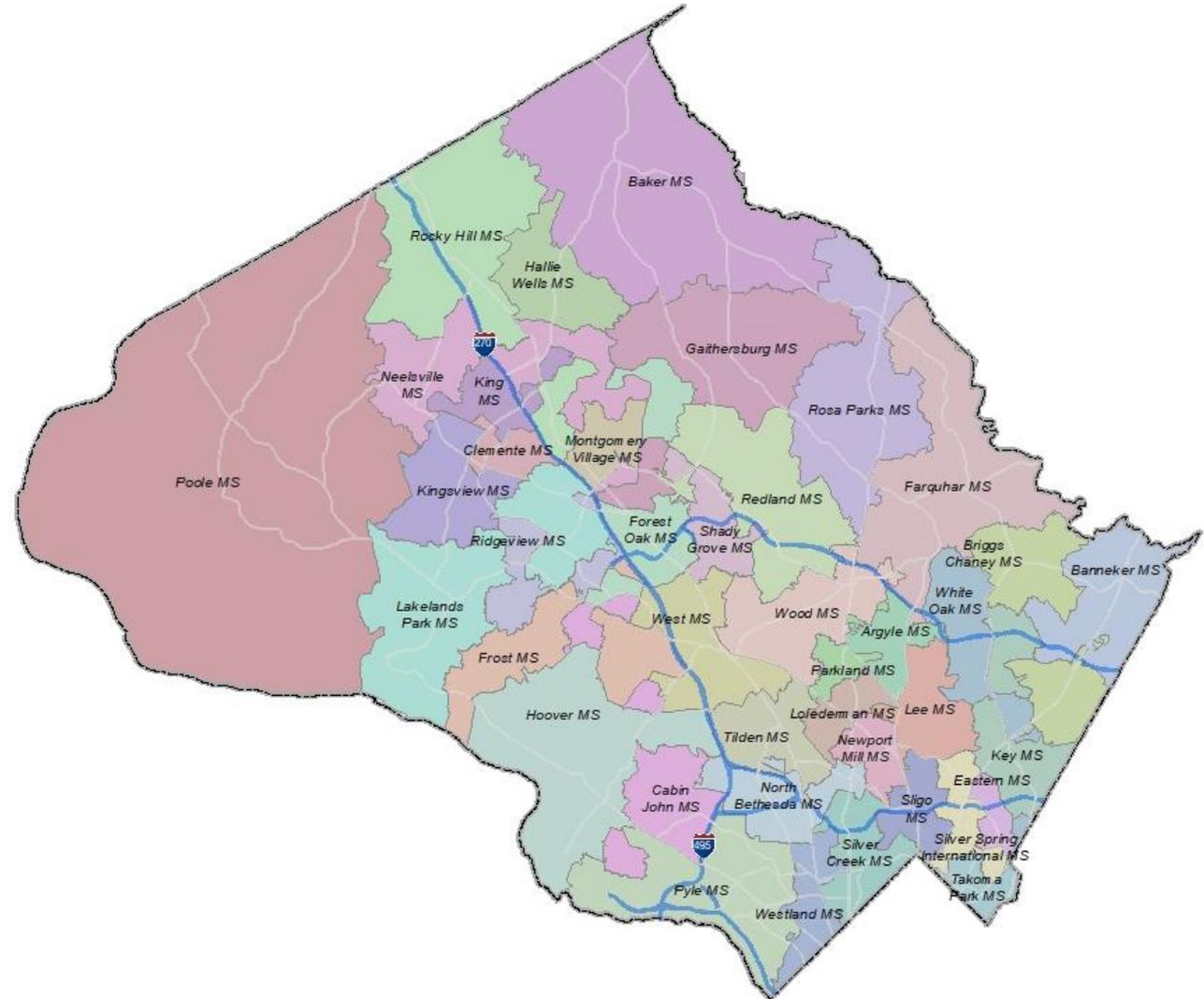
- The Annual School Test evaluates each public school facility in Montgomery County that serves students residing in a specific area.
- The MCPS Board of Education is responsible for establishing school boundaries.
- There are currently 25 High School Service Areas.



# School Service Areas

## ➤ Middle School Service Areas (School Year 2020-2021)

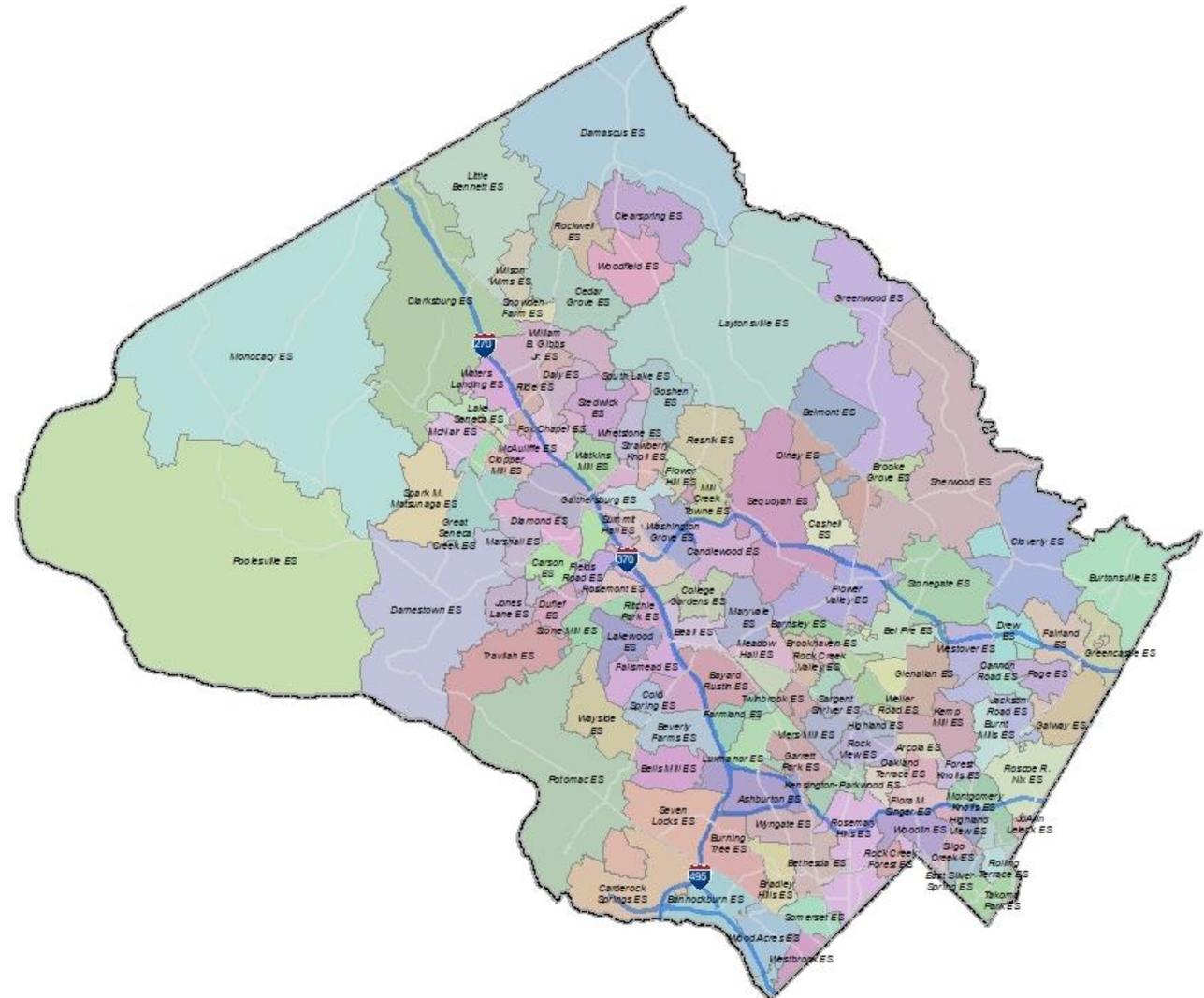
- The Annual School Test evaluates each public school facility in Montgomery County that serves students residing in a specific area.
- The MCPS Board of Education is responsible for establishing school boundaries.
- There are currently 40 Middle School Service Areas



# School Service Areas

## ➤ Elementary School Service Areas (School Year 2020-2021)

- The Annual School Test evaluates each public school facility in Montgomery County that serves students residing in a specific area.
- The MCPS Board of Education is responsible for establishing school boundaries.
- There are currently 129 Elementary School Service Areas.
  - The following paired schools (where students attend grades K-2 at one location and grades 3-5 at another) are considered as one homogenous service area for the purpose of the Annual School Test.
    - Bel Pre ES/Strathmore ES
    - Montgomery Knolls ES/Pine Crest ES
    - New Hampshire Estates ES/Oak View ES
    - Roscoe R. Nix ES/Cresthaven ES
    - Takoma Park ES/Piney Branch ES
    - Rosemary Hills ES/Chevy Chase ES
    - Rosemary Hills ES/North Chevy Chase ES



# School Impact Areas

## ➤ School Impact Areas (2020-2024 Growth & Infrastructure Policy)

- During the 2020 Growth & Infrastructure Policy (GIP) update, the county was classified into the following School Impact Areas based on their housing (amount and type of new housing) and enrollment growth context.

- **Greenfield Impact Area**

High housing growth in single-family units with high impact on enrollment growth (no area of the county was found to be in this category for the 2020-2024 GIP)

- **Turnover Impact Area**

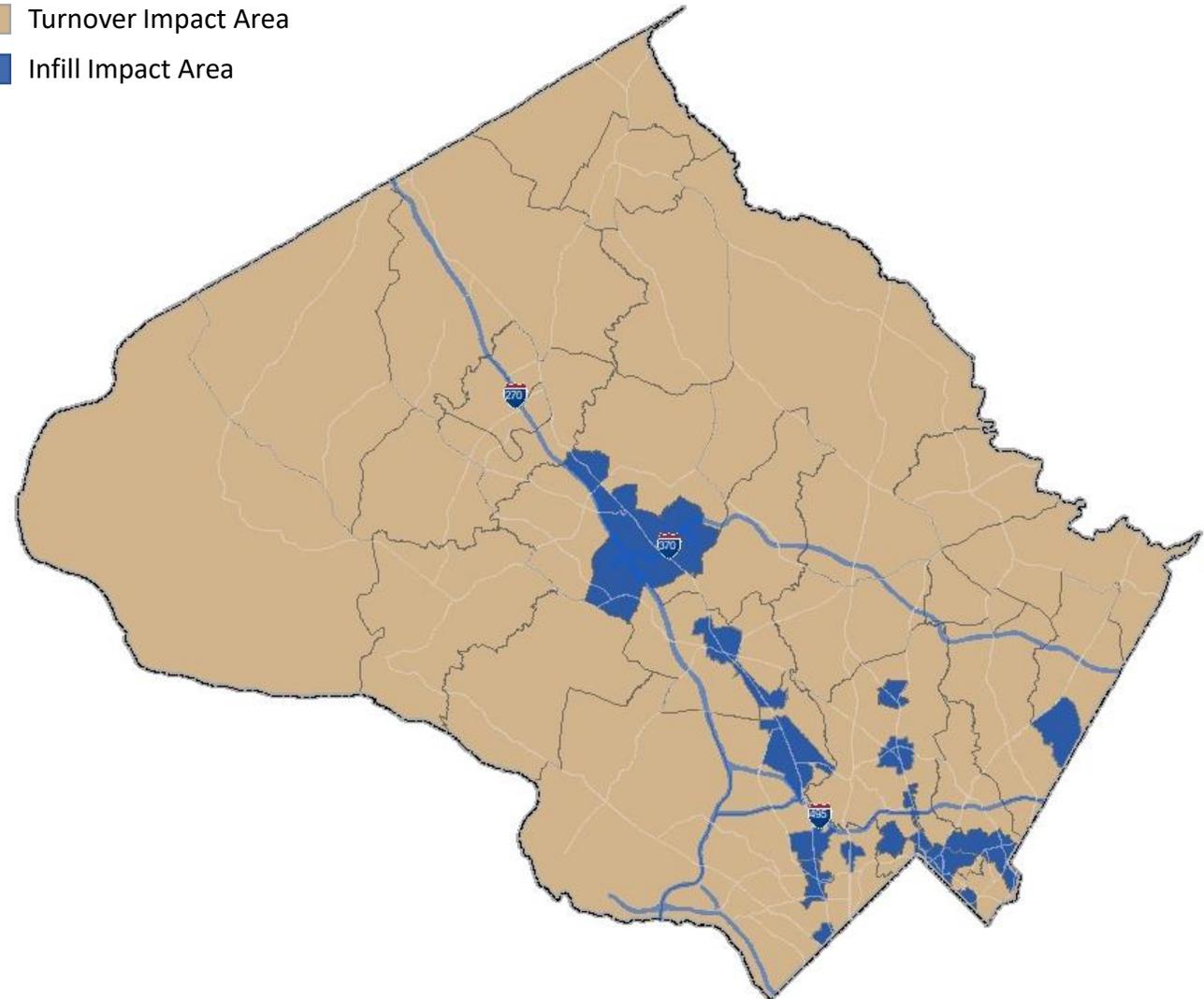
Low housing growth; enrollment growth largely due to turnover of existing single-family units

- **Infill Impact Area**

High housing growth in multifamily units with low impact on enrollment growth on a per unit basis

- The latest housing and enrollment growth contexts will be analyzed at every quadrennial update to the GIP, and School Impact Area classifications may be revised accordingly.

- Turnover Impact Area
- Infill Impact Area



# Annual School Test Procedures

# AST Data Source

- The original data used to conduct the Annual School Test is published in the **'MCPS Educational Facilities Master Plan and Capital Improvements Program' (Master Plan CIP)**.
  - Provides enrollment and capacity projection data and relevant information, including approved capital projects and/or Board of Education decisions regarding capacity solutions.
    - **Projection Tables** (Chapter 4)
    - **Capital Project Description Forms** (Chapter 6)
  - The publication is released every spring by the MCPS Division of Capital Planning.
- The Montgomery County Planning Department does not produce its own enrollment or capacity projections.

## ➤ Projection Tables

- Typically found in Chapter 4 of the Master Plan CIP.
- Provides the original MCPS enrollment and capacity projections that are used for the Annual School Test.
- Projections for individual schools do not reflect the enrollment relief provided by an approved capacity solution for an overutilized school if the solution is provided at a different school in a future year. Montgomery Planning modifies the projections for such schools to estimate the future reassignment of students for the purpose of the Annual School Test. (See more on this in the AST Modifications section of the Guidelines.)

**WATKINS MILL CLUSTER**

Projected Enrollment and Space Availability  
Effects of the Adopted FY 2021-2026 CIP and Non-CIP Actions on Space Availability

| Schools               |                  | Actual |                                  | Projections |       |       |                             |       |       |       |
|-----------------------|------------------|--------|----------------------------------|-------------|-------|-------|-----------------------------|-------|-------|-------|
|                       |                  | 19-20  | 20-21                            | 21-22       | 22-23 | 23-24 | 24-25                       | 25-26 | 2020  | 2024  |
| Watkins Mill HS       | Program Capacity | 1942   | 1942                             | 1942        | 1942  | 1942  | 1942                        | 1942  | 1942  | 1942  |
|                       | Enrollment       | 1560   | 1625                             | 1638        | 1685  | 1695  | 1702                        | 1706  | 1706  | 1706  |
|                       | Available Space  | 382    | 317                              | 304         | 257   | 247   | 240                         | 236   | 236   | 236   |
|                       | Comments         |        |                                  |             |       |       |                             |       |       |       |
| Montgomery Village MS | Program Capacity | 865    | 865                              | 865         | 865   | 865   | 865                         | 865   | 865   | 865   |
|                       | Enrollment       | 790    | 827                              | 866         | 848   | 849   | 849                         | 856   | 845   | 853   |
|                       | Available Space  | 75     | 38                               | (1)         | 17    | 16    | 16                          | 9     | 20    | 12    |
|                       | Comments         |        |                                  |             |       |       |                             |       |       |       |
| Neotide MS            | Program Capacity | 956    | 956                              | 956         | 956   | 956   | 1190                        | 1190  | 1190  | 1190  |
|                       | Enrollment       | 945    | 860                              | 797         | 868   | 897   | 983                         | 999   | 991   | 981   |
|                       | Available Space  | 11     | 706                              | 799         | 98    | 59    | 207                         | 769   | 799   | 209   |
|                       | Comments         |        | Removal of Major Capital Project |             |       |       | Major Cap. Project Complete |       |       |       |
| North Lake ES         | Program Capacity | 694    | 694                              | 694         | 694   | 694   | 694                         | 694   | 694   | 694   |
|                       | Enrollment       | 691    | 692                              | 694         | 698   | 699   | 694                         | 699   | 694   | 699   |
|                       | Available Space  | (3)    | (2)                              | (2)         | (4)   | (4)   | (4)                         | (4)   | (4)   | (4)   |
|                       | Comments         |        |                                  |             |       |       |                             |       |       |       |
| Neotek ES             | Program Capacity | 608    | 608                              | 608         | 608   | 608   | 608                         | 608   | 608   | 608   |
|                       | Enrollment       | 517    | 512                              | 516         | 512   | 525   | 525                         | 525   | 525   | 525   |
|                       | Available Space  | 91     | 96                               | 92          | 96    | 83    | 83                          | 83    | 83    | 83    |
|                       | Comments         |        |                                  |             |       |       |                             |       |       |       |
| Watkins Mill ES       | Program Capacity | 641    | 641                              | 641         | 641   | 641   | 641                         | 641   | 641   | 641   |
|                       | Enrollment       | 731    | 756                              | 762         | 774   | 771   | 779                         | 779   | 779   | 779   |
|                       | Available Space  | (90)   | (115)                            | (121)       | (133) | (130) | (139)                       | (139) | (139) | (139) |
|                       | Comments         |        |                                  |             |       |       |                             |       |       |       |
| Whitestone ES         | Program Capacity | 750    | 750                              | 750         | 750   | 750   | 750                         | 750   | 750   | 750   |
|                       | Enrollment       | 740    | 741                              | 732         | 734   | 733   | 732                         | 731   | 731   | 731   |
|                       | Available Space  | 10     | 9                                | 18          | 16    | 17    | 18                          | 19    | 19    | 19    |
|                       | Comments         |        |                                  |             |       |       |                             |       |       |       |
| Cluster Information:  | HS Utilization   | 82%    | 83%                              | 85%         | 87%   | 87%   | 87%                         | 88%   | 92%   | 98%   |
|                       | MS Utilization   | 100%   | 100%                             | 100%        | 100%  | 100%  | 100%                        | 100%  | 100%  | 100%  |
|                       | MS Enrollment    | 1715   | 1677                             | 1623        | 1706  | 1746  | 1823                        | 1886  | 1836  | 1834  |
|                       | ES Enrollment    | 2903   | 2911                             | 2939        | 2928  | 2926  | 2899                        | 2841  | 2780  | 2730  |

Approved Actions and Planning Issues • 4-99

- Paired Schools:** The Annual School Test treats the service area of paired schools as one homogenous area. The projections of each segment are therefore summed together as well. In the case of Rosemary Hills ES, which is paired with both Chevy Chase ES and North Chevy Chase ES, the projections are counted as a whole in each pair, as shown in the table below.

| Schools                                    | 4-yr Projections |            |                    |            | Notes                                      |
|--|------------------|------------|--------------------|------------|--|
|  | MCPS Master Plan |            | Annual School Test |            |  |
|  | Capacity         | Enrollment | Capacity           | Enrollment |  |
| <b>Rosemary Hills/Chevy Chase ES</b>       | -                | -          | 1101               | 973        |  |
| Rosemary Hills ES                          | 628              | 562        | -                  | -          | Grades K-2 (paired with CC & NCC ES)       |
| Chevy Chase ES                             | 473              | 411        | -                  | -          | Grades 3-5 (paired with Rosemary Hills ES) |
| <b>Rosemary Hills/North Chevy Chase ES</b> | -                | -          | 986                | 797        |  |
| Rosemary Hills ES                          | 628              | 562        | -                  | -          | Grades K-2 (paired with CC & NCC ES)       |
| North Chevy Chase ES                       | 358              | 235        | -                  | -          | Grades 3-5 (paired with Rosemary Hills ES) |



# AST Data Source

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  - Provides enrollment and capacity projection data and relevant information, including approved capital projects and/or Board of Education decisions regarding capacity solutions.
    - **Projection Tables** (Chapter 4)
    - **Capital Project Description Forms** (Chapter 6)
  - The publication is released every spring by MCPS's Division of Capital Planning.
- The Planning Department does not produce its own enrollment or capacity projections.

## ➤ Capital Project Description Forms (PDFs)

- Typically found in Chapter 6 of the Master Plan CIP.
- Is the official, county-authorized budget form for capital projects.
- Includes a description and justification for capacity solutions.
- The description and justification language provides information for making modifications to enrollment or capacity projections for the Annual School Test.

| William T. Page ES Addition<br>(P352105)  |                                  |           |                      |                |              |            |              |              |              |      |                 |  |
|---|----------------------------------|-----------|----------------------|----------------|--------------|------------|--------------|--------------|--------------|------|-----------------|--|
| Category  | Montgomery County Public Schools |           | Date Last Modified   | 00/00/00       |              |            |              |              |              |      |                 |  |
| Subcategory   | Elementary Schools               |           | Administering Agency | Public Schools |              |            |              |              |              |      |                 |  |
| Planning Area   | Colesate-White Oak and Varsity   |           | Status               |                |              |            |              |              |              |      |                 |  |
|   | Total                            | Year FY19 | Est FY20             | Total \$/Seat  | FY21         | FY22       | FY23         | FY24         | FY25         | FY26 | Revised 6 years |  |
| <b>EXPENDITURE SCHEDULE (\$000s)</b>  |                                  |           |                      |                |              |            |              |              |              |      |                 |  |
| Planning, Design and Supervision  | 1,715                            | -         | -                    | 1,715          | 1,000        | 500        | 100          | 0            | 0            | 0    | -               |  |
| Site Improvements and Utilities   | 3,000                            | -         | -                    | 3,000          | -            | -          | 2,450        | 1,451        | -            | -    | -               |  |
| Construction  | 14,180                           | -         | -                    | 14,180         | -            | -          | 793          | 6,082        | 6,500        | -    | -               |  |
| Other   | 761                              | -         | -                    | 761            | -            | -          | 761          | 761          | -            | -    | -               |  |
| <b>TOTAL EXPENDITURES:</b>  | <b>20,614</b>                    | -         | -                    | <b>20,614</b>  | <b>1,000</b> | <b>500</b> | <b>3,322</b> | <b>9,162</b> | <b>6,500</b> | -    | -               |  |
| <b>FUNDING SCHEDULE (\$000s)</b>  |                                  |           |                      |                |              |            |              |              |              |      |                 |  |
| G.O. Bonds  | 20,614                           | -         | -                    | 20,614         | 1,000        | 500        | 3,322        | 8,162        | 6,500        | -    | -               |  |
| <b>TOTAL FUNDING SOURCES:</b>   | <b>20,614</b>                    | -         | -                    | <b>20,614</b>  | <b>1,000</b> | <b>500</b> | <b>3,322</b> | <b>9,162</b> | <b>6,500</b> | -    | -               |  |
| <b>APPROPRIATION AND EXPENDITURE DATA (\$000s)</b>  |                                  |           |                      |                |              |            |              |              |              |      |                 |  |
| Appropriation FY 21 Request   | 1,715                            | -         | -                    | 1,715          | -            | -          | -            | -            | -            | -    | -               |  |
| Appropriation FY 22 Request   | -                                | -         | -                    | -              | -            | -          | -            | -            | -            | -    | -               |  |
| Cumulative Appropriation  | -                                | -         | -                    | -              | -            | -          | -            | -            | -            | -    | -               |  |
| Expenditure Encumbrances  | -                                | -         | -                    | -              | -            | -          | -            | -            | -            | -    | -               |  |
| Unencumbered Balance  | -                                | -         | -                    | -              | -            | -          | -            | -            | -            | -    | -               |  |
| <b>PROJECT DESCRIPTION</b>  |                                  |           |                      |                |              |            |              |              |              |      |                 |  |
| <p>In September 2018, the Spanish Immersion Program located at Rolling Terrace Elementary School was relocated to William T. Page Elementary School. Projections indicate that enrollment will exceed capacity by 92 seats or more by the end of the six-year period. An FY 2021 appropriation was requested to begin the architectural planning and design for this addition project. The FY 2021 planning appropriation was approved by the County Council, however, due to fiscal constraints, the construction expenditures were approved one year beyond the Board of Education's request. This project is scheduled to be completed September 2024.</p> |                                  |           |                      |                |              |            |              |              |              |      |                 |  |
| 6-24 • Project Description Forms  |                                  |           |                      |                |              |            |              |              |              |      |                 |  |



# AST Evaluation Year

## ➤ Projections

- The Annual School Test evaluates the adequacy of the county’s school facilities **4 years in the future.**
- This is in consideration of the time it generally takes for a residential development application to result in units that can be occupied by a student.
- Due to the timing of the Planning Board’s Annual School Test (which is conducted toward the end of each school year), the first set of MCPS projections are considered a current year projection. The school year to be evaluated as 4-year projections is counted accordingly, as illustrated on the right.

*Last Year Actuals*  
*Current Year Projection*  
*1-Year Projection*  
*2-Year Projection*  
*3-Year Projection*  
**4-Year Projection**  
*5-Year Projection*

| Schools                 |                  | Actual<br>19-20 | Projections |       |       |       |       |       |      |      |
|-------------------------|------------------|-----------------|-------------|-------|-------|-------|-------|-------|------|------|
|                         |                  |                 | 20-21       | 21-22 | 22-23 | 23-24 | 24-25 | 25-26 | 2029 | 2034 |
| Bethesda-Chevy Chase HS | Program Capacity | 2457            | 2457        | 2457  | 2457  | 2457  | 2457  | 2457  | 2457 | 2457 |
|                         | Enrollment       | 2257            | 2337        | 2448  | 2510  | 2518  | 2544  | 2541  | 2535 | 2523 |
|                         | Available Space  | 200             | 120         | 9     | (53)  | (61)  | (87)  | (84)  | (78) | (66) |
|                         | Comments         |                 |             |       |       |       |       |       |      |      |



# AST Modifications

- While Montgomery Planning does not produce its own projections, the original data from MCPS is modified in limited circumstances to better account for approved capacity solutions or decisions that are not fully incorporated into the individual school projections made by MCPS.

## ➤ Enrollment Projection Modifications

- *When?*

When a solution for an overutilized school involves capacity at another location, it is typically not reflected in the MCPS enrollment projections until the Board of Education has made a decision on resulting boundary adjustments. If such a solution is approved to be completed within the timeframe of the Annual School Test, Planning staff calculates the relief that could be provided by the solution and factors it into a modified enrollment projection for each school involved accordingly. The cases in which this data modification may apply include:

- Opening of a new school (or reopening of a previously closed school)
- Capacity addition at another school facility
- Student reassignment to an underutilized school

- *Which Schools?*

To determine which schools to include when modifying enrollment projections for a capacity solution, Montgomery Planning refers to information specified in the documents listed below (in order of priority).

- ① Project Description Form (Chapter 6 of the Master Plan CIP)
- ② Cluster Planning Issues or Schools Information (Chapter 4 of the Master Plan CIP)
- ③ Comments Section of Each Cluster's Projection Table (Chapter 4 of the Master Plan CIP)



# AST Modifications

- MCPS projections are modified solely for the purpose of the Annual School Test. They have no implications on how the actual Board of Education decisions will be made, or what the enrollment and capacity projections will look like once the Board of Education makes and implements a boundary realignment.

## ➤ Enrollment Projection Modifications

- *How?*

- Using Project Description Form Specifics

If a Project Description Form provides detailed information about the number of seats that are intended to relieve a certain school, Montgomery Planning uses that information to modify enrollment projections.

- Calculating the Modifications

If no specific information is documented, Montgomery Planning uses a hypothetical scenario in which the utilization rates of all involved schools are balanced. The steps are outlined below:

1. The enrollment and capacity projections of involved schools are totaled.
2. The collective projected utilization rate is calculated by dividing the total enrollment by the total capacity.
3. The total enrollment is redistributed to each school by multiplying the collective projected utilization rate by each school's projected capacity, then rounded to the nearest whole number.

$$\text{Modified Enrollment Projection} = \frac{\text{Sum of Enrollment Projections}}{\text{Sum of Capacity Projections}} \times \text{School Capacity Projection}$$

4. If the rounding causes the sum of the modified enrollment projections to be different from the original sum, then the rounded enrollment is adjusted at the school where such an adjustment will have the least impact on the change in value.

*(see next page for an example)*



# AST Modifications

## ➤ Enrollment Projection Modifications

### ❖ Example: Gaithersburg Cluster Elementary School #8

The language provided in the Project Description Form for Gaithersburg Cluster Elementary School #8 indicates that the new school, scheduled to be completed in September 2022, will relieve overutilization at Gaithersburg, Rosemont, Strawberry Knoll, Summit Hall and Washington Grove elementary schools. However, the number of seats that are intended to relieve over-enrollment at each school is not specified. Therefore, Montgomery Planning uses modified enrollment projections for the FY21 Annual School Test (which tests the 2024 school year), calculated according to the method described on the previous page.

The table below shows the original MCPS projections, calculated values, and modified projections for each school.

| Schools             | 2024-2025 Projections |            |                  |                         |                   |               |                  | FY21 AST |            |
|---------------------|-----------------------|------------|------------------|-------------------------|-------------------|---------------|------------------|----------|------------|
|                     | MCPS                  |            |                  | Enrollment Modification |                   |               |                  | Capacity | Enrollment |
|                     | Capacity              | Enrollment | Utilization Rate | Calculation             | Value w/ Decimals | Rounded Value | Adjusted for Sum |          |            |
| Gaithersburg ES     | 737                   | 884        | 119.9%           | = 96.1% x 737           | 708.34            | 708           | 709              | 737      | 709        |
| Rosemont ES         | 568                   | 675        | 118.8%           | = 96.1% x 568           | 545.91            | 546           |                  | 568      | 546        |
| Strawberry Knoll ES | 459                   | 676        | 147.3%           | = 96.1% x 459           | 441.15            | 441           |                  | 459      | 441        |
| Summit Hall ES      | 457                   | 723        | 158.2%           | = 96.1% x 457           | 439.23            | 439           |                  | 457      | 439        |
| Washington Grove ES | 613                   | 477        | 77.8%            | = 96.1% x 613           | 589.16            | 589           |                  | 613      | 589        |
| Gaithersburg ES #8  | 740                   | 0          | 0.0%             | = 96.1% x 740           | 711.22            | 711           |                  | 740      | 711        |
| Total               | 3574                  | 3435       | 96.1%            |                         | 3435.00           | 3434          |                  | 3574     | 3435       |



# AST Modifications

## ➤ Capacity Projection Modifications

- Placeholders
  - A placeholder is an interim capacity solution implemented by the County Council. It refers to funds placed in the budget for a school that does not have an approved project scheduled in the CIP.
  - If the Council provides placeholder funding for an overutilized school, it is considered a valid capacity solution for the purpose of the Annual School Test. Planning staff calculates the relief to be provided by the funds and modifies the capacity projection of the school accordingly.
  - The metrics used to calculate the placeholder impact is consistent with MCPS school capacity calculation guidelines. The placeholder PDF identifies the number of classrooms funded by the solution and the modified capacity projection for the school is calculated assuming the following number of seats per classroom:
    - ES: 23 seats per classroom
    - MS: 21.25 seats per classroom
    - HS: 22.5 seats per classroom



# AST Adequacy Metrics

- The Annual School Test evaluates school adequacy in terms of capacity utilization, and measures it in two different ways using the modified 4-year capacity and enrollment projections:
  - 4-Year **Utilization Rate** Projection
  - 4-Year **Seat Deficit (or Surplus)** Projection

## ➤ Utilization Rate

A utilization rate depicts the extent to which a school facility will be used by comparing the student enrollment to the program capacity of the school. It is calculated by dividing the projected enrollment of a school by the projected capacity of the facility.

$$\textit{Utilization Rate (\%)} = \frac{\textit{Enrollment}}{\textit{Capacity}}$$

## ➤ Seat Deficit (or Surplus)

A seat deficit, or surplus, depicts the number of students by which a school facility will be overutilized or underutilized. It is calculated by subtracting the projected enrollment of a school from the projected capacity of the facility.

$$\textit{Seat Deficit or Surplus} = \textit{Capacity} - \textit{Enrollment}$$



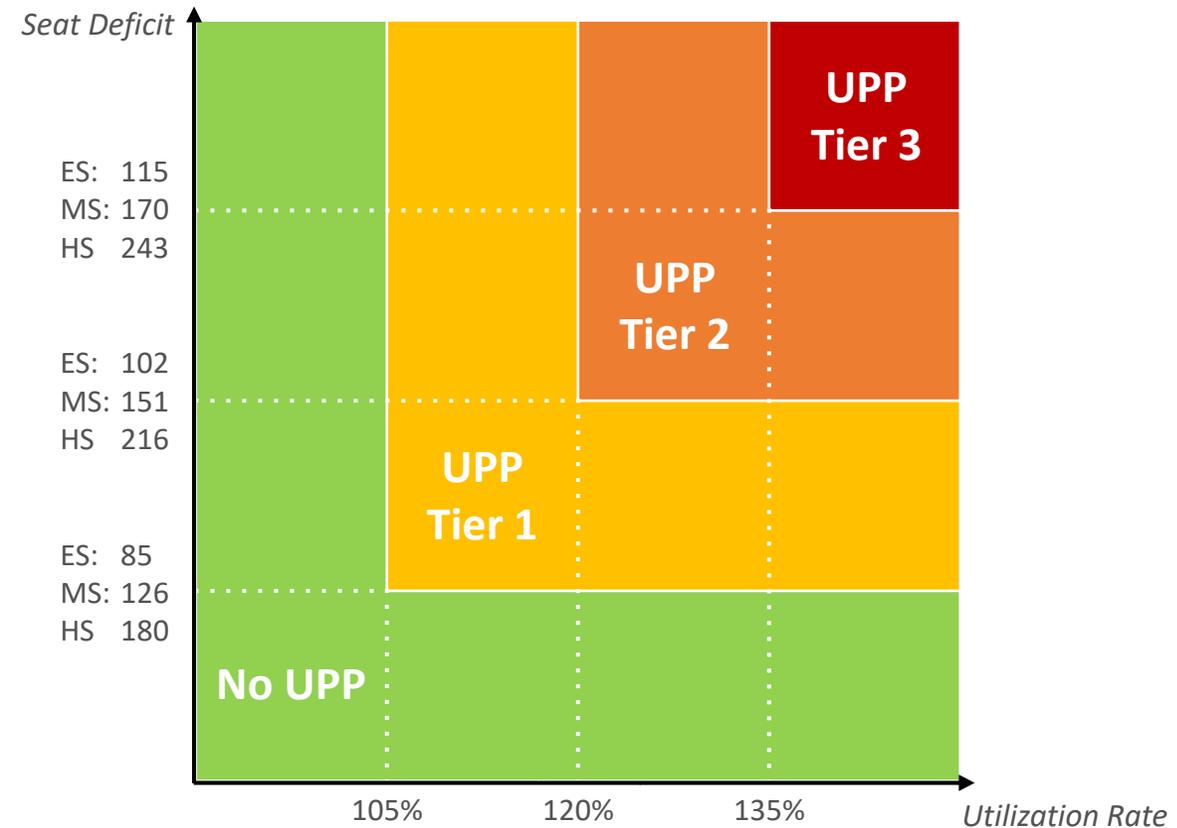
# Adequacy Status and Standards

- The adequacy standard used by the Annual School Test:
  - is a combination of utilization rate and seat deficit metrics.
  - determines the adequacy level of a school.
  - is prescribed by the Growth and Infrastructure Policy.
- The adequacy level of a school dictates the status of the service area, also referred to as the **Utilization Premium Payment Tier**.

## ➤ Utilization Premium Payment Tiers

The graph below illustrates the thresholds for each Utilization Premium Payment (UPP) Tier. A school reaches a certain UPP Tier if the 4-year modified projections indicate that both the *utilization rate* and *seat deficit* will exceed their respective adequacy thresholds.

- *Utilization rate thresholds* are shown on the horizontal (x) axis.
- *Seat deficit thresholds* vary by school level, as shown on the vertical (y) axis.



# Utilization Premium Payment (UPP)

- Utilization Premium Payments are fees paid by applicants for residential building permits as a condition of preliminary plan approval in service areas determined to exceed certain adequacy levels.
- The fee is calculated by applying the appropriate **UPP factor** of each school level, which is determined by the adequacy status (tier level) of the *school service area*, to the undiscounted and unexempt impact tax rate applicable to a residential unit.
- Impact tax rates** are determined by the *school impact area* classification of the development application and residential unit type (single family detached, single family attached, multifamily high-rise or multifamily low-rise).

## ➤ Utilization Premium Payment Factor by Service Area Tier

| School Level      | Payment Factor |            |            |             |
|-------------------|----------------|------------|------------|-------------|
|                   | No UPP         | Tier 1     | Tier 2     | Tier 3      |
| Elementary School | -              | 16⅓%       | 33⅓%       | 50%         |
| Middle School     | -              | 10%        | 20%        | 30%         |
| High School       | -              | 13⅓%       | 26⅓%       | 40%         |
| <b>Total</b>      | -              | <b>40%</b> | <b>80%</b> | <b>120%</b> |

- The appropriate payment factor of each school level must be applied.

## ➤ Impact Tax Rates by School Impact Area & Unit Type

| Residential Unit Type  | Infill Impact Area | Turnover Impact Area |
|------------------------|--------------------|----------------------|
| Single Family Detached | \$20,510           | \$21,990             |
| Single Family Attached | \$17,841           | \$23,813             |
| Multi-Family Low-Rise  | \$5,200            | \$12,148             |
| Multi-Family High-Rise | \$3,193            | \$2,600              |



# Adequacy Ceilings

- In addition to establishing the adequacy status (UPP Tier) for each school service area, the Annual School Test also reports their **adequacy ceilings** to subsequent tier levels.
- The adequacy status and adequacy ceilings of a school service area stay constant for the entire fiscal year, unless there is a material change to the CIP adopted by the Council.

## ➤ Definition:

- An adequacy ceiling is the seat threshold of a school service area to subsequent UPP Tier levels.
- It depicts the number of additional seats at a school that are available within each tier, or the number of additional students that can be accommodated at such tier, after which the subsequent tier is applied.
- The enrollment impacts of residential units in a development application are evaluated against the adequacy ceilings to determine the appropriate payment factor based on the proportional number of students at each tier.

## ❖ Example:

| Elementary School   | Capacity | Projected 2024-25 |             |          | UPP Status | Adequacy Ceilings |        |        |
|---------------------|----------|-------------------|-------------|----------|------------|-------------------|--------|--------|
|                     |          | Enrollment        | Utilization | Seat +/- |            | Tier 1            | Tier 2 | Tier 3 |
| Arcola ES           | 651      | 730               | 112.1%      | -79      |            | 6                 | 52     | 149    |
| Ashburton ES        | 789      | 944               | 119.6%      | -155     | Tier 1 UPP |                   | 3      | 122    |
| Bannockburn ES      | 364      | 505               | 138.7%      | -141     | Tier 3 UPP |                   |        |        |
| Lucy V. Barnsley ES | 652      | 760               | 116.6%      | -108     | Tier 1 UPP |                   | 23     | 121    |

- If a development application is estimated to generate more than 6 students at Arcola ES where the utilization rate already exceeds 105%, the 6<sup>th</sup> student will bring the seat deficit to 85 and trigger a Tier 1 UPP, which will then be applied to any additional student that is estimated to be generated *by the same development project*.
- If a development application is estimated to generate more than 3 students at Ashburton ES where the seat deficit is already beyond 102, the 3<sup>rd</sup> student will bring the utilization rate above 120% and trigger a Tier 2 UPP, which will then be applied to any additional student that is estimated to be generated *by the same development project*.
- If a single development project exceeds an adequacy ceiling triggers the next payment tier, that does not change the school service area status for subsequent applications. Each application is reviewed under the status and ceilings identified in the annual school test results.



# Student Generation Rates

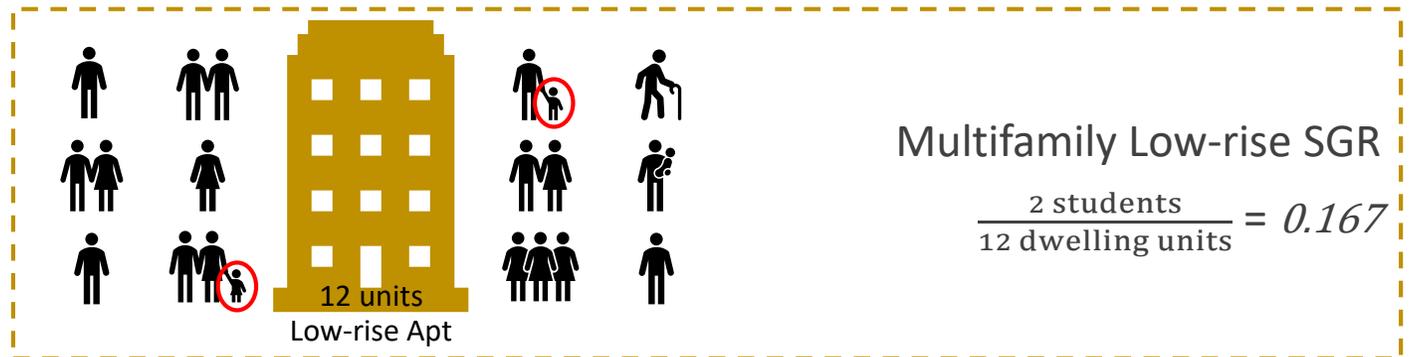
# SGR Definition

- A student generation rate identifies the average number of public school students living in a particular residential unit type in a given geography.
- Student generation rates are used to estimate the number of students generated by a proposed residential unit.

## ➤ Student Generation Rate (SGR)

$$SGR = \frac{\text{number of students}}{\text{number of residential dwelling units}}$$

- ❖ Examples: The student generation rates of the residential units below are...



# SGR Data Sources

- Student generation rates rely on two major data files:
    - **MCPS Student Enrollment Data**
    - **Montgomery County Property Data**
  - Since 2014, Montgomery County student generation rates have been calculated based on the whole population dataset rather than from a sample estimate.
- **MCPS Student Enrollment Data**
    - Provided by the MCPS Division of Capital Planning.
    - Includes the address, school and grade level of each student enrolled in MCPS. (Other sensitive or personal information of students are not transmitted.)
  - **Montgomery County Property Data**
    - Includes property information about the residential dwelling type, number of units, year built, etc.
    - Original data are provided by the Maryland State Department of Assessments and Taxation (SDAT).
    - Corrections are made to individual data points when Planning staff is able to verify an error in the SDAT information (often due to misclassification of residential unit types or outdated information) to improve accuracy to the extent possible.



# SGR Methodology

- Montgomery Planning uses the following methodologies to calculate student generation rates:
  - **Geocoding**
  - **GIS Data Join**

## ➤ Geocoding

Montgomery Planning maps the student data provided by MCPS according to their addresses, a process commonly referred to as geocoding.

- A very small percentage of student data is unable to be geocoded due to invalid or out-of-county addresses.

## ➤ GIS Data Join

The geocoded student data is then joined to the property database within Montgomery Planning's geographic information system.

- Student data that are matched to non-residential parcels or to senior housing units are excluded from the student generation rate analysis.



# SGR Calculation & Application

- Student generation rates are calculated for each School Impact Area, by each residential unit type.

## ➤ SGR by Residential Unit Type

A student generation rate is calculated for each residential unit type as classified below. The countywide student generation rate of each unit type can be calculated by dividing the total number of students residing in each unit type by the total number of units in that category.

- Single Family Structures  
All single family units are considered in the student generation analysis, regardless of the year the structure was built.
  - **Single Family Detached (SFD)**
  - **Townhouses or Single Family Attached (SFA)**
- Multifamily Structures:  
Only multifamily units built since 1990 are considered in the student generation rate analysis.
  - **Multifamily Low-rise (MFL or MFLR):** includes units in structures up to 4-stories high
  - **Multifamily High-rise (MFH or MFHR):** includes units in structures 5-stories or higher

## ➤ SGR by School Impact Area

Student generation rates are calculated by residential unit type for each School Impact Area. Similar to how a countywide rate is calculated for each residential unit type, rates for School Impact Areas are calculated by dividing the total number of students residing in each unit type within a School Impact Area by the total number of units in that category within the School Impact Area.



# SGR Calculation & Application

- Official student generation rates are updated biennially, on July 1<sup>st</sup> of every odd-numbered calendar year.
  - Student data from the latest school year, which Montgomery Planning receives from MCPS in the fall of the previous year, are joined to contemporaneous property data for the analysis.
- The official student generation rates are used to estimate the enrollment impacts of a residential development application during the development review process. The rates are applied, by School Impact Area, to the number of units proposed for each residential unit type.

## ➤ Official Student Generation Rates for FY2021

|                 |             | Student Generation Rates |       |       |       |
|-----------------|-------------|--------------------------|-------|-------|-------|
|                 |             | ES                       | MS    | HS    | K-12  |
| <b>Infill</b>   | <b>SFD</b>  | 0.201                    | 0.096 | 0.139 | 0.436 |
|                 | <b>SFA</b>  | 0.176                    | 0.087 | 0.117 | 0.380 |
|                 | <b>MFLR</b> | 0.055                    | 0.023 | 0.033 | 0.110 |
|                 | <b>MFHR</b> | 0.039                    | 0.014 | 0.016 | 0.069 |
| <b>Turnover</b> | <b>SFD</b>  | 0.198                    | 0.112 | 0.156 | 0.465 |
|                 | <b>SFA</b>  | 0.230                    | 0.120 | 0.157 | 0.506 |
|                 | <b>MFLR</b> | 0.124                    | 0.063 | 0.073 | 0.261 |
|                 | <b>MFHR</b> | 0.023                    | 0.013 | 0.019 | 0.055 |

The table above identifies the official student generation rates in effect for the remainder of FY2021. The rates will be recalculated and updated in July 2021 (for use in FY2022 and FY2023) to reflect the latest enrollment and property data.



# Development Review

# Enrollment Impact

- The following material is reviewed to estimate the enrollment impacts of residential units in a development application.
  - **Development Application**
    - Applicable School Impact Area and school service areas
    - Types and number of residential units
  - **Student Generation Rates**
  - **Annual School Test Results**
    - UPP Status and adequacy ceilings

## ➤ Estimating Enrollment Impact of Residential Units

❖ Example: Hypothetical Development Application

| <u>Site Location</u>  | <u>Residential Unit Proposal</u>                          |
|---|---|
| <input type="checkbox"/> School Impact Area: Infill Impact Area | <input type="checkbox"/> Single Family Detached: 40 units |
| <input type="checkbox"/> ES Service Area: Ashburton ES          | <input type="checkbox"/> Single Family Attached: 35 units |
| <input type="checkbox"/> MS Service Area: North Bethesda MS     | <input type="checkbox"/> Multifamily Low-rise: 0 units    |
| <input type="checkbox"/> HS Service Area: Walter Johnson HS     | <input type="checkbox"/> Multifamily High-rise: 200 units |

### Enrollment Impact Calculation:

| Unit Type    | # of Units | Infill Impact Area SGR |       |       | Estimated # of Students |          |           |
|--------------|------------|------------------------|-------|-------|-------------------------|----------|-----------|
|              |            | ES                     | MS    | HS    | ES                      | MS       | HS        |
| SFD          | 40         | 0.201                  | 0.096 | 0.139 | 8.040                   | 3.840    | 5.560     |
| SFA          | 35         | 0.176                  | 0.087 | 0.117 | 6.160                   | 3.045    | 4.095     |
| MFL          | 0          | 0.055                  | 0.023 | 0.033 | 0.000                   | 0.000    | 0.000     |
| MFH          | 200        | 0.039                  | 0.014 | 0.016 | 7.800                   | 2.800    | 3.200     |
| <b>TOTAL</b> | <b>275</b> |                        |       |       | <b>22</b>               | <b>9</b> | <b>12</b> |

The enrollment impact calculation table illustrates how the enrollment impact is estimated for the hypothetical development application above.

1. The number of units being proposed for each unit type are multiplied by the corresponding student generate rates for the applicable School Impact Area, by school level.
2. The resultant unrounded numbers are totaled by school level.
3. The total for each school level is rounded down to a whole number.



# UPP Factor Calculation

- The estimated number of students from a development application dictates the Utilization Premium Payment factor that is applied to the impact tax rate for each unit.
  - If the estimated number of students at a certain school level is within the adequacy ceiling of the service area, the standard UPP factor is applied as a whole to all units.
  - If the estimated number of students exceeds an adequacy ceiling, the Utilization Premium Payment factor of different tiers are applied proportionally, based on the number of students the development generates at each tier level.
- If multiple applications in the same school service area are reviewed within the same fiscal year, each application is evaluated under the same adequacy status and ceilings. The Utilization Premium Payment factors to be applied may differ between projects if the estimated number of students is different.

## ➤ Applying Adequacy Ceiling to Calculate UPP Factor

### ❖ Example: Hypothetical Development Application

| Service Area Status                       |            | Estimated # of Students      |    |
|---|------------|------------------------------|----|
| <input type="checkbox"/> ES Service Area: | Tier 1 UPP | <input type="checkbox"/> ES: | 22 |
| <input type="checkbox"/> MS Service Area: | No UPP     | <input type="checkbox"/> MS: | 9  |
| <input type="checkbox"/> HS Service Area: | Tier 3 UPP | <input type="checkbox"/> HS: | 12 |

| Status     | Adequacy Ceiling |        |        |
|------------|------------------|--------|--------|
|            | Tier 1           | Tier 2 | Tier 3 |
| ES: Tier 1 |                  | 3      | 122    |
| MS: No UPP | 87               | 208    | 393    |
| HS: Tier 3 |                  |        |        |

### UPP Factor Calculation:

| # of Students | Allocation |        |        |        | UPP Factor Ratio |        |        |        |
|---------------|------------|--------|--------|--------|------------------|--------|--------|--------|
|               | No UPP     | Tier 1 | Tier 2 | Tier 3 | No UPP           | Tier 1 | Tier 2 | Tier 3 |
| ES            | 22         | 0      | 3      | 19     | 0.000            | 0.136  | 0.864  | 0.000  |
| MS            | 9          | 9      | 0      | 0      | 1.000            | 0.000  | 0.000  | 0.000  |
| HS            | 12         | 0      | 0      | 12     | 0.000            | 0.000  | 0.000  | 1.000  |

For the hypothetical development application above, which generates 22 elementary school students, nine middle school students and 12 high school students, the following steps are used to calculate the proper UPP factors.

1. Since 3 of the 22 elementary students count as being under Tier 1, and the other 19 are considered to be in Tier 2, each unit of the hypothetical development is assessed 0.136 ( $3 \div 22$ ) of a Tier 1 elementary school UPP and 0.864 ( $19 \div 22$ ) of a Tier 2 elementary school UPP.
2. The estimated number of middle school students is less than the adequacy ceiling, and therefore the applicant would not be charged any middle school UPP.
3. The high school service area is at Tier 3, which has no ceiling. All 12 of the estimated high school students fall into Tier 3, therefore the applicant would be assessed a full Tier 3 high school UPP for each residential unit.



# Amendment

- When a previously approved project files for an amendment, a new Utilization Premium Payment factor is calculated for the newly proposed units.
- Previously approved units will continue to require UPPs based on the conditions that applied to their approval.
- The net enrollment impacts of all changes proposed in the amendment (including any units removed from previous approvals) are used to determine whether multiple tiers of UPPs will be required for the units added by the amendment.

## ➤ Application Amendment

### ❖ Example: Hypothetical Development Amendment

The following hypothetical amendment to a previously approved application removes 10 single-family detached homes and adds 8 single-family attached (townhouse) and 50 multifamily low-rise units.

### Additional Enrollment Impact from Amendment:

| AMENDMENT IMPACT       | Net Change in Units | Infill SGRs |       |       | Students |          |          |
|------------------------|---------------------|-------------|-------|-------|----------|----------|----------|
|                        |                     | ES          | MS    | HS    | ES       | MS       | HS       |
| Single-family Detached | -10                 | 0.201       | 0.096 | 0.139 | -2.01    | -0.96    | -1.39    |
| Single-family Attached | 8                   | 0.176       | 0.087 | 0.117 | 1.408    | 0.696    | 0.936    |
| Multifamily Low-rise   | 50                  | 0.055       | 0.023 | 0.033 | 2.75     | 1.15     | 1.65     |
| Multifamily High-rise  | 0                   | 0.039       | 0.014 | 0.016 | 0        | 0        | 0        |
| <b>TOTAL</b>           | <b>48</b>           |             |       |       | <b>2</b> | <b>0</b> | <b>1</b> |

The enrollment impacts of the amendment are calculated as a net enrollment impact relative to previous approvals. In this example, the net impact is two additional elementary school students and one additional high school student.

### UPP Factor Calculation:

|     | Status     | UPP Adequacy Ceiling |        |        | Student Allocation |        |        |        |       | Amendment Payment Ratio |        |        |        |
|-----|------------|----------------------|--------|--------|--------------------|--------|--------|--------|-------|-------------------------|--------|--------|--------|
|     |            | Tier 1               | Tier 2 | Tier 3 | No UPP             | Tier 1 | Tier 2 | Tier 3 | Total | No UPP                  | Tier 1 | Tier 2 | Tier 3 |
| ES: |            | 10                   | 32     | 136    | 2                  | 0      | 0      | 0      | 2     | 1.000                   | 0.000  | 0.000  | 0.000  |
| MS: | Tier 1 UPP |                      | 54     | 258    | 0                  | 0      | 0      | 0      | 0     | 0.000                   | 1.000  | 0.000  | 0.000  |
| HS: | Tier 2 UPP |                      |        | 35     | 0                  | 0      | 1      | 0      | 1     | 0.000                   | 0.000  | 1.000  | 0.000  |

An amendment UPP Factor ratio is calculated using the updated adequacy status and ceiling information for the Annual School Test under which the amendment is reviewed. These new payment ratios will apply to the 8 single-family attached (townhouse) and 50 multifamily low-rise units proposed by the amendment only.

