Waverley Elementary School Feasibility Study

FREDERICK COUNTY PUBLIC SCHOOLS

Feasibility Study Meeting #3

November 30, 2017

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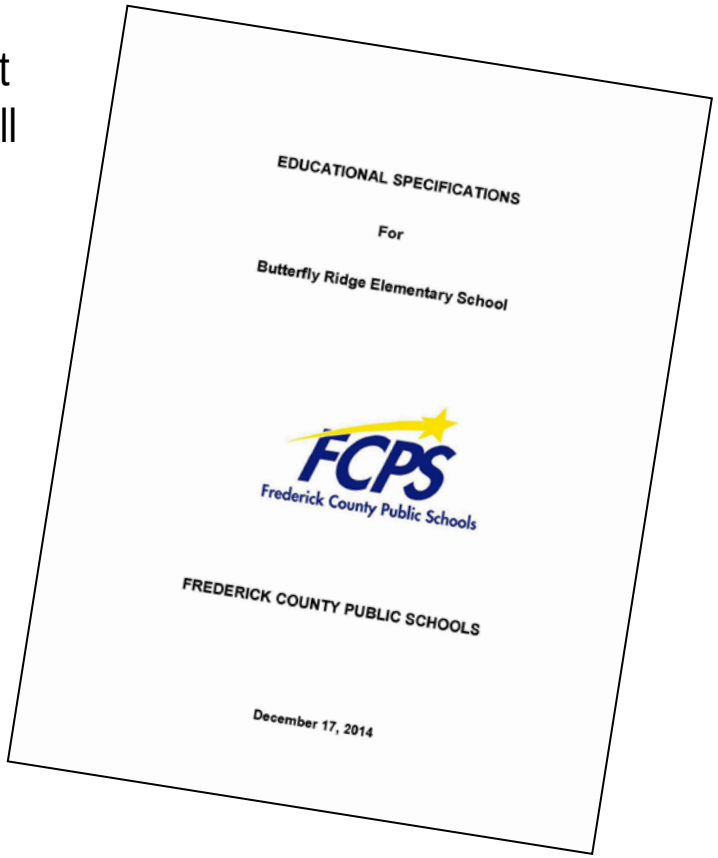
AGENDA

1. PROJECT OVERVIEW – feasibility study process recap, schedule
2. EDUCATIONAL ASSESSMENT – educational specification requirements, building area analysis, existing building versus educational specification comparison
3. SUSTAINABLE DESIGN – building design, curriculum opportunities
4. FEASIBILITY STUDY OPTIONS – preliminary approach
5. COMMUNITY MEETING – preparation for 12/11/17 community meeting

PROCESS OVERVIEW

What is an Educational Specification?

- An Educational Specification (Ed Spec) is a document that includes the *general guidelines and considerations* that will guide the planning process for a new or expanded school building.
- It *identifies the spaces needed* to serve the proposed enrollment of the school plus additional room for growth.
- It *includes the required learning environment features*, characteristics and overall building design goals.
- Ed Specs take into consideration *the relationship of one space to another*, special built-in equipment, and other physical features.



PROCESS OVERVIEW

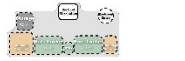
What is a Feasibility Study?

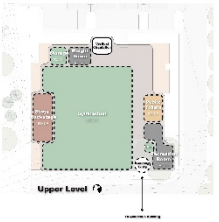
- An *analysis of the existing conditions* of site and building systems:

  What is the condition of the mechanical, electrical and plumbing systems?

  Do the educational spaces serve the needs of the students?

- Provides *possible design options* for the renovation or replacement of the school to address the requirements of the Ed Spec.
- Incorporates *community feedback*.
- Makes a *recommendation* for which option best meets the goals of the Ed Spec and other factors.





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FEASIBILITY STUDY OUTLINE

EXECUTIVE SUMMARY
- An overview of the process
- Summary of the concept options and estimated costs
- Evaluation criteria and final recommendation

BUILDING AND SITE ASSESSMENT
- Community description and history
- Evaluation of the existing building structure and systems
- Analysis of site conditions

EDUCATIONAL ASSESSMENT
- Existing building diagrams
- Enrollment projection data
- Evaluation of existing building to meet the Ed Spec requirements

FEASIBILITY CONCEPT OPTIONS
- Plan and site diagrams illustrating renovation and replacement options
- Narratives describing concepts including “pros” and “cons”
- Other information such as phasing requirements
- Cost estimates for each option

APPENDICES

State requirements per the IAC Procedure Manual

A. Executive Summary

B. Summary of the Educational Specifications

C. Proposed Budget

D. Proposed Project Schedule

E. Existing Facility Inventory Data

F. Existing Condition of Site and Building Components

G. Other Planning and Design Considerations

H. Preliminary Design Floor and Site Plans

I. Major and Minor Educational Program Advantages and Deficiencies

J. Forty-Year Life Cycle Cost Comparisons

K. Consultant’s Recommendation

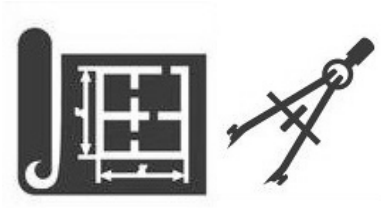
L. Superintendent's recommendation

M. Local BoE Action

PROJECT TIMELINE

Ed Spec and Feasibility Study

5-6 Months



Building Design

18-24 Months

Construction and Occupancy

18-24 Months

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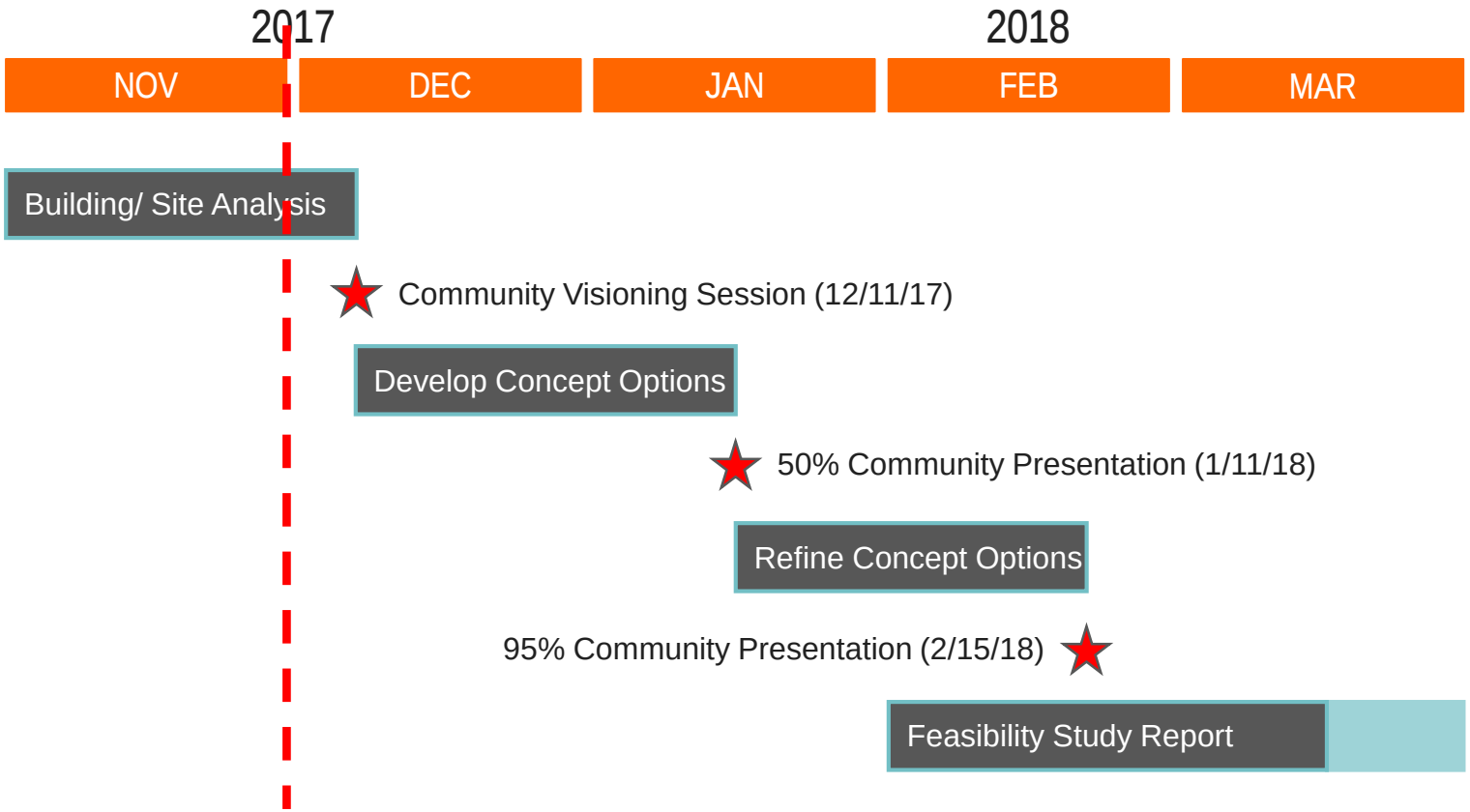
FEASIBILITY SCHEDULE



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EDUCATIONAL ASSESSMENT

Educational Specification Goals:

- A school environment that allows students to work together in small and large group activities
- Access to technology
- Administrative services organized to facilitate the teaching/learning process
- Centrally located Media Center convenient to instructional areas
- Physical education spaces that can support a variety of student needs
- A cafeteria space that can be maximized in use for assemblies and special programs
- Interior circulation that promotes a smooth and safe flow of students
- Other?

EDUCATIONAL ASSESSMENT

Total Teaching Stations:

Existing Waverley Building 36
725 Student Ed Spec 32

Alternates:

Parks and Rec Facility 2,100 GSF

	Existing Waverley Building	725 Student Ed Spec
Administration	1,347	2,090
Health Suite	136	600
Media Center	2,102	4,700
Art	2,552	2,300
Music	891	1,525
Physical Education	3,825	6,942
Computer Instruction	940	1,950
Pre-Kindergarten	2,488	2,480
Kindergarten	6,208	6,100
Learning Area/ Grades 1-5	25,059	22,650
Support Services	1,494	7,580
Community Resources	551	1,240
Food Service	2,171	2,290
Cafetorium	3,800	5,230
Custodial	561	1,180
Maintenance	75	520
Net Square Feet (NSF)	54,200*	69,377
Gross Square Feet (GSF)	**71,534****	**97,128**

*Includes 15,779 NSF in Portable Classrooms and Toilet buildings

**Includes Portable Classrooms and Toilet buildings

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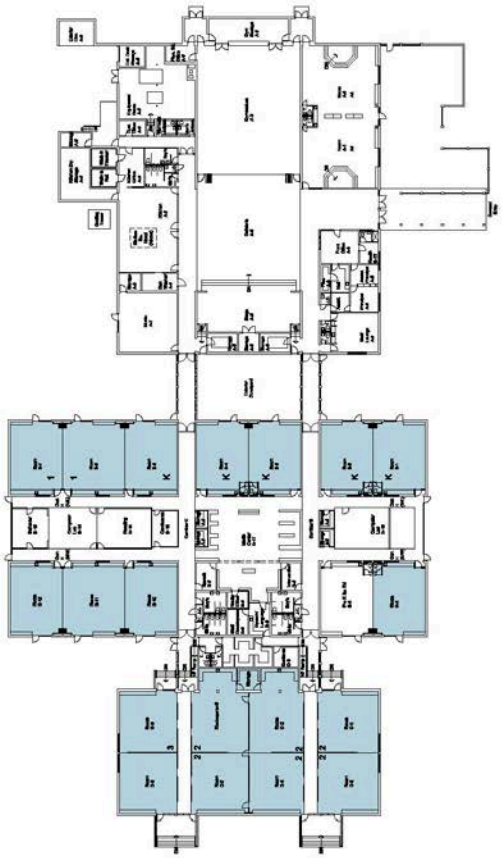
EDUCATIONAL ASSESSMENT

Existing Waverley

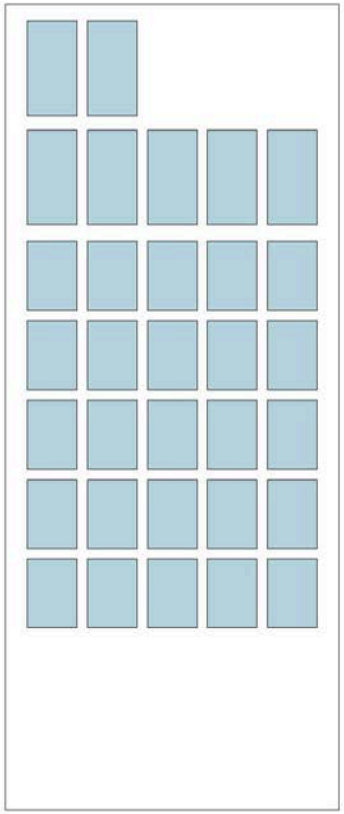
19 Classrooms in building
17 Portable Classrooms

Total Classrooms
31,571 NSF



725 Student Ed Spec

32 Classrooms
28,580 NSF



Nearly 50% of the existing classrooms are in portables

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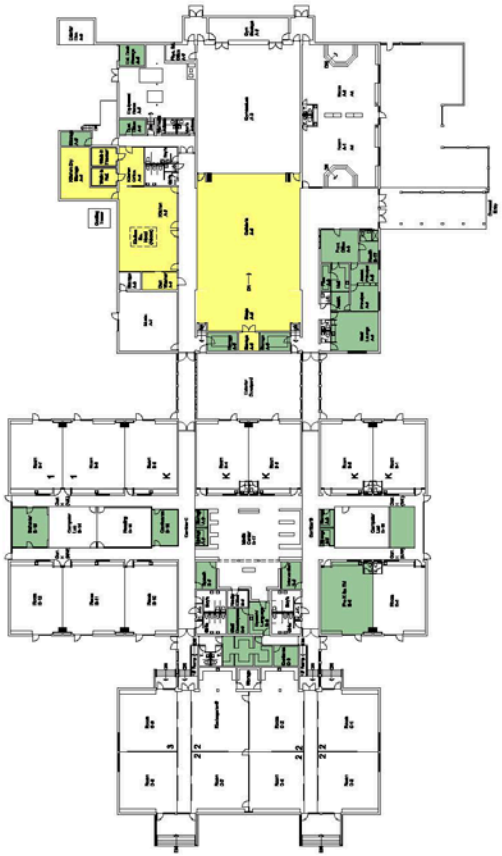
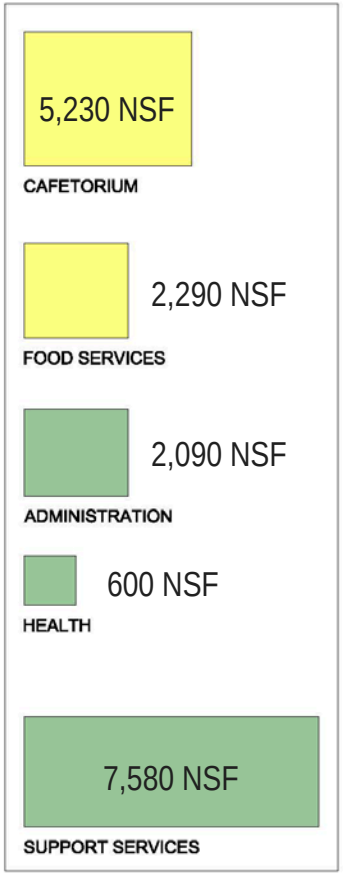
EDUCATIONAL ASSESSMENT

Existing Waverley

Cafetorium	3,800 NSF
Food Services	2,171 NSF
Administration	1,347 NSF
Health	136 NSF
Support Services	1,494 NSF



725 Student Ed Spec

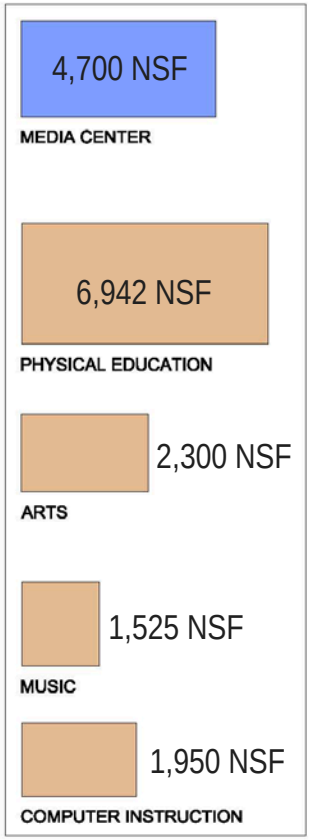


EDUCATIONAL ASSESSMENT

Existing Waverley

Media Center	2,102 NSF
Physical Education	3,825 NSF
Arts	2,552 NSF
Music	891 NSF
Computer Instr.	940 NSF

725 Student Ed Spec



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SUSTAINABLE DESIGN

Green School Design Principles and Strategies

- Clearly Articulate Goals
- Focus on Energy Efficiency
- Focus on Life Cycle Cost
- Focus on the quality of learning environment
  - *Light*
  - *Air Quality*
  - *Acoustics*

ENERGY STAR

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SUSTAINABLE DESIGN

SUSTAINABLE SITES

- Sensitive Stormwater Management Designs
- Rain Gardens
- Pervious Paving
- Vegetative Roofing
- Compact Design
- Proper Orientation

ENERGY AND RESOURCE CONSERVATION

- Water conservation
- High efficiency controllable lighting
- Daylighting strategies
- High efficiency HVAC systems
- Ground source heat pump/geothermal
- Increased R-values
- Recycling program

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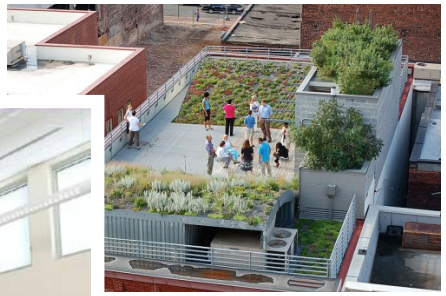
SUSTAINABLE DESIGN

HEALTHY LEARNING ENVIRONMENTS

- Materials with low-VOC
- Optimized acoustics for learning
- Recycled Products
- Bio-based materials
- Rapidly renewable materials
- Sound absorptive wall treatments



SUSTAINABLE DESIGN AS PART OF THE LEARNING PROCESS

- Teaching Green
- Walkable connections on site
- Shading strategies for exterior and interior gathering spaces
- Outdoor classroom doubles as a biofilter/rain garden for SWM

FEASIBILITY STUDY OPTIONS

1. Renovate Waverley Building – 725 Students
   Strategic renovations to the exterior and interior with minimal demolition and additional space.

2. Renovation/ Addition to Waverley Building
   Complete renovation of the existing facility, extensive demolition of existing partitions, and construction of additional space to meet the Ed Spec requirements.

   - 725 Students (Approximately 97,128 GSF)
   - 1019 Students (GSF TBD)

3. Demolish and Replace Waverley Building
   Construction of an entirely new facility on the existing site to meet the Ed Spec requirements.

   - 725 Students (Approximately 97,128 GSF)
   - 1019 Students (GSF TBD)

4. Renovate/ Demolish and/or Addition to Waverley and Rock Creek Building – 1019 Students
   Selective demolition of whole portions of the existing buildings, extensive demolition of existing partitions and complete renovation in areas to remain, and construction of additional space to meet the Ed Spec requirements.

DESIGN OPTIONS

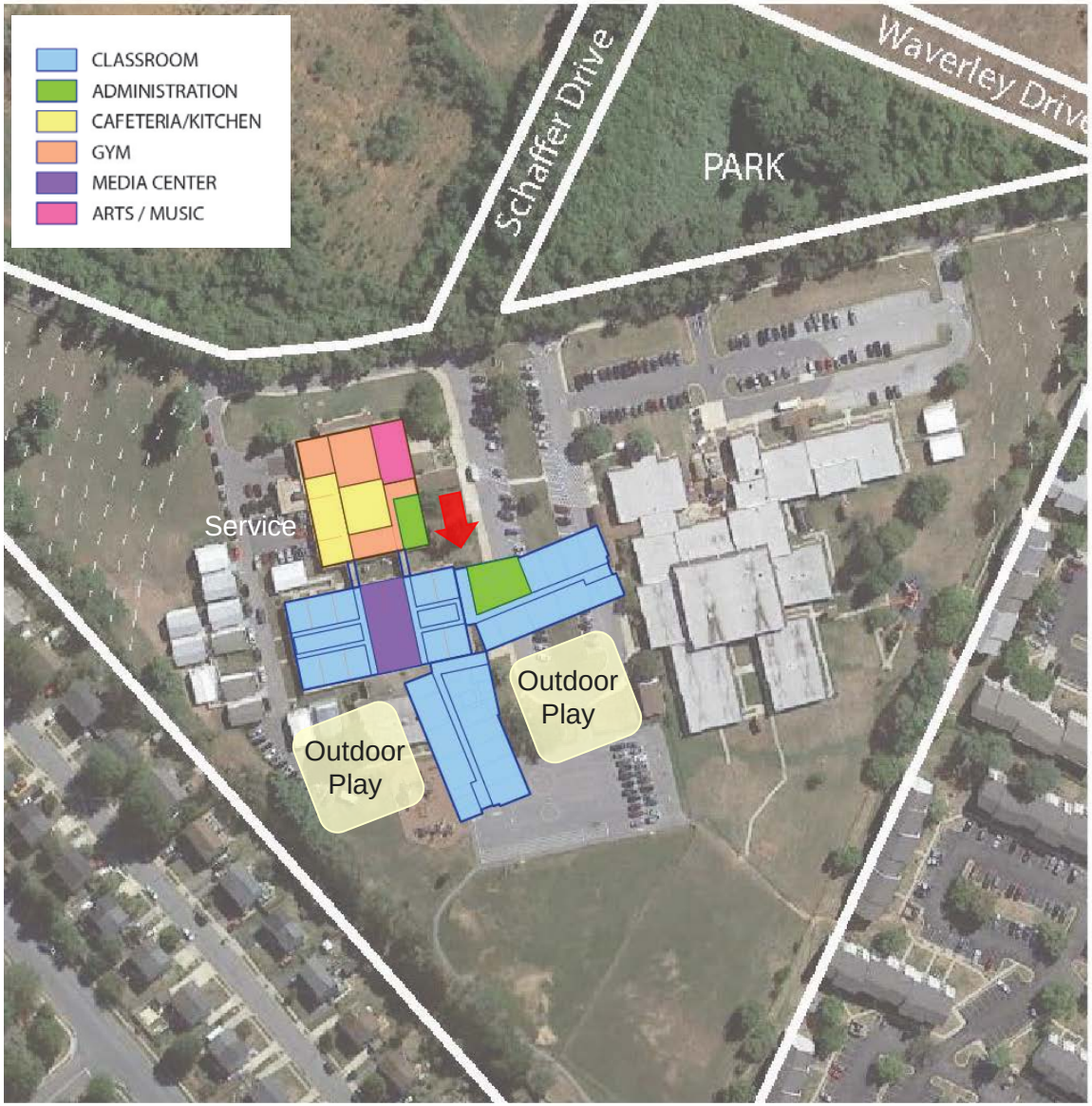
Waverley Building Renovation-Addition

Option 1A (725 Students)

- Demolish west classroom wing
- Reuse cafeteria/ gym and central classroom wing
- New one-story classroom addition

Option 1B (1019 Students)

- Demolish west classroom wing
- Reuse cafeteria/ gym and central classroom wing
- New two-story classroom addition



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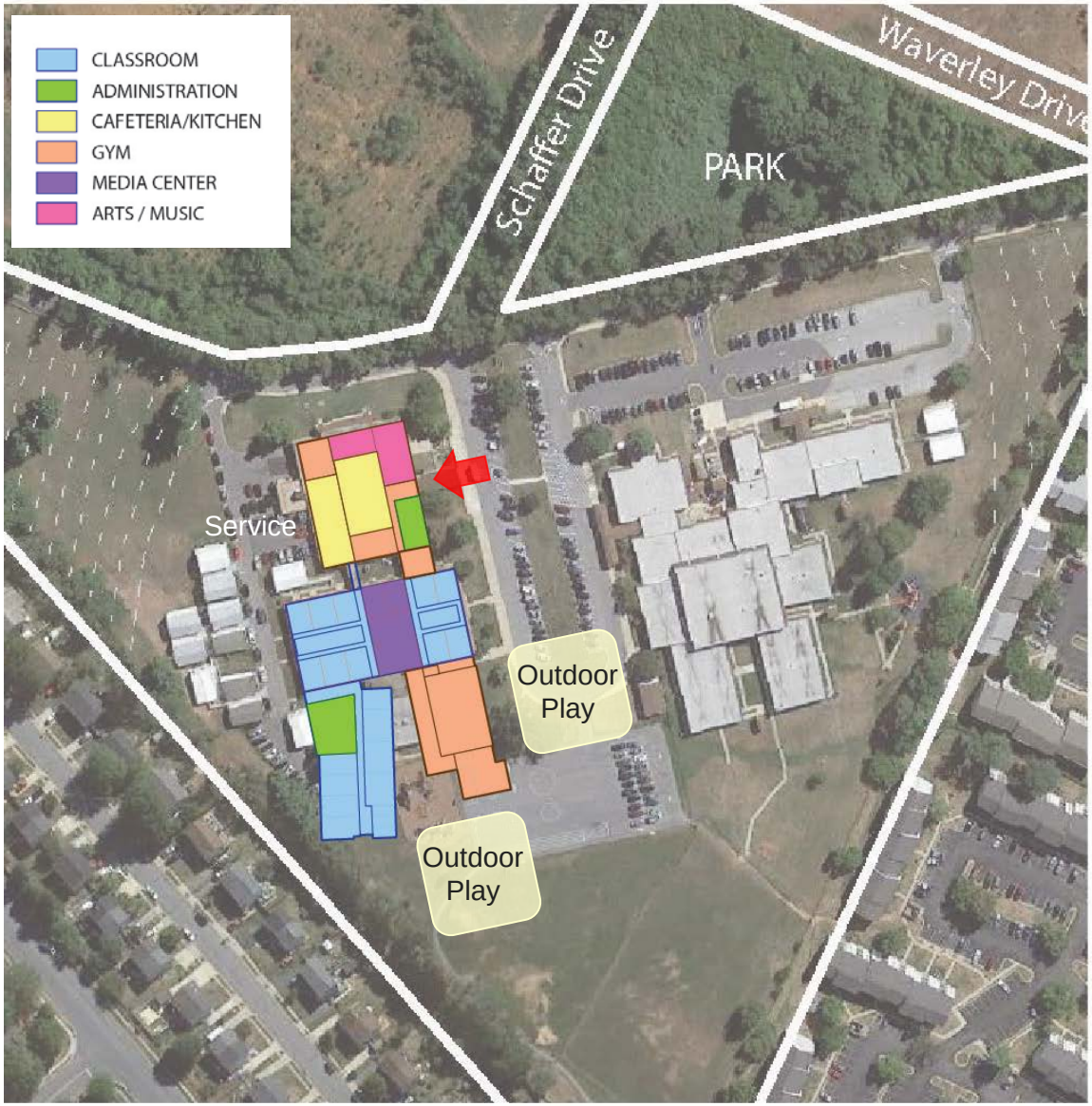
DESIGN OPTIONS

Waverley Building Renovation-Addition

Option 2 (725 Students)

- Demolish west classroom wing
- Repurpose cafeteria/ gym
- Reuse cafeteria/ gym
- New two-story classroom addition



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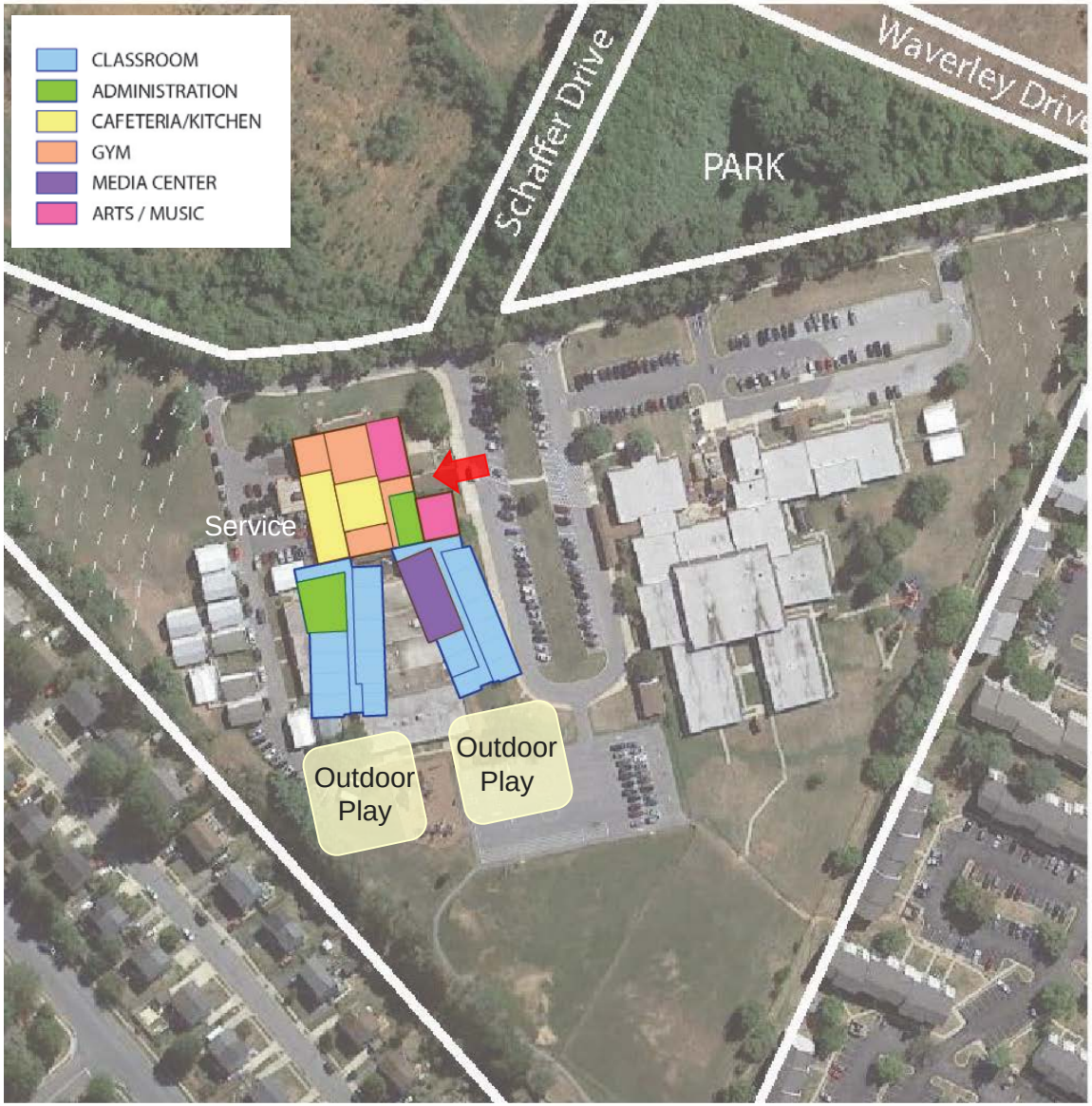
DESIGN OPTIONS

Waverley Building Renovation-Addition

Option 3 (725 Students)

- Demolish west and central classroom wings
- Reuse cafeteria/ gym
- New two-story classroom addition



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DESIGN OPTIONS

Waverley Building Renovation-Addition

Option 4A (725 Students)

- Demolish cafeteria/ gym and west classroom wing
- Reuse central classroom wing
- New one-story classroom addition on east side
- New cafeteria/ gym on west side

Option 4B (1019 Students)

- Demolish cafeteria/ gym and west classroom wing
- Reuse central classroom wing
- New two-story classroom addition on east side
- New cafeteria/ gym on west side

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DESIGN OPTIONS

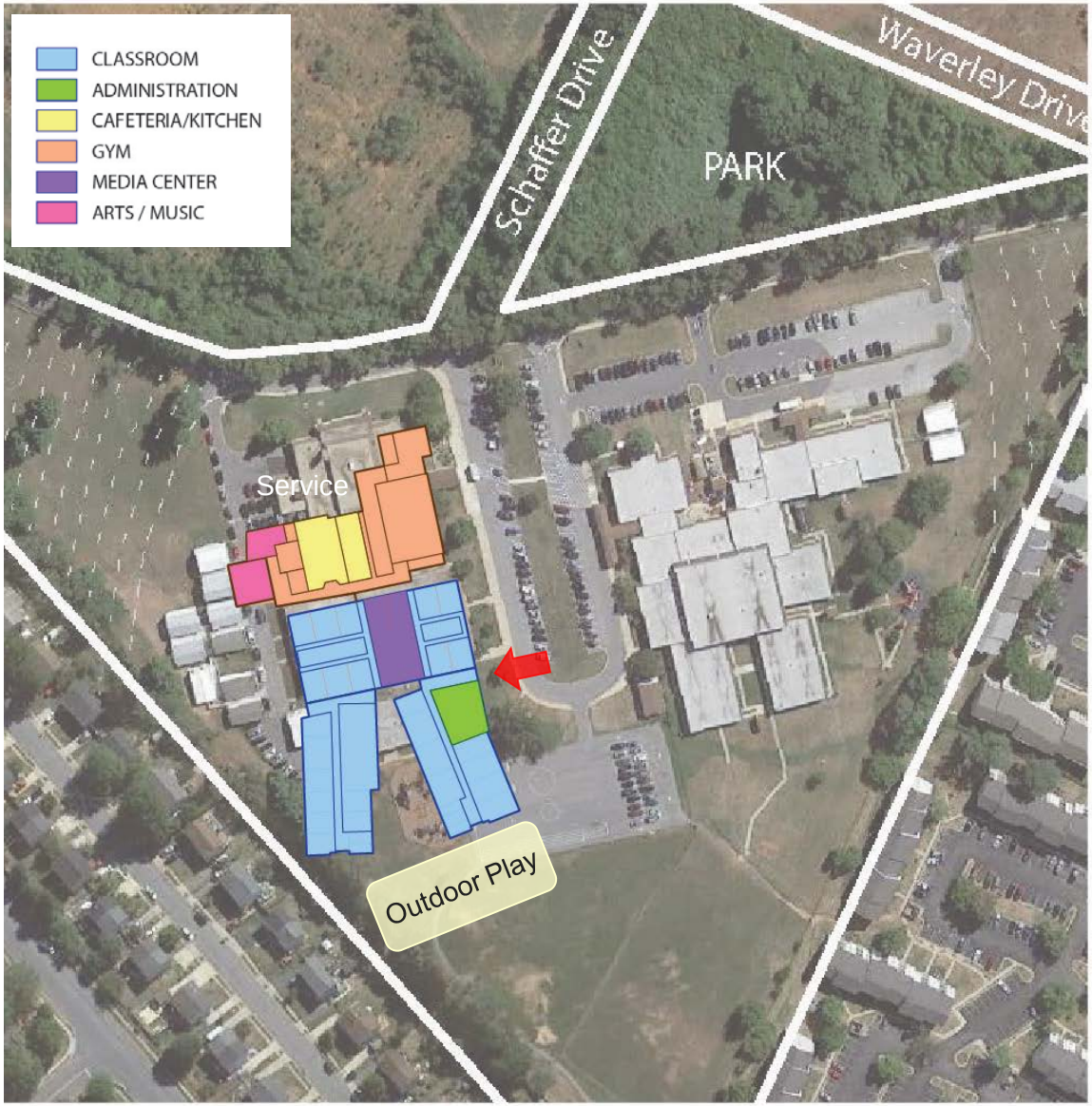
Waverley Building Renovation-Addition

Option 5A (725 Students)

- Demolish cafeteria/ gym and west classroom wing
- Reuse central classroom wing
- New cafeteria/ gym on west side
- New one-story classroom addition on east side

Option 5B (1019 Students)

- Demolish cafeteria/ gym and west classroom wing
- Reuse central classroom wing
- New cafeteria/ gym on west side
- New two-story classroom addition on east side



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DESIGN OPTIONS

Replace Waverley Building

Option 1 (725 Students)

- Demolish Rock Creek building
- New FCPS prototype on former Rock Creek building location
- Demolish Waverley building and redevelop site as outdoor play areas and additional parking

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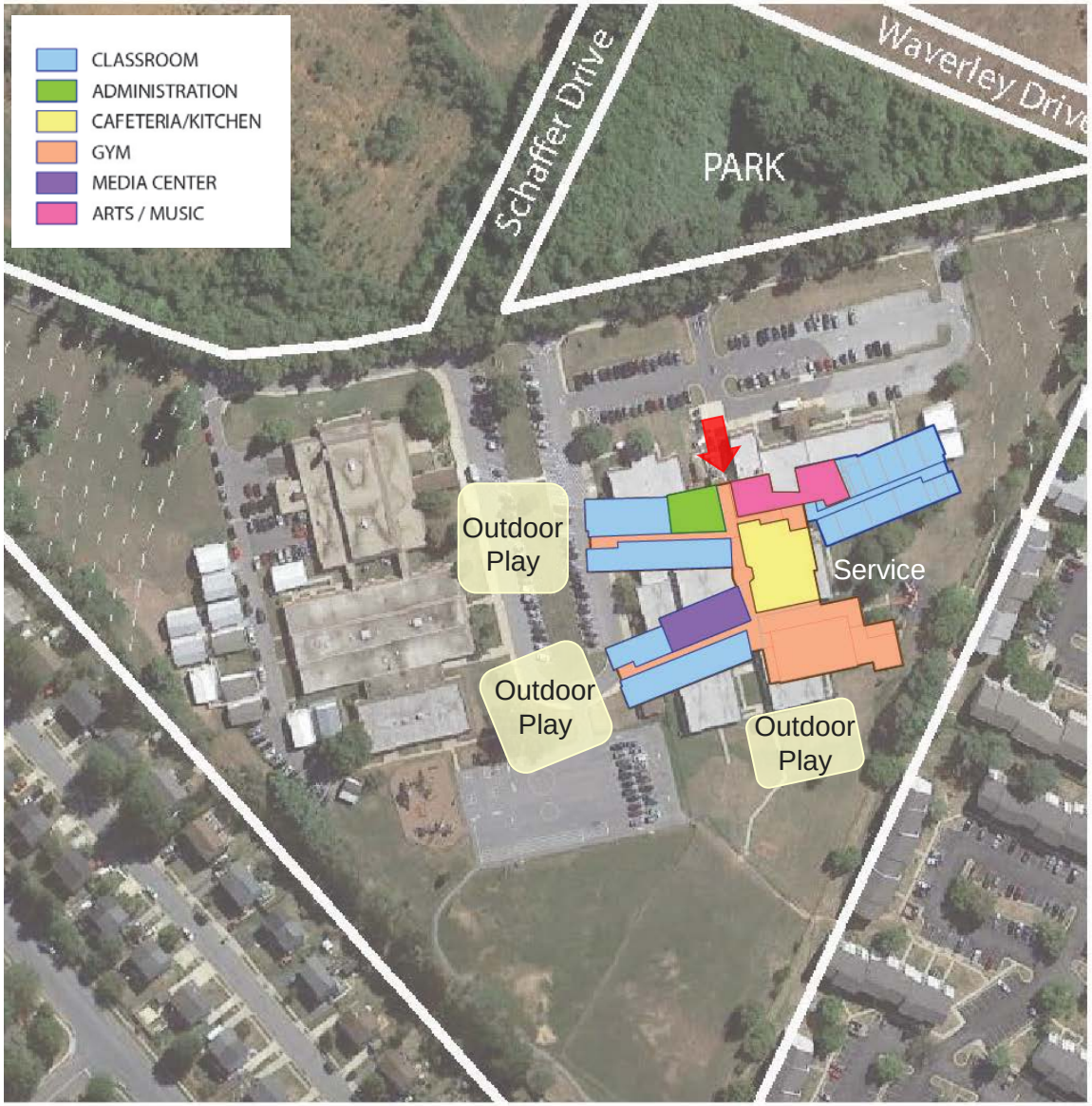
DESIGN OPTIONS

Replace Waverley Building

Option 2 (1019 Students)

- Demolish Rock Creek building
- New FCPS prototype modified with additional two-story classroom wing on former Rock Creek building location
- Demolish Waverley building and redevelop site as outdoor play areas and additional parking



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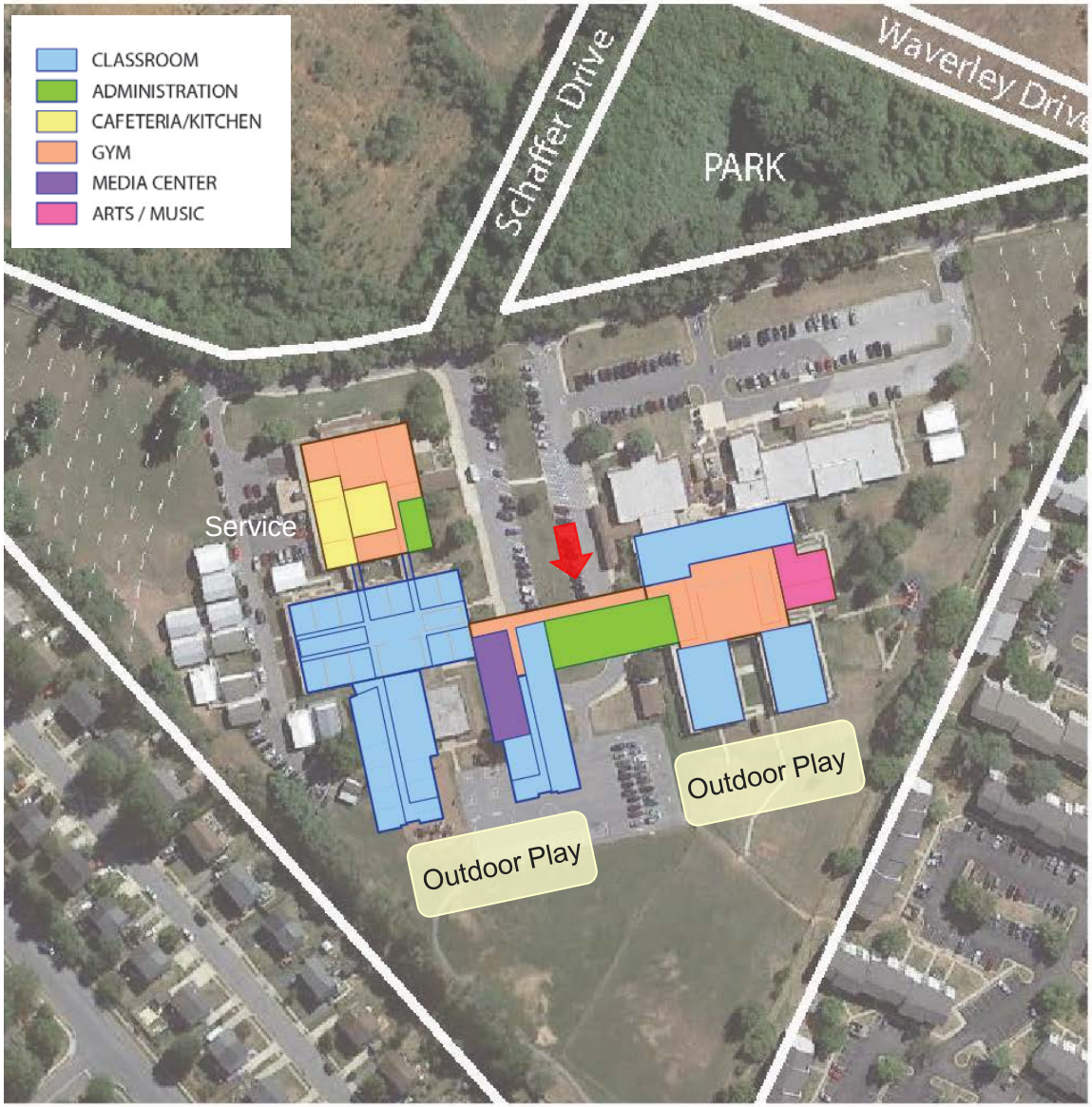
DESIGN OPTIONS

Reuse Waverley & Rock Creek Buildings

Option 1 (1019 Students)

- Demolish west classroom wing of Waverley building
- Demolish south and east portion of Rock Creek Building
- Reuse cafeteria/ gym and central classroom wing of Waverley Building
- Repurpose gym/ pool and west classroom wings of Rock Creek Building
- New one-story classroom addition between Waverley and Rock Creek Buildings

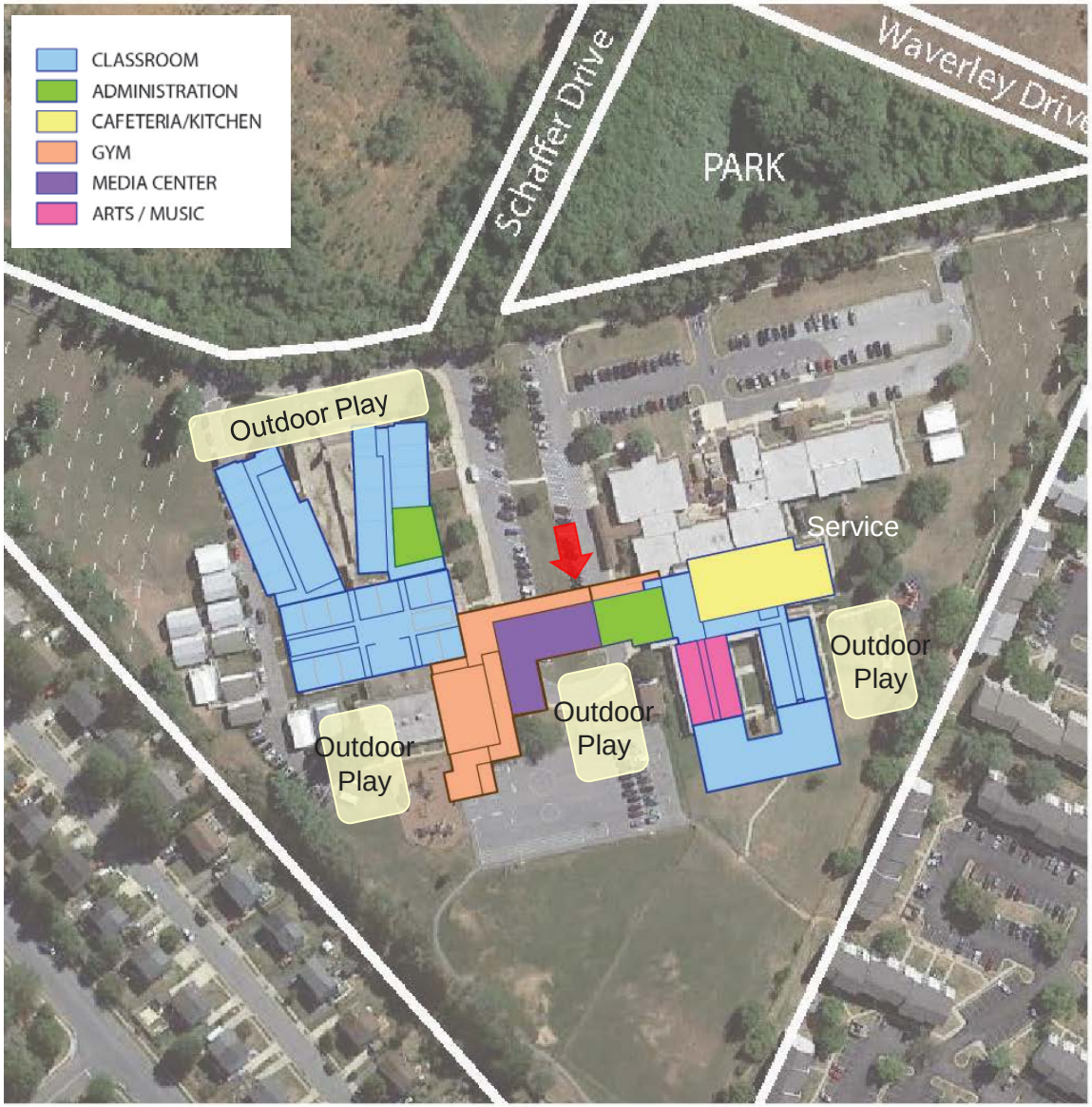


DESIGN OPTIONS

Reuse Waverley & Rock Creek Buildings

Option 2 (1019 Students)

- Demolish cafeteria/ gym and west classroom wing of Waverley building
- Demolish south and east portion of Rock Creek Building
- Repurpose gym/ pool and west classroom wings of Rock Creek Building
- New one-story classroom addition on east side of Waverley building
- New addition on end of west classroom wing of Rock Creek building
- New one-story cafeteria/gym addition between Waverley and Rock Creek Buildings



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