

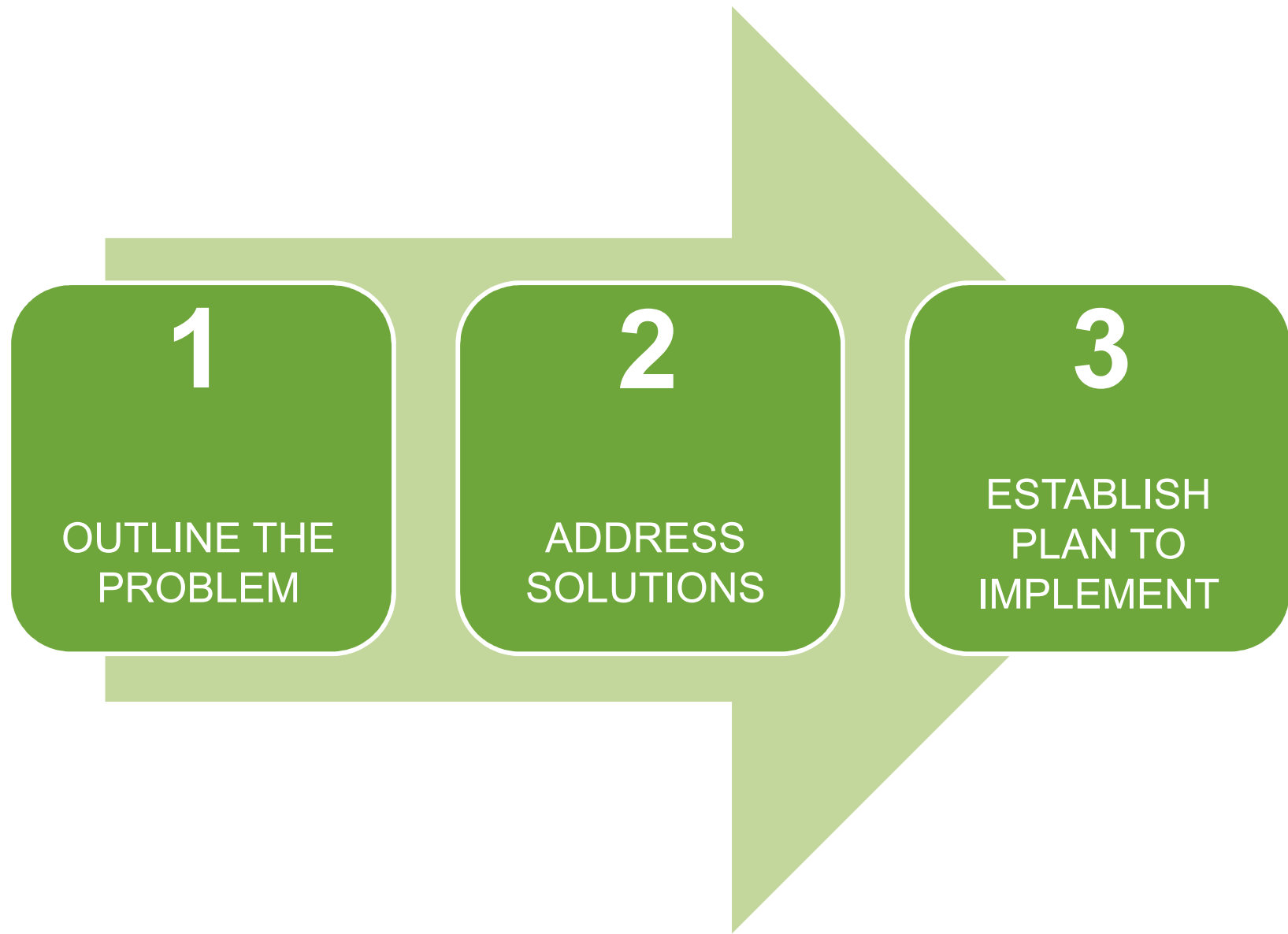


Greene County
Public Schools

VMDO ARCHITECTS

13 April 2016 | School Board Meeting

FACILITIES ASSESSMENT STUDY



GCPS FACILITIES ASSESSMENT



- Surveyed Each School Site's Buildings, Finishes, & Systems
- Analyzed Enrollment Data & Future Growth;
Identified Program Deficiencies, Capacity Needs & Project Options
- Completed existing energy usage analysis;
Established EUI for all existing facilities
- Started study of middle + high school cafeteria capacity issues

Weeks 1-4

Weeks 5-8

Weeks 9-12

Weeks 13-18

Phase 1:
Facilities Assessment

Analysis of Buildings & Core Spaces

Analysis of Enrollment, Growth & Capacity

- Conduct Interviews with Leadership & Personnel; Survey Each School Site's Buildings, Finishes, & Systems
- Analyze Enrollment Data, Capacity Needs, & Future Growth; Identify Program Deficiencies & Potential Project Options
- **Workshop #1:** Share Analysis, Confirm Goals & Schedule

Phase 2:
Long-Range Strategic Visioning

Long-Range Strategic Visioning

- Refine Project Options
 - Obtain Stakeholder Input
- **Workshop #2:** Recommend Future Projects to Support Growth and Capacity Needs, Upgrades, and Improvements
- Obtain Stakeholder Input
- Final Report of Study & Long-Range Strategic Visioning



Stanardsville Campus



Technical Education Center



Ruckersville Elementary School



GROWTH + CAPACITY ASSESSMENT



GCPS Growth

2005-2015

1.78%

2010-2015

2.50%

GCPS Growth

PROJECTIONS Weldon Cooper

2005-2015



2015-2018

2010-2015



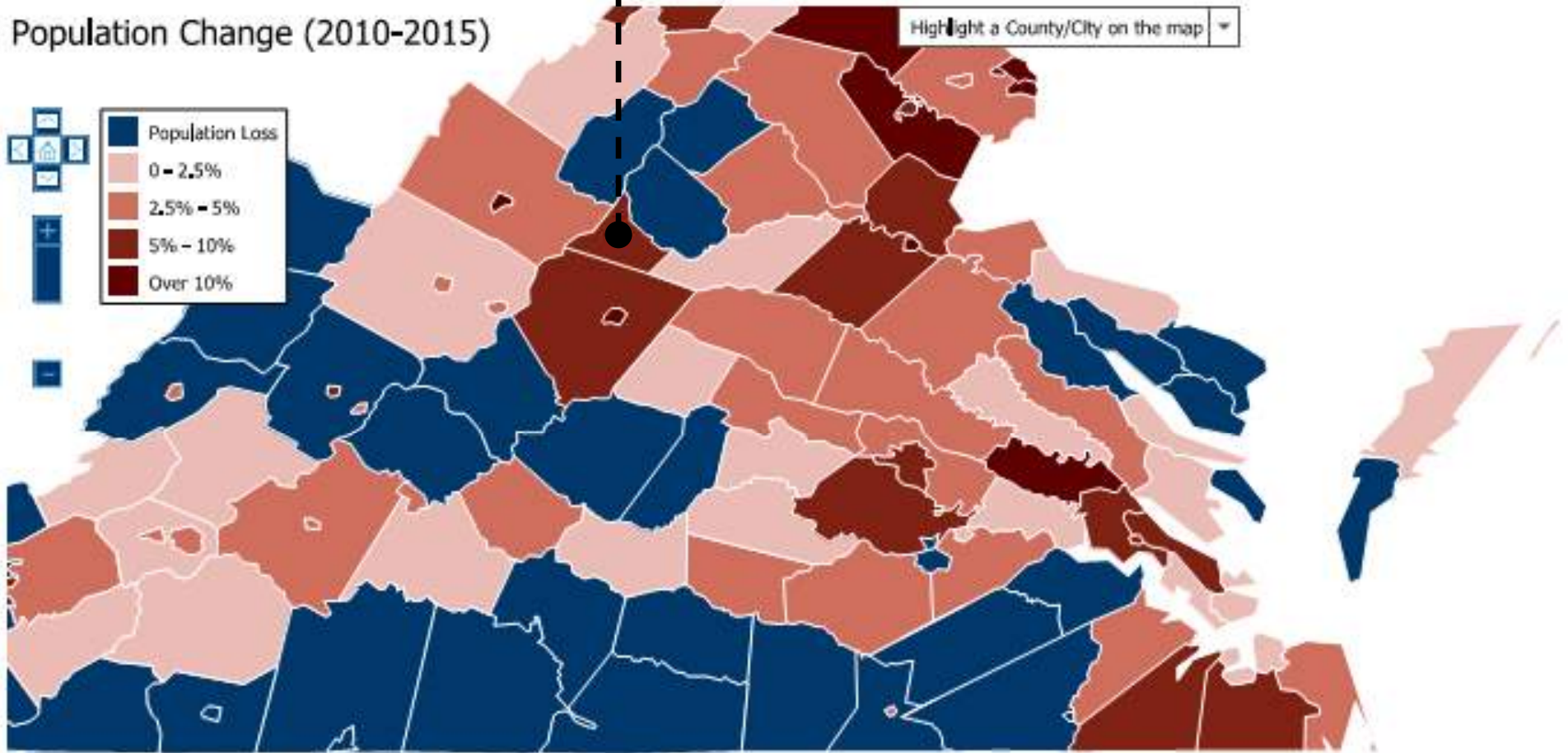
VA Employment
Commission

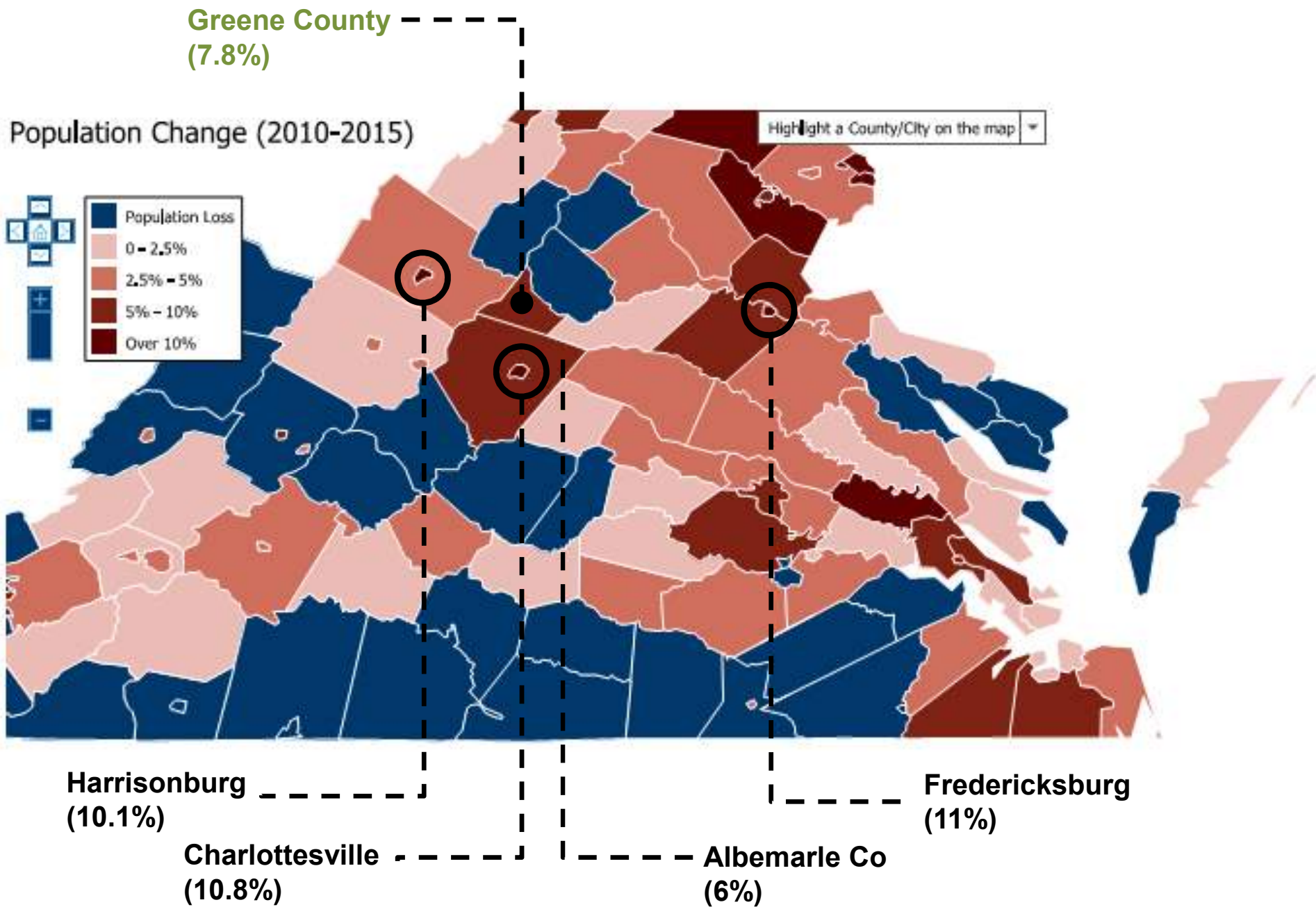


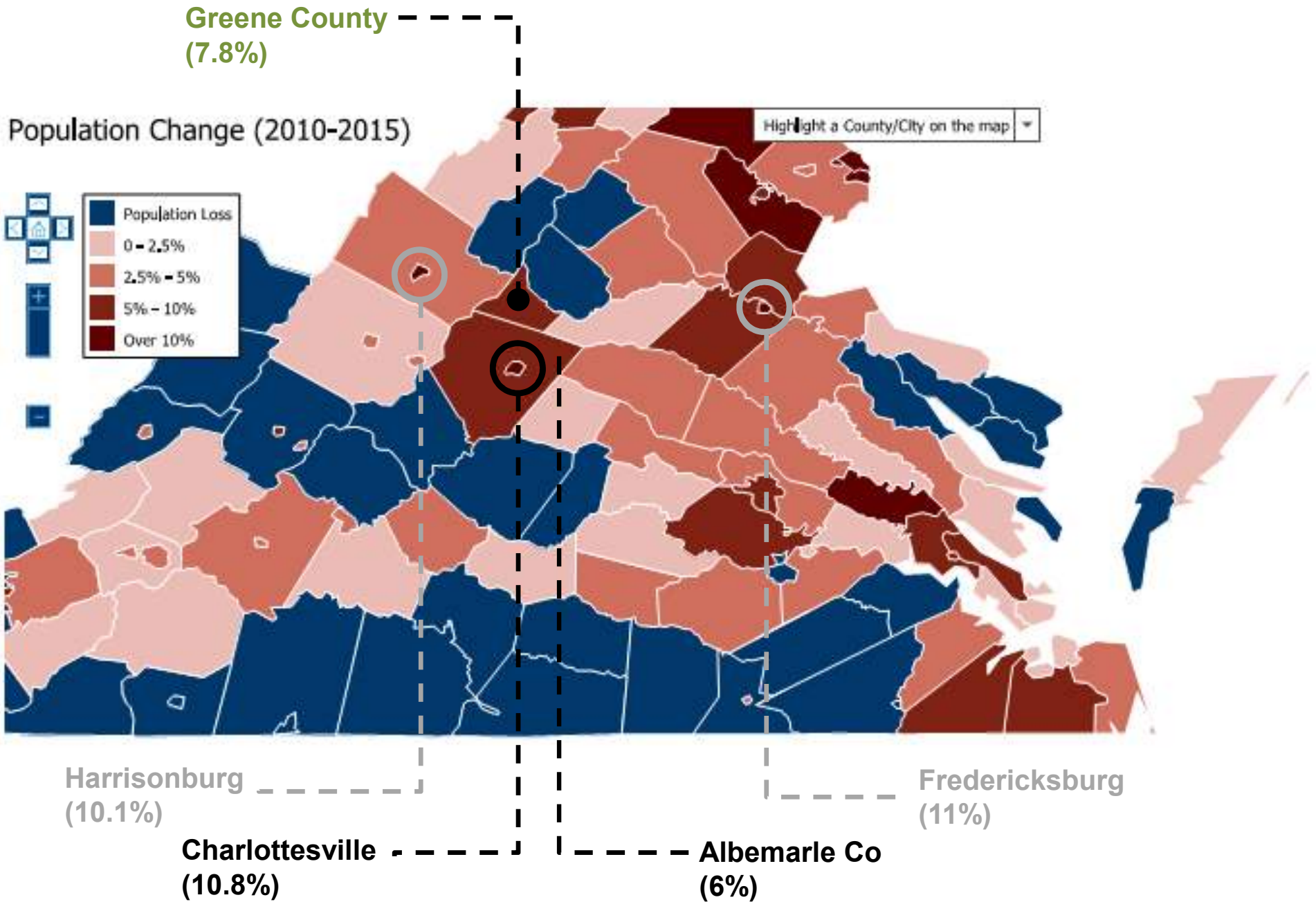
Greene County
(7.8%)

Population Change (2010-2015)

Highlight a County/City on the map







- **Proximity to:**

Albemarle Co.

Charlottesville

Harrisonburg (to some degree)

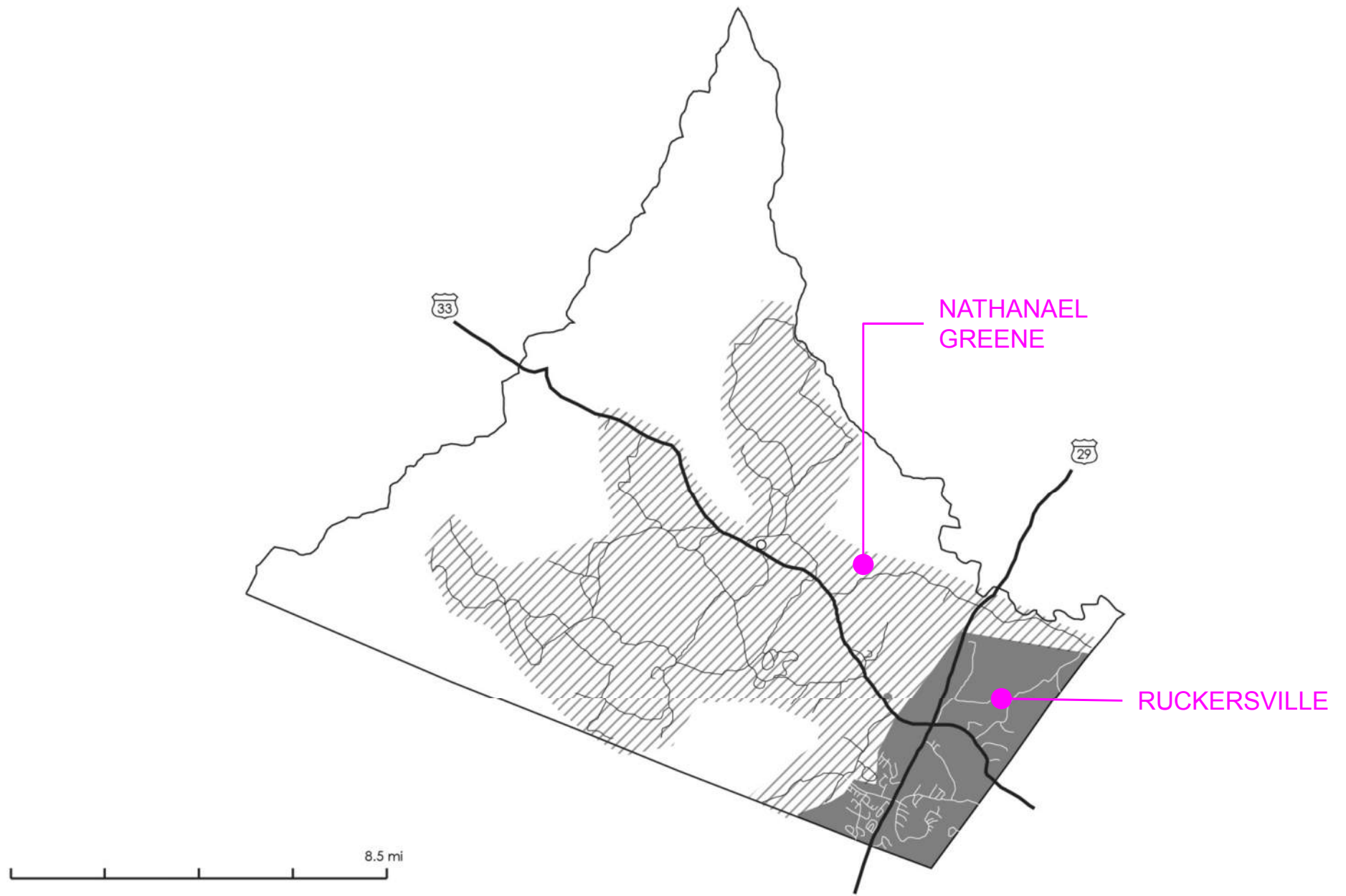
- **Development-ready land along US-29**

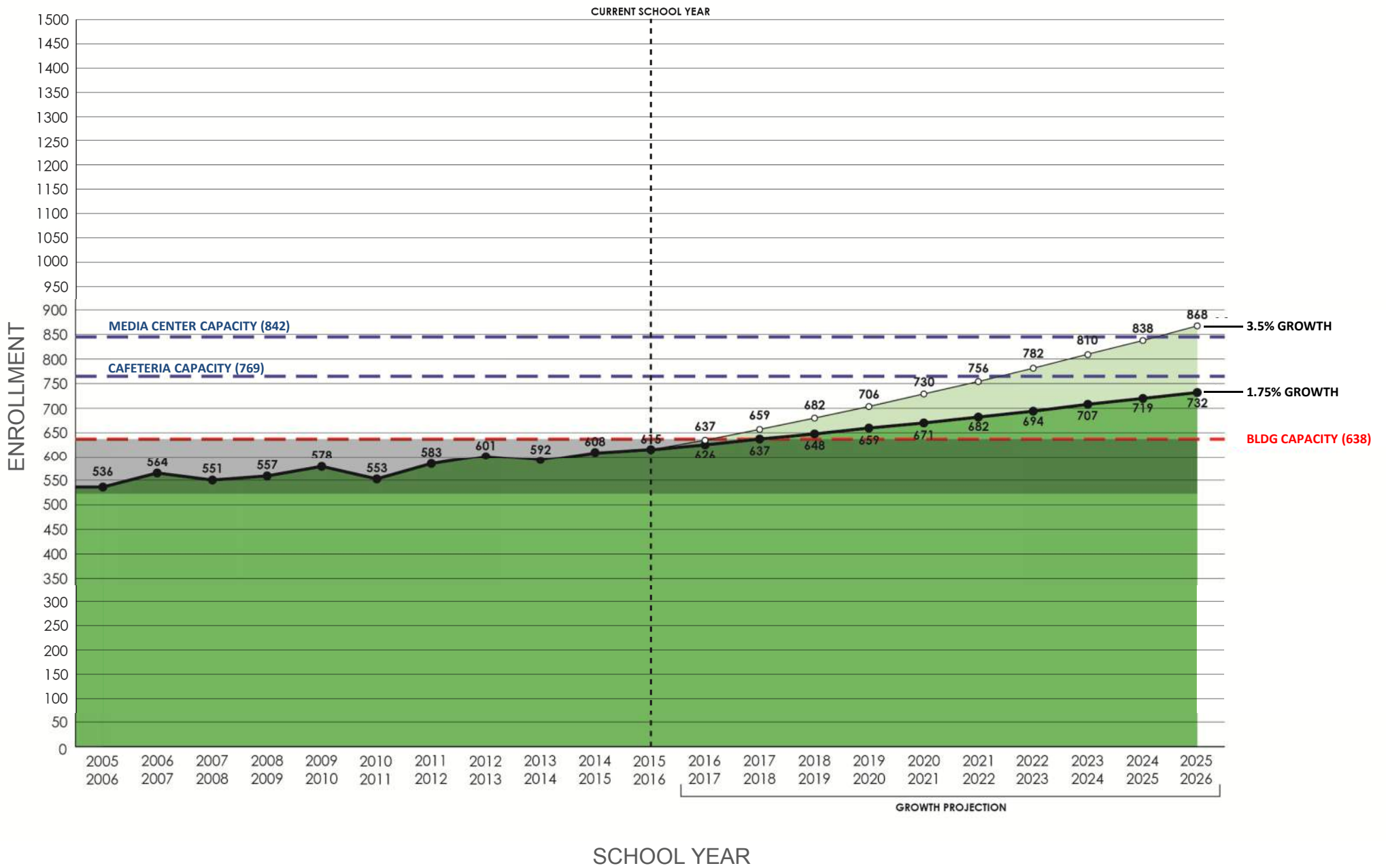
- **Recent Development**

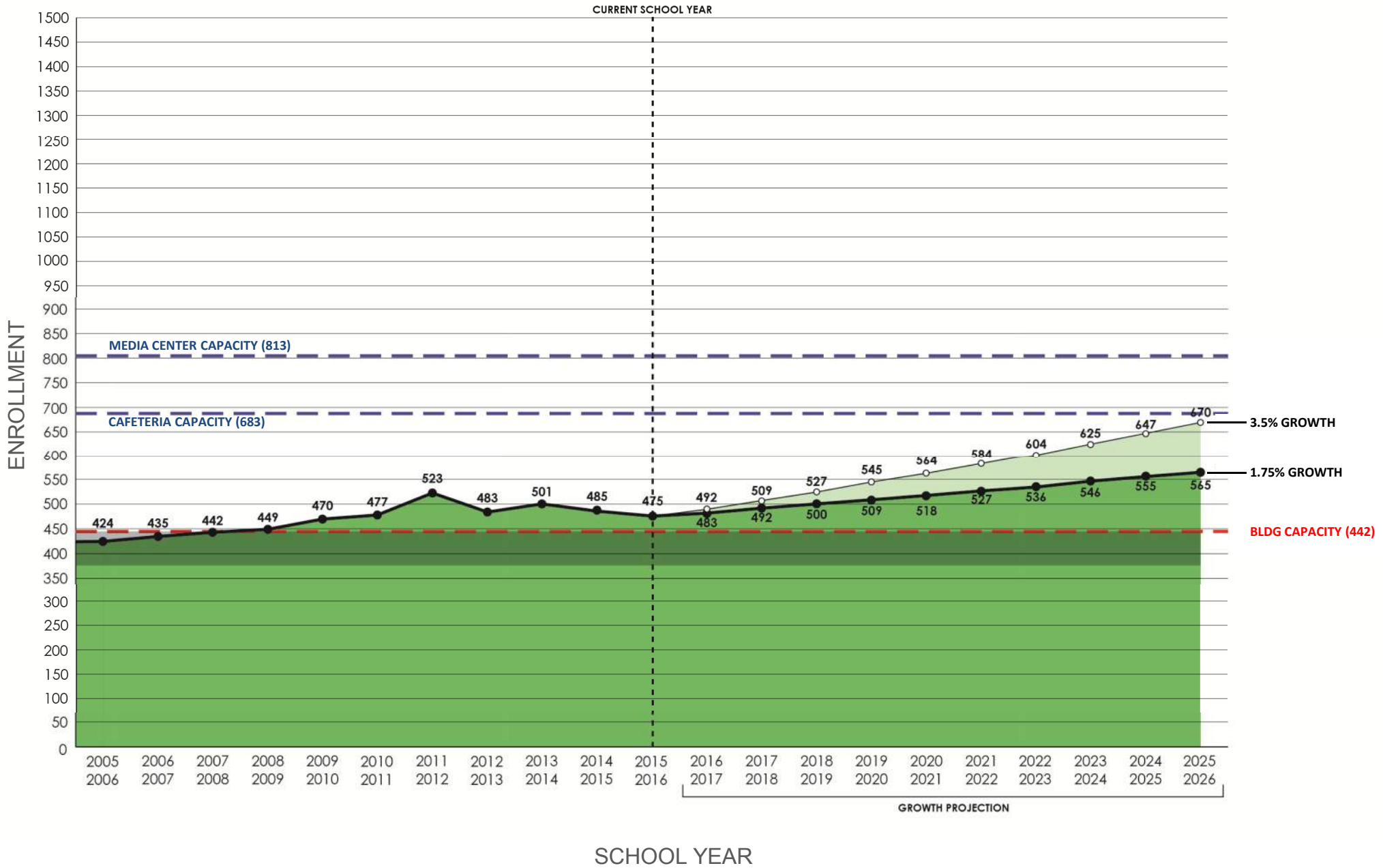
N.G.I.C.

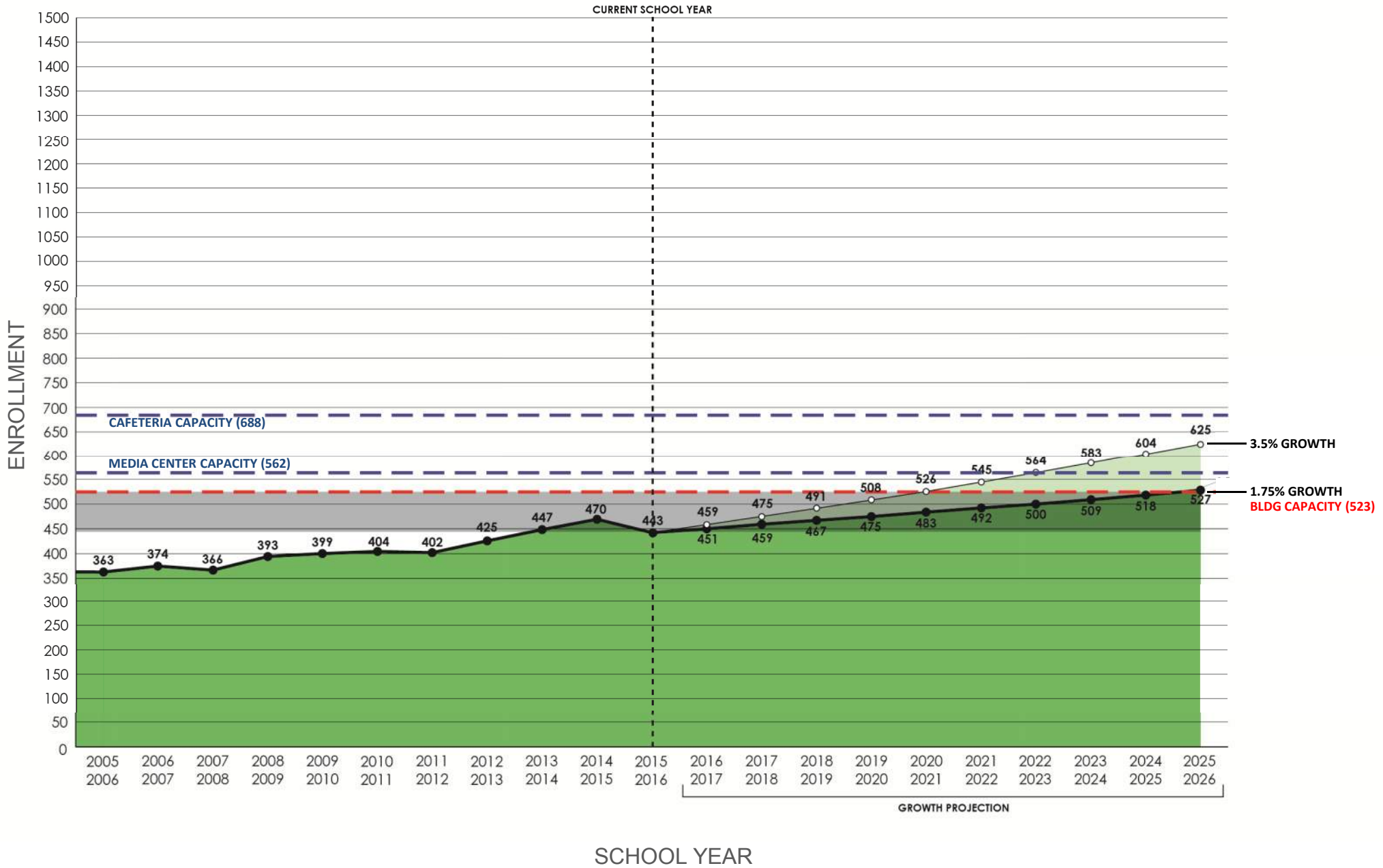
Highway Safety Crash Center

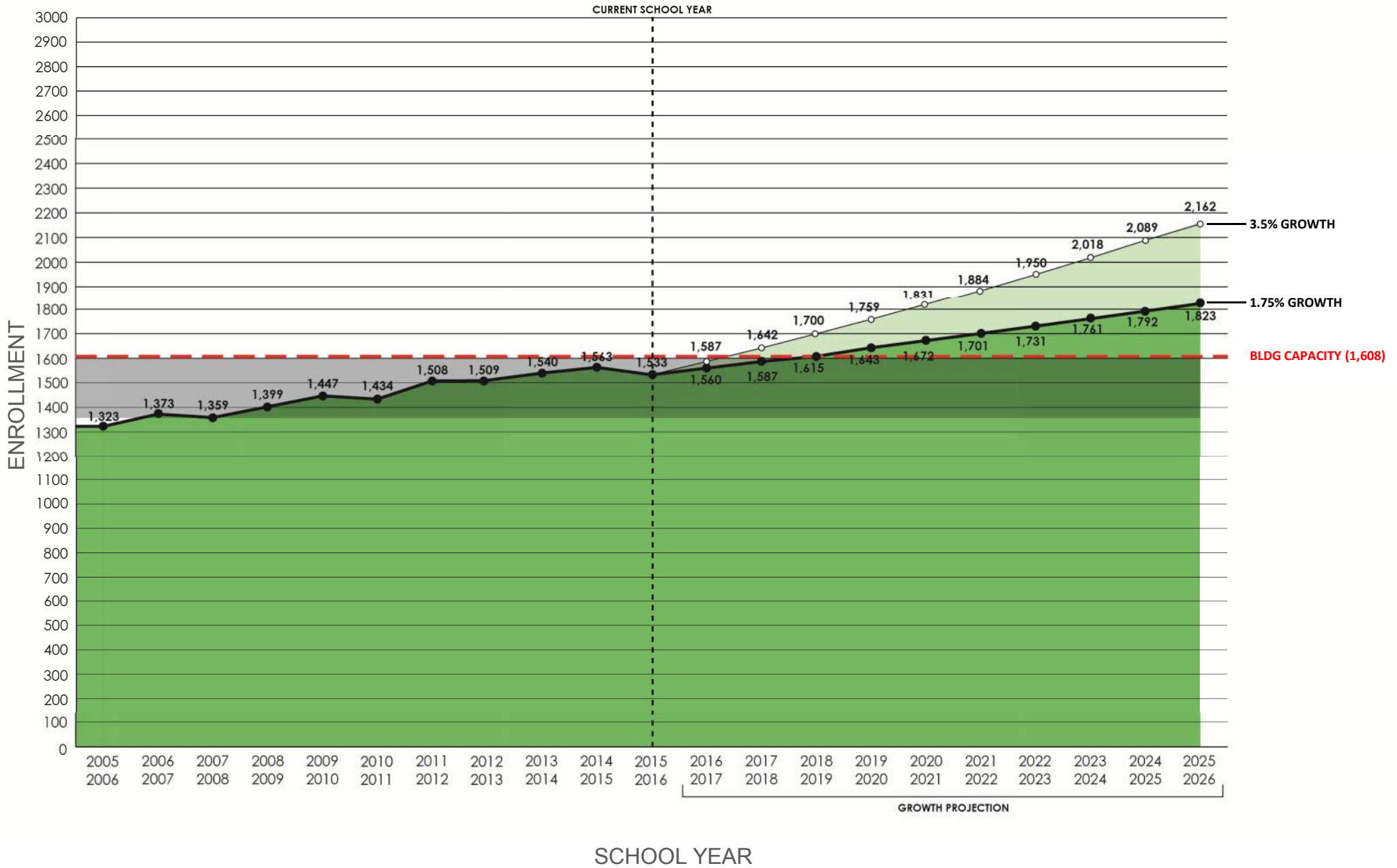
New/expanded Retail + Housing

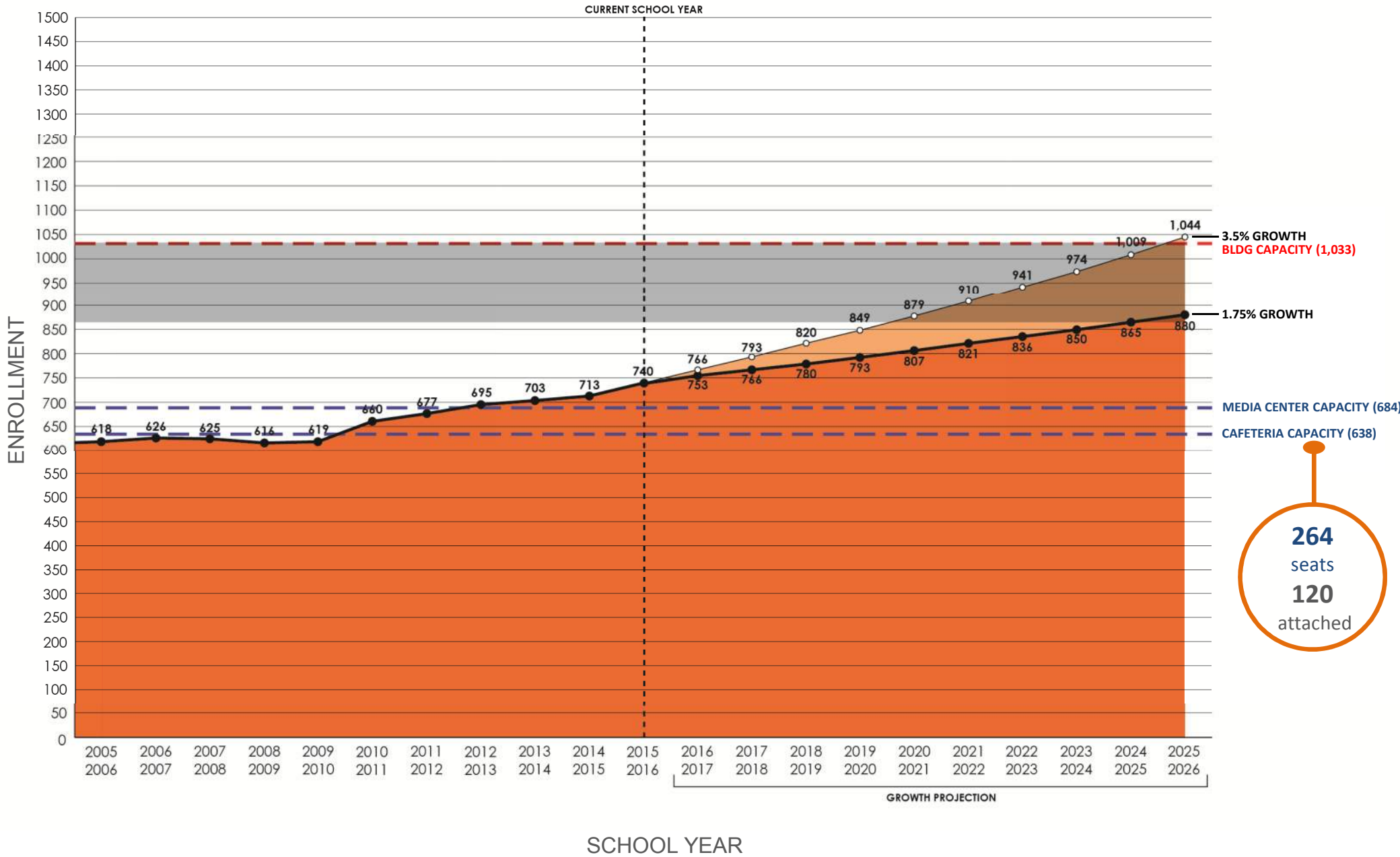


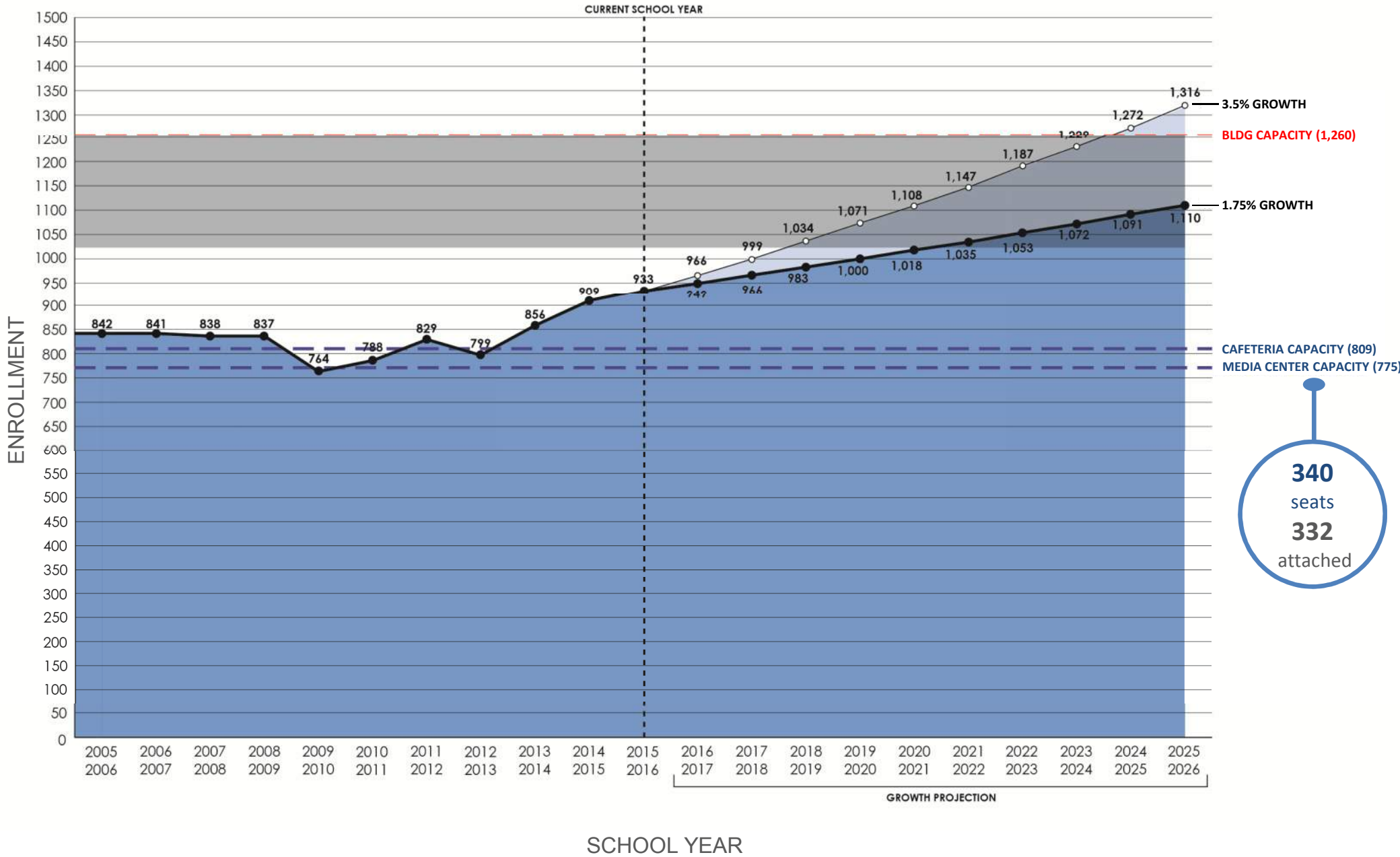












QUALITY ASSESSMENT



State Averages – New Construction

	Elementary	Middle	High
2009-2010	125	134	
2010-2011	123		164
2011-2012	111		175
2012-2013	124	168	166
2013-2014	129		158
2014-2015	109		183
2015-16	111	151	
Avg (sf)	119	151	169

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Elementary

	GSF	VDOE Capacity	SF/Pupil
NG Primary	47,500	440	108
NG Elem	50,424	526	96
Ruckersville	67,460	632	107
Average			103

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W. Monroe	92,504	1,033	90

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Middle

	GSF	VDOE Capacity	SF/Pupil
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High

	GSF	VDOE Capacity	SF/Pupil
W. Monroe	142,972	1,260	113



SITE DENSITY

WILLIAM MONROE MIDDLE

740 PUPILS
9.1 ACRES

81.3
PUPILS/ACRE

NATHANAEL GREENE PRIMARY / ELEMENTARY

920 PUPILS
16.4 ACRES

56.1
PUPILS/ACRE

WILLIAM MONROE HIGH

933 PUPILS
31.1 ACRES

30.0
PUPILS/ACRE

RUCKERSVILLE ELEMENTARY

615 PUPILS
30.0 ACRES

20.5
PUPILS/ACRE

THOMAS HARRISON MIDDLE SCHOOL

890 PUPILS
33.75 ACRES (Harrisonburg, VA)

26.4
PUPILS/ACRE

WATERMAN ELEMENTARY SCHOOL

496 PUPILS
14.1 ACRES (Harrisonburg, VA)

35.2
PUPILS/ACRE

ENERGY EFFICIENCY + OPERATING COSTS





K–12 **energy costs** are second only to **personnel costs** as the leading draw on school district operating budgets.

Each **energy unit** reduction saved in design + construction results in **continuous** monthly savings in operation over the life of the building.

A photograph of a modern classroom with large windows and students sitting on beanbag chairs. The image is overlaid with a green tint. The text is centered on the image.

Improved test scores

Happier + Healthier building occupants

Improved interior environment
(light, air, temperature control)

Reduced sick days
(student + staff)

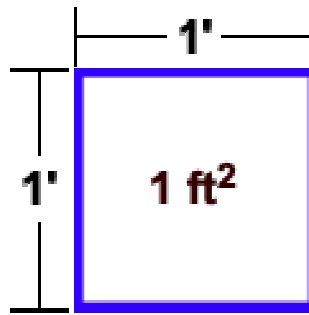
Higher teacher retention

Energy Use Intensity (EUI) =

energy use (kBTU) per square foot over one year



1 Foot x 1 Foot = 1 ft²





ENERGY

K-12 NATIONAL AVERAGE
2010

70.0
kBTU/GSF/YR

RUCKERSVILLE
ELEMENTARY SCHOOL
2014-2015

83.8
kBTU/GSF/YR

NATHANAEL GREENE
ELEMENTARY SCHOOL
2014-2015

72.3
kBTU/GSF/YR

WILLIAM MONROE
HIGH SCHOOL
2014-2015

72.0
kBTU/GSF/YR

NATHANAEL GREENE
PRIMARY SCHOOL
2014-2015

64.9
kBTU/GSF/YR

WILLIAM MONROE
MIDDLE SCHOOL
2014-2015

58.9
kBTU/GSF/YR



WATER

WILLIAM MONROE
MIDDLE SCHOOL + HIGH SCHOOL
1680 OCCUPANTS

2,237
GAL/OCC/YR

NATHANAEL GREENE
ELEMENTARY SCHOOL
443 OCCUPANTS

1,668
GAL/OCC/YR

NATHANAEL GREENE
PRIMARY SCHOOL
477 OCCUPANTS

1,598
GAL/OCC/YR

GCPS AVERAGE

1,596
GAL/OCC/YR

RUCKERSVILLE
ELEMENTARY SCHOOL
615 OCCUPANTS

881
GAL/OCC/YR

431
GAL/OCC/YR

MANASSAS PARK
ELEMENTARY SCHOOL
840 OCCUPANTS



BILLS

WILLIAM MONROE
HIGH SCHOOL
110,972 GSF

\$187,600
UTILITY BILL / YR

WILLIAM MONROE
MIDDLE SCHOOL
92,504 GSF

\$146,045
UTILITY BILL / YR

NATHANAEL GREENE
ELEMENTARY SCHOOL
50,424 GSF

\$84,096
UTILITY BILL / YR

NATHANAEL GREEN
PRIMARY SCHOOL
47,500 GSF

\$88,504
UTILITY BILL / YR

RUCKERSVILLE
ELEMENTARY SCHOOL
67,460 GSF

\$142,106
UTILITY BILL / YR

MANASSAS PARK
ELEMENTARY SCHOOL
140,460 GSF

\$145,438
UTILITY BILL / YR



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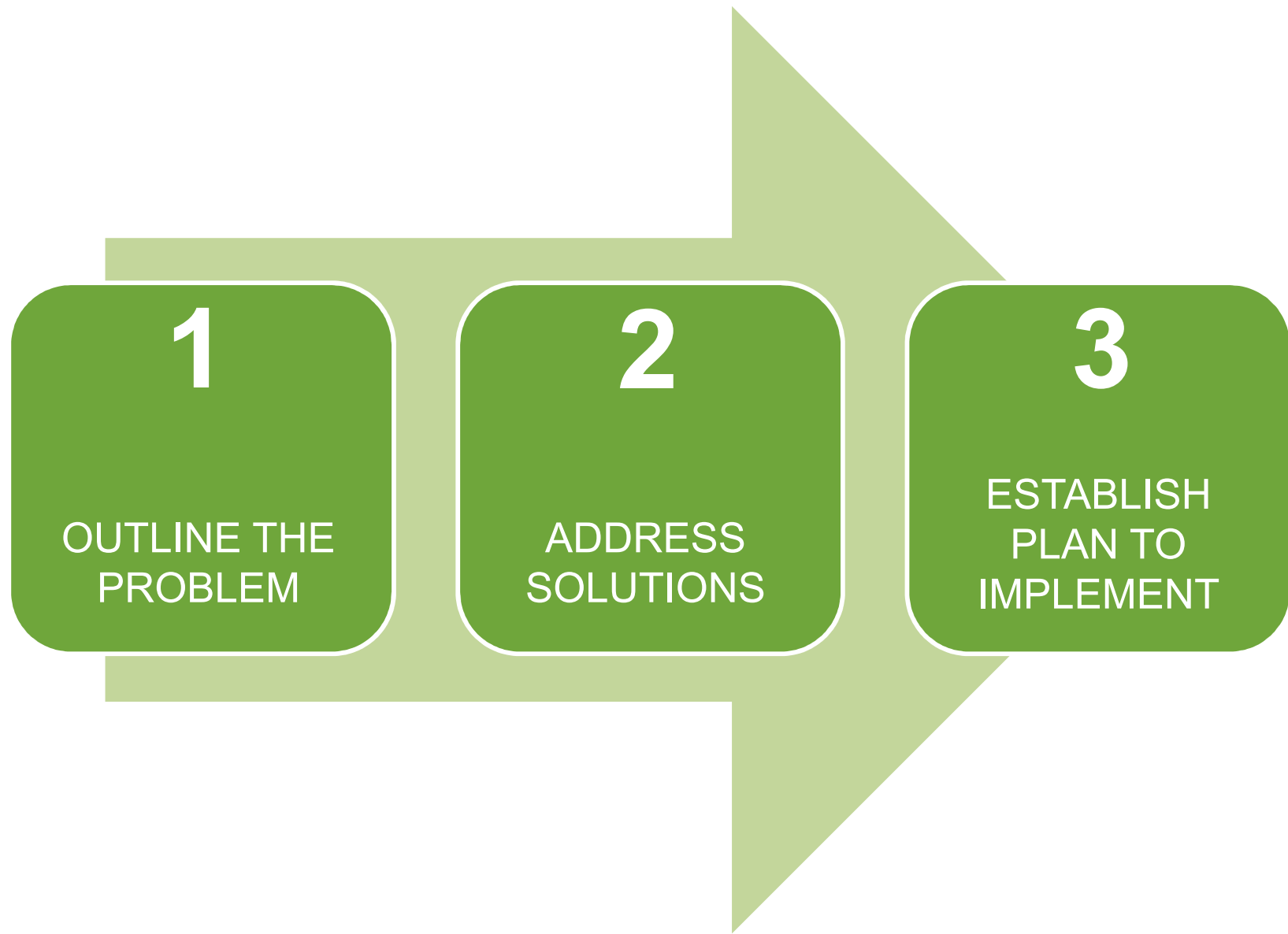
\$142,106
UTILITY BILL / YR

MANASSAS PARK
ELEMENTARY SCHOOL
140,460 GSF

\$145,438
UTILITY BILL / YR

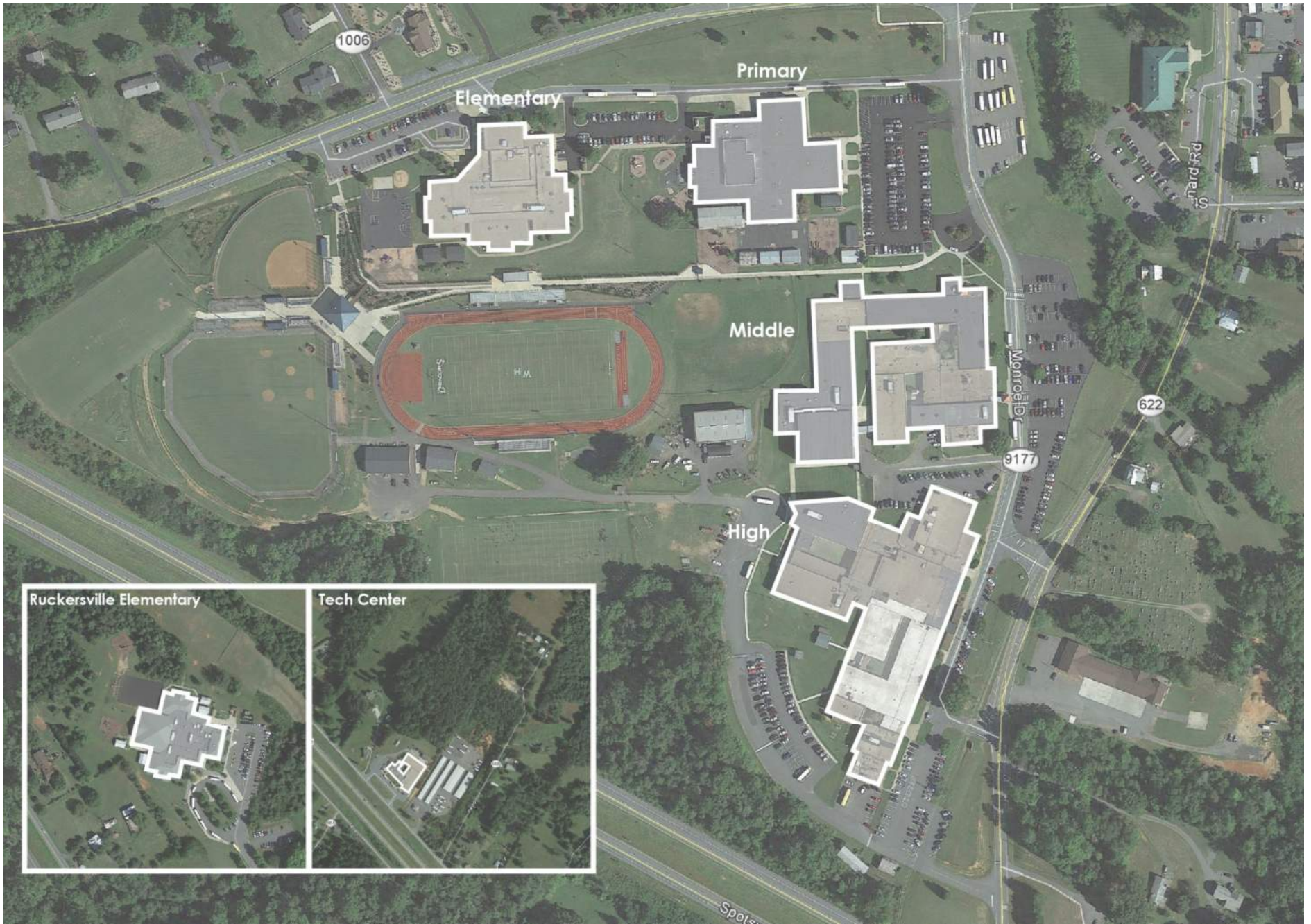
ANALYSIS

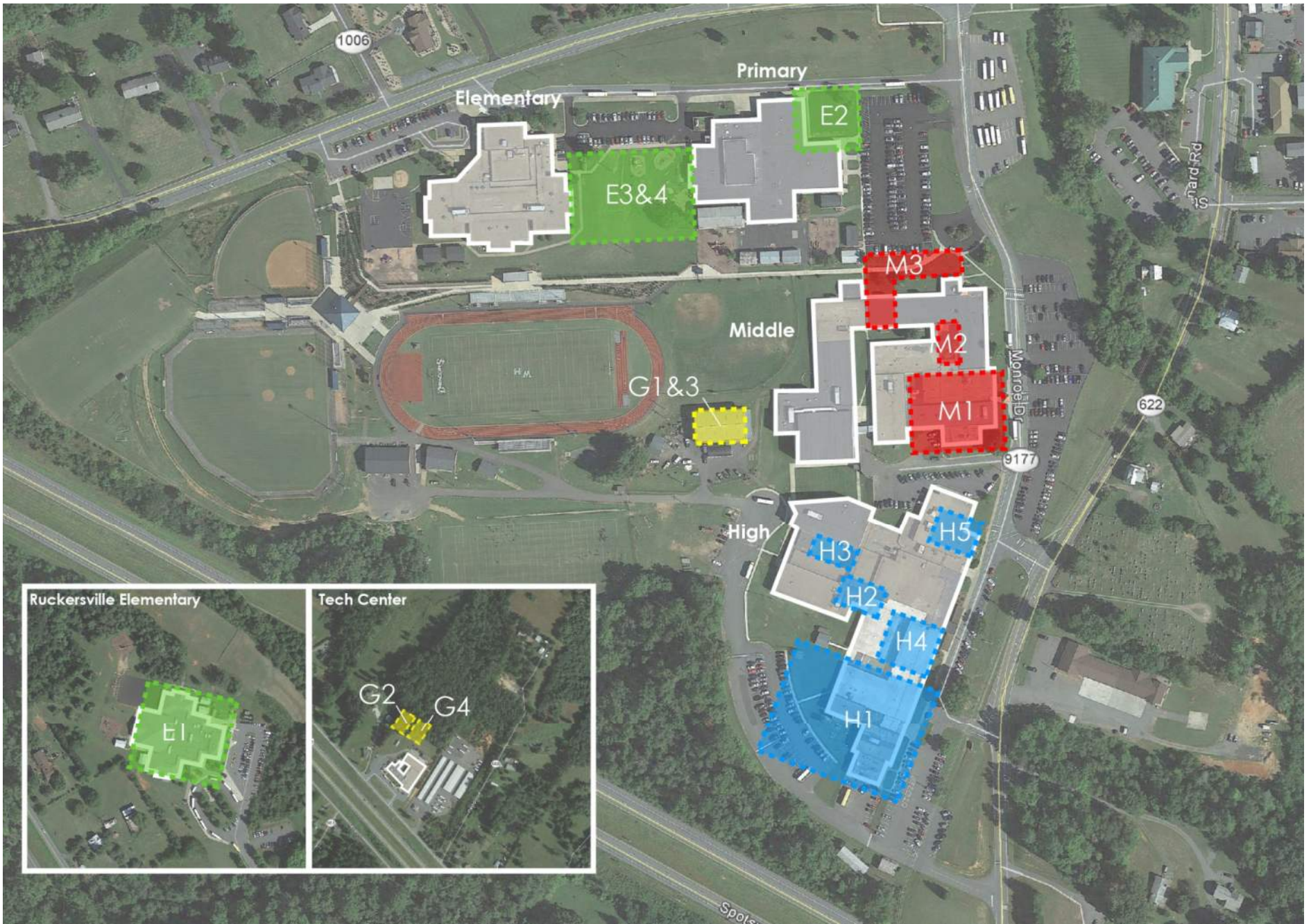




- Every school approaching or over **CAPACITY**
- Every school lacking **QUALITATIVE PROGRAM** to support education
- Middle School + High School **KITCHEN + DINING** spaces insufficient for current and growing enrollment
- Every school has **TRAFFIC + PARKING** issues

- **Solutions to address:**
 - growth + capacity issues
 - incremental school-specific program needs
 - Building Identity
 - Big picture solutions that address multiple issues, in hopes of achieving some efficiencies/synergies
- **Detailed analysis + study of Middle + High School dining currently in process**
 - incremental projects at each school
 - looking for other spaces in the buildings that could serve as dining space (and provide other benefits at other times)
 - more radical solutions (i.e. centralized kitchen)
- **New Elementary School**
 - Likely first required big move to provide capacity relief





NEXT STEPS



Weeks 1-4

Weeks 5-8

Weeks 9-12

Weeks 13-18

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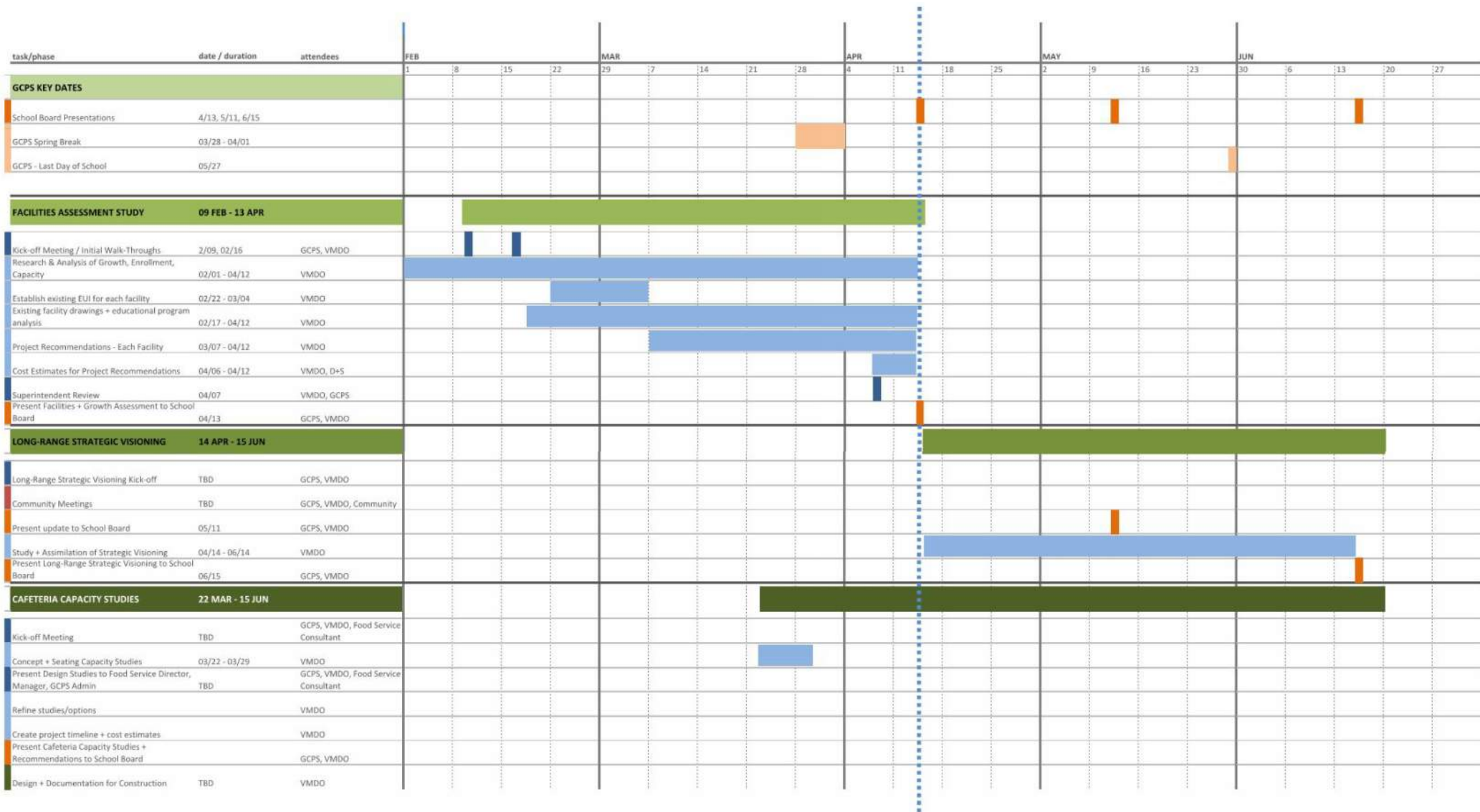
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