



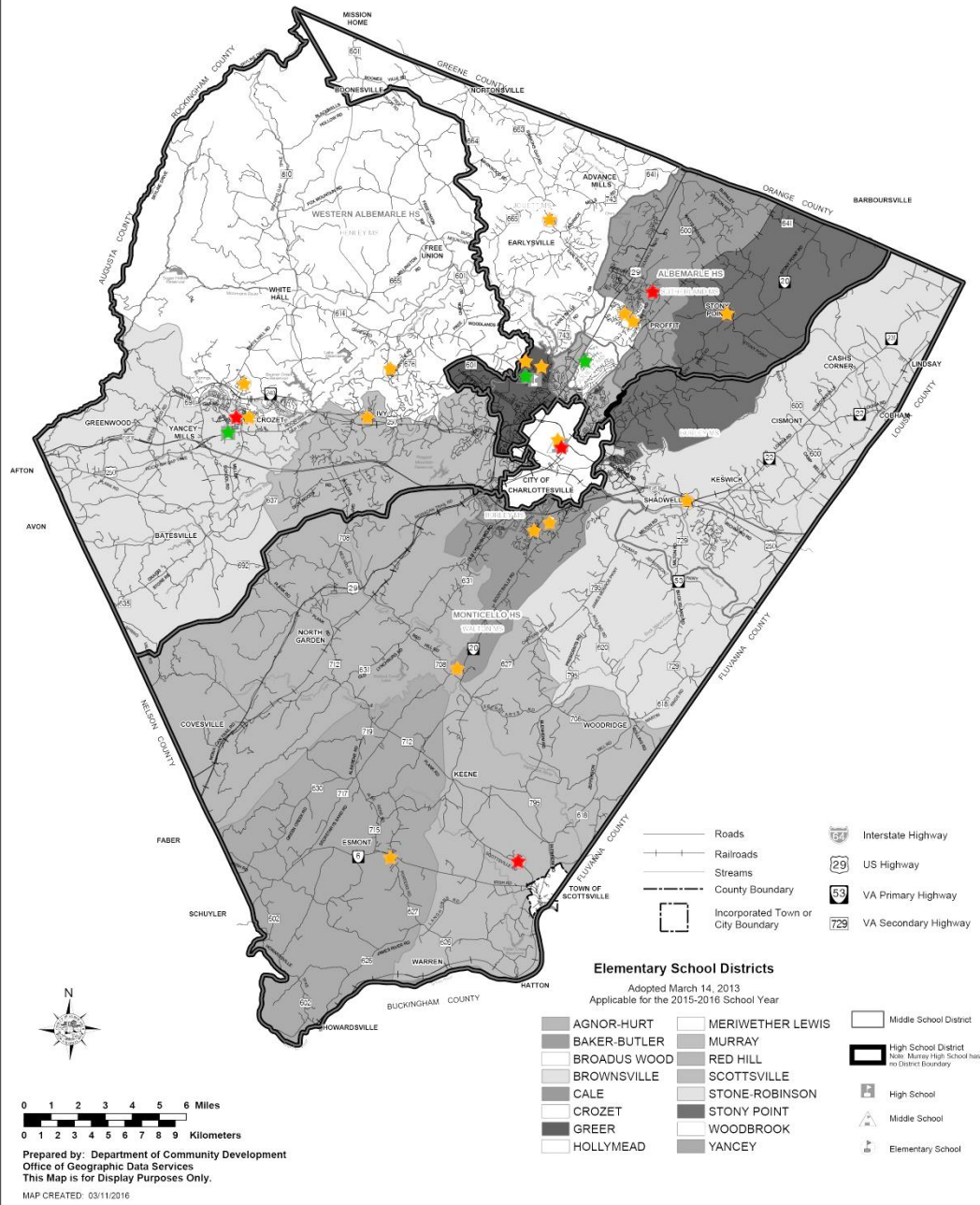
BOND REFERENDUM 2016: SCHOOL PROJECTS OVERVIEW

Board of Supervisors Meeting
May 11, 2016

School Board Requested Projects

Project	2017/18	2018/19	Total
Learning Space Modernization	\$ 3,300,000	\$ 7,600,000	\$ 10,900,000
Woodbrook Addition, Modernization & Renovation	\$ 15,200,000		\$ 15,200,000
WAHS Science Lab Addition & Modernization	\$ 500,000	\$ 5,500,000	\$ 6,000,000
School Security Improvements	\$ 1,500,000	\$ 1,400,000	\$ 2,900,000
High School Capacity Planning	\$ 500,000		\$ 500,000
TOTAL	\$ 21,000,000	\$ 14,500,000	\$ 35,500,000

County of Albemarle Virginia



Security Projects

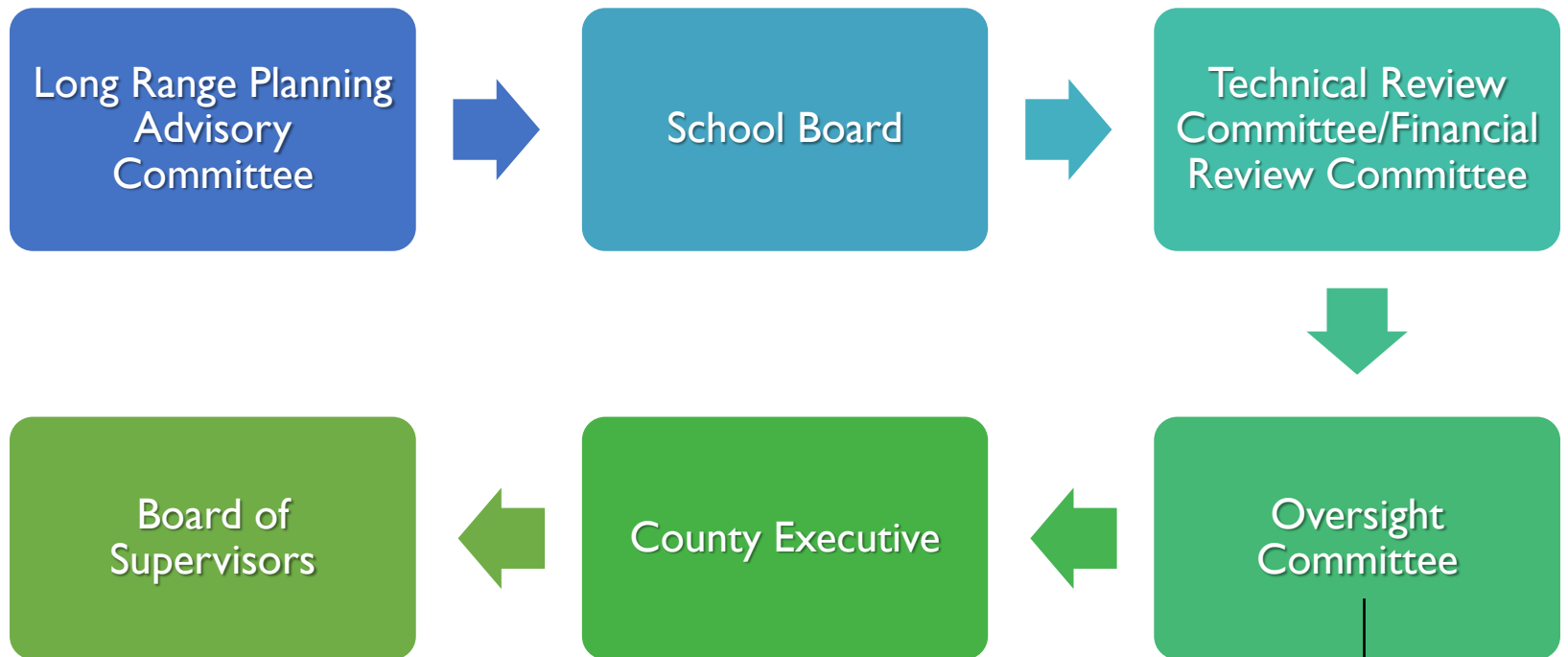


Individual School Projects



Modernization Projects

CIP Project Review Process



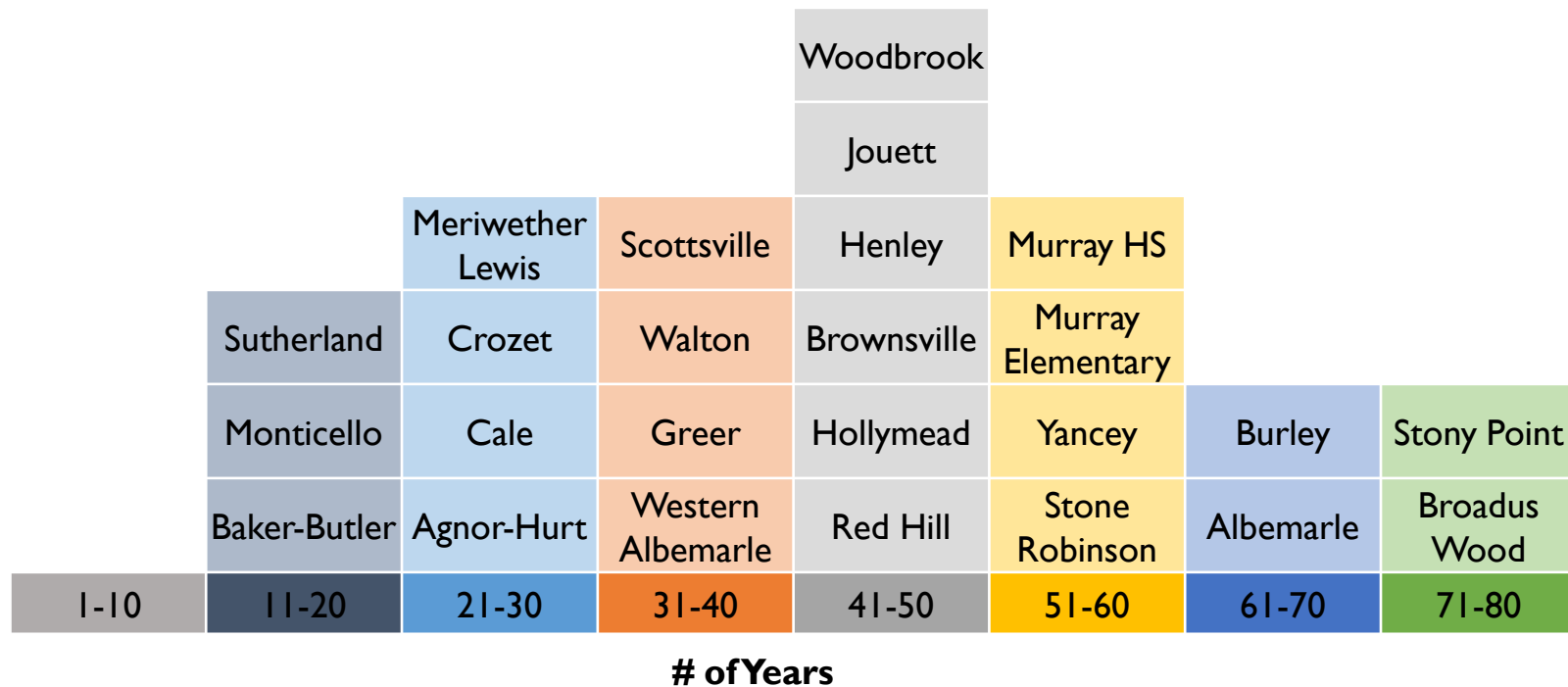
All projects were in OC's
"Preferred Scenario"

Learning Space Modernization

mod·ern·ize *verb* \ 'mä-dər-, nīz\ :
to make (something) modern
and more suited to present
styles or **NEEDS**

Building Age

Age of Original Building



Project Categories



Classroom Furniture Upgrade



Classroom Modernization



Media Center Modernization

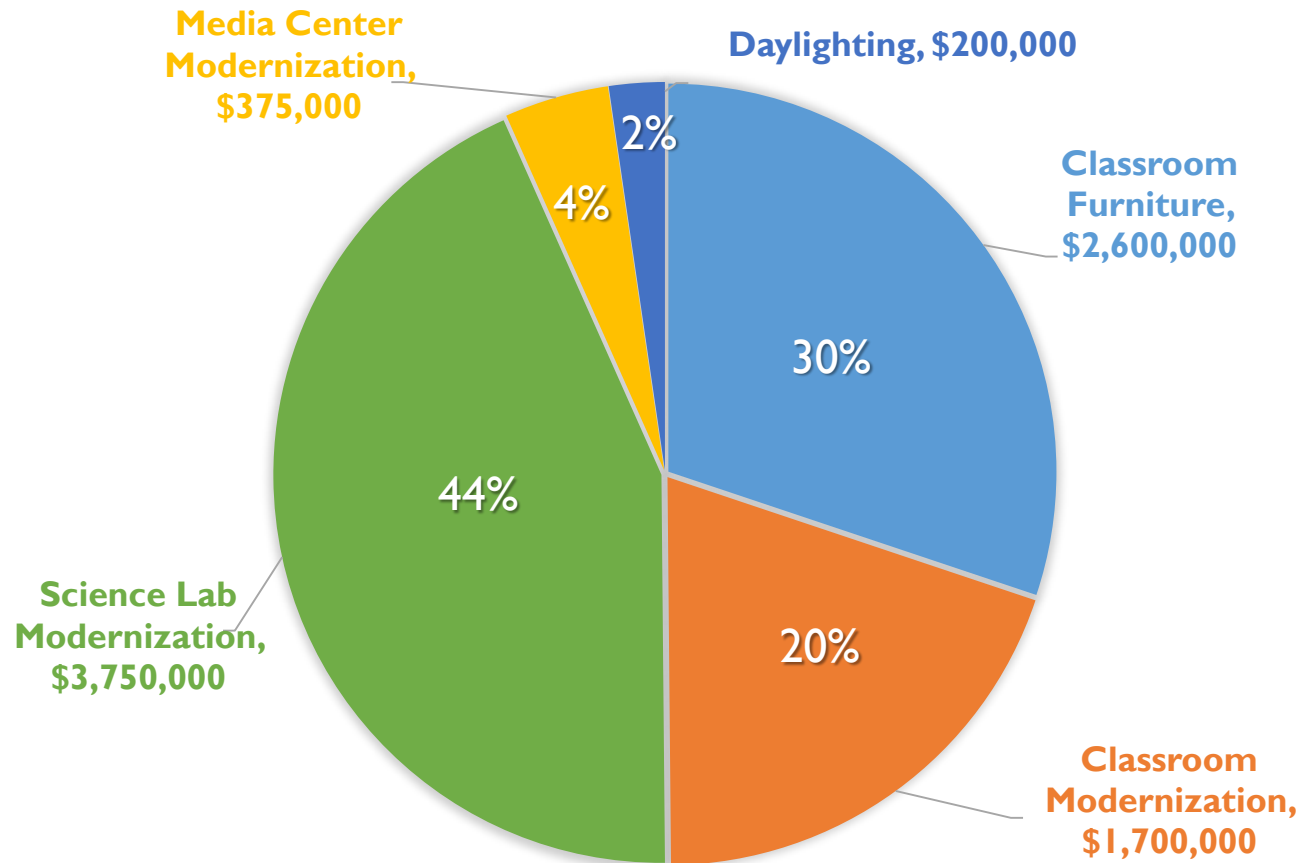


Science Lab Modernization



Daylighting

Project Costs by Categories



*Amounts do not include contingency, design or PM fees

Key Features

- Furniture that promotes movement, flexibility, student comfort/choice
- Lighting
 - Natural Light
 - Dimmable LED Lighting
- Connectivity
 - Outdoors
 - Adjacent Classrooms
 - Hallway
- Adequate Power
- Color
- Updates to finishes, casework and storage

What does the research say?

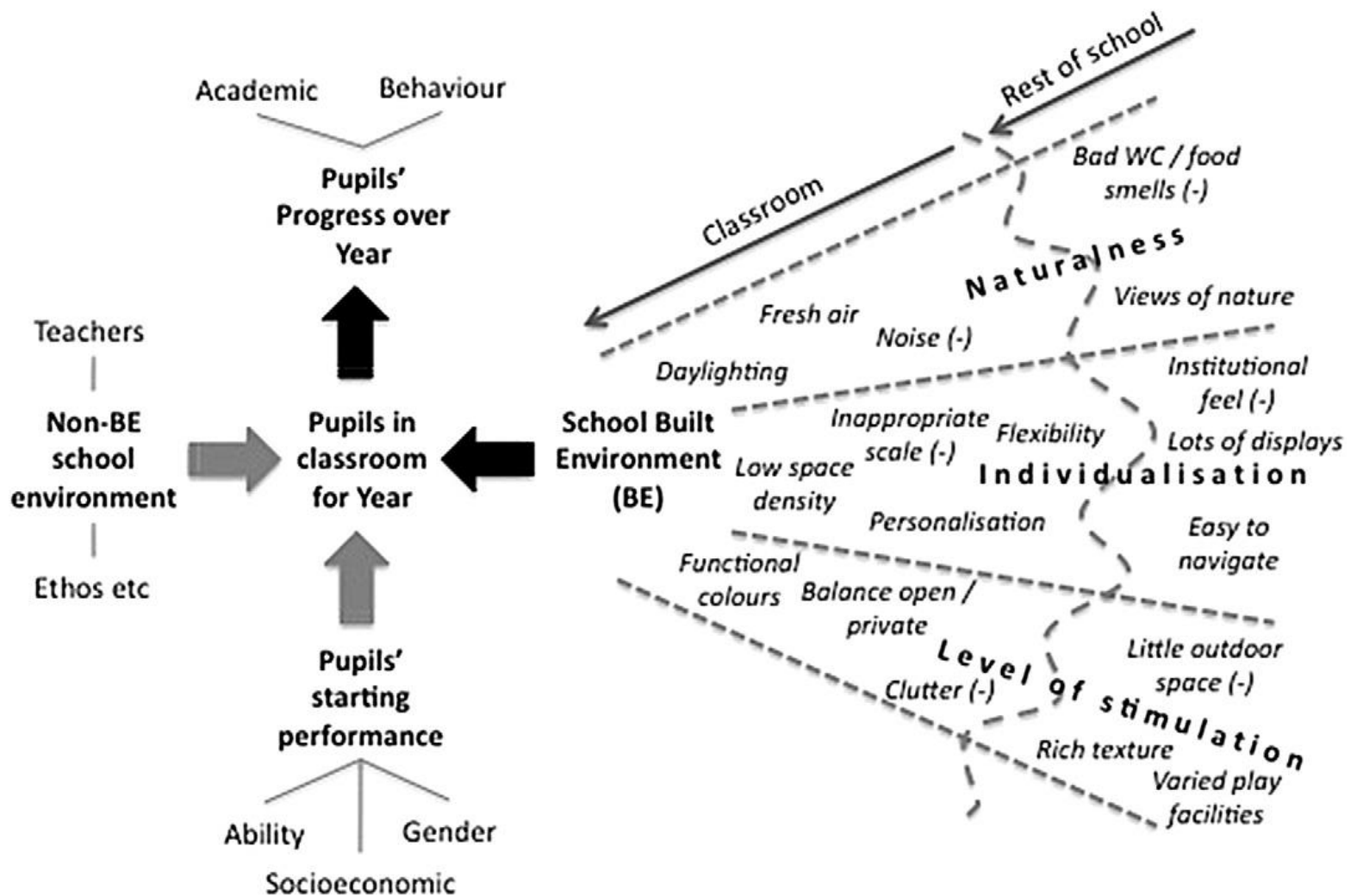
“A holistic, multi-level analysis identifying the impact of classroom design on pupils’ learning”

Peter Barrett, Yufan Zhang, Joanne Moffat, Khairy Kobbacy

School of the Built Environment, Maxwell Building, University of Salford, Salford M5 4WT, UK

- “The aim of this study was to explore if there is any evidence for demonstrable impacts of school building design on the learning rates of pupils in primary schools.”
- Studied 751 Pupils in 34 Classrooms at 7 schools
- The study uses multilevel statistical modeling.





“A holistic, multi-level analysis identifying the impact of classroom design on pupils’ learning”

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“The **most distinctive** classroom characteristics that relate to the improvement of the pupils’ academic achievement via the model”:

Design Principles	Design Parameters
Naturalness	Light
Individualism	Choice
	Flexibility
	Connection
Stimulation	Complexity
	Color

Key Finding:

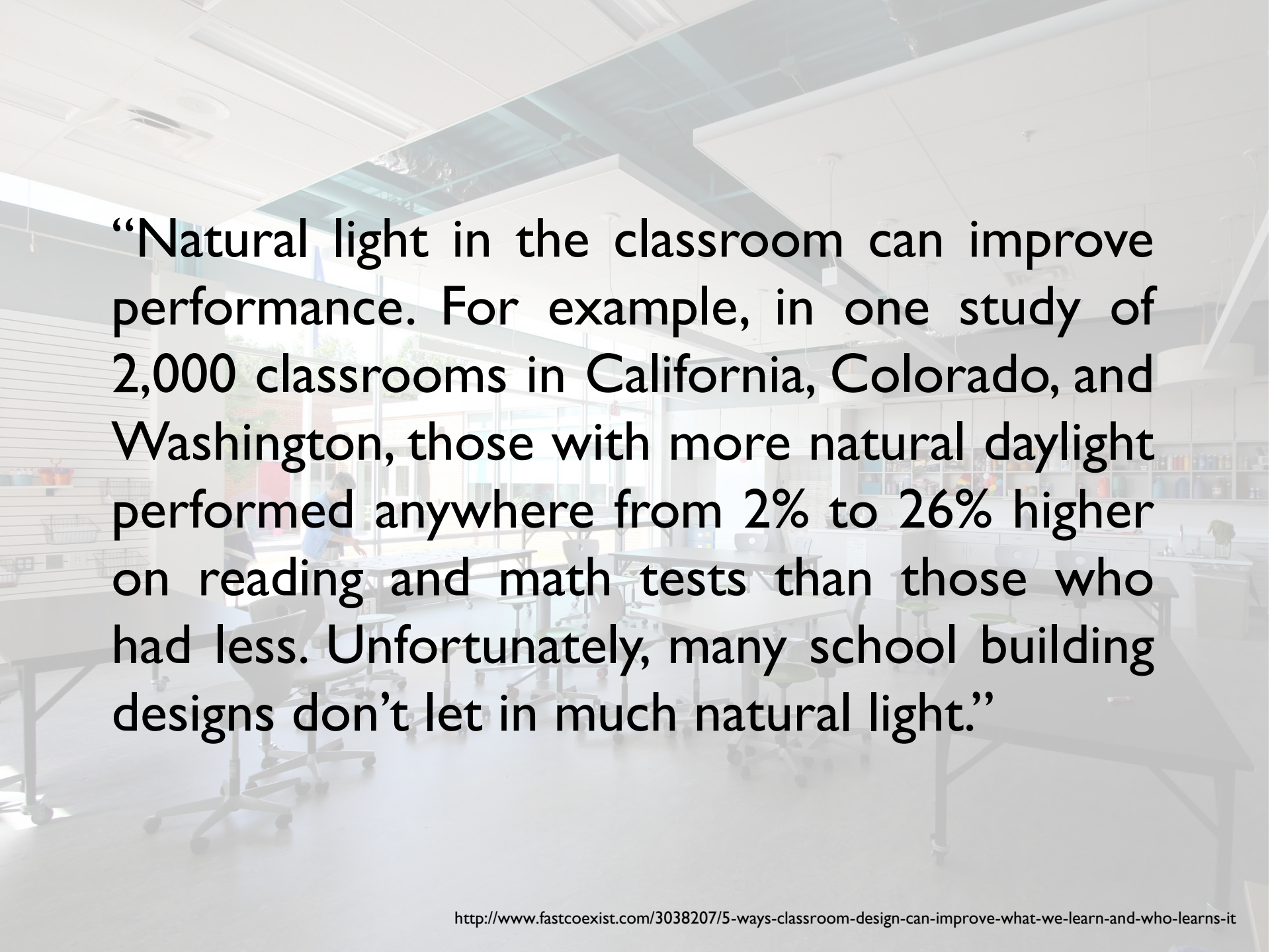
“The impact of these environmental factors alone has also been scaled and appears to account for, in the

order of, **25%** of the learning progression of pupils.”

“A holistic, multi-level analysis identifying the impact of classroom design on pupils’ learning”
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Natural Light:
Agnor-Hurt Elementary Art Room

A modern classroom with large windows and desks. The room is bright and airy, with a high ceiling and a large window on the right side. Several desks and chairs are arranged in the room, and a person is visible in the background. The text is overlaid on the image.

“Natural light in the classroom can improve performance. For example, in one study of 2,000 classrooms in California, Colorado, and Washington, those with more natural daylight performed anywhere from 2% to 26% higher on reading and math tests than those who had less. Unfortunately, many school building designs don’t let in much natural light.”

Research: Active Seating



“Physical movement increases oxygen supply and is essential for stimulating cognition. When students are physically engaged, specific hormones are released that have a positive influence on brain activity. As a result, attention spans grow longer, and the ability to concentrate improves. Research proves that this relationship between movement and brain activity leads to better academic results.”

“Bodies in Motion, Brains in Motion”

Dr. Dieter Breithecker, German Health & Kinetic Scientist

What do our educators think?



“I just recently was given three student rocking chairs. This simple

change in **seating** has caused specific students to demonstrate higher levels of focus and stronger participation in group discussions. I feel very proud to work in a division where this kind of fluidity and flexibility is embraced.”

Leslie Wills-Taylor
Woodbrook Teacher

“When asked to think about why **modernization** is important in the world of education one simply needs to think about how much our world is changing and at the ever increasing speed and ask why would we want our students in a learning environment that represents what was best in the world of education in 1963.”

Lisa Molinaro
Woodbrook Principal

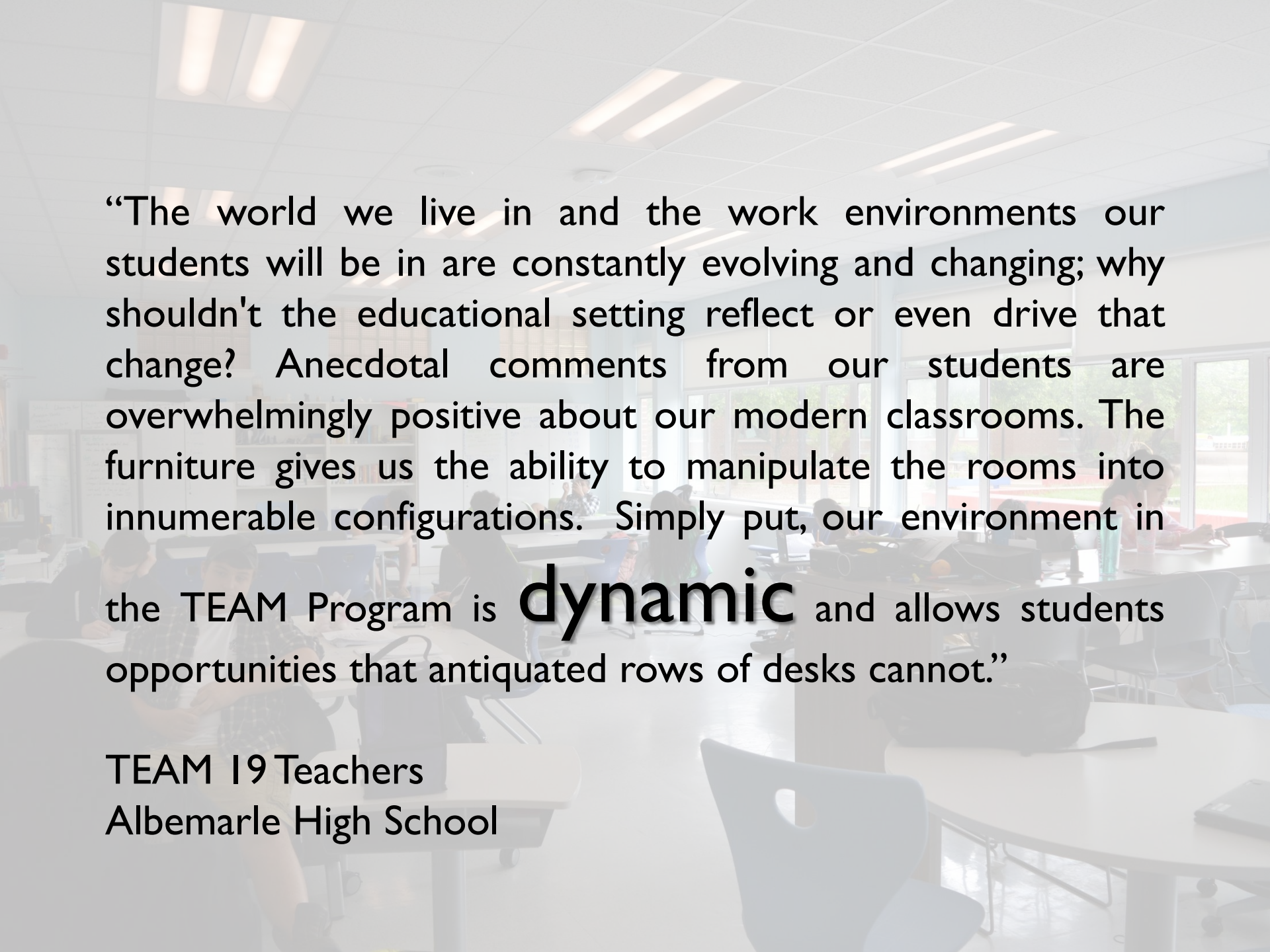
Do Learning Spaces Really Matter?

To answer that question look around your own work space and home and ask yourself does your lighting, comfort, color windows, accessibility to tools, materials and information impact your productivity, your mood, your comfort, your willingness to try new things or inspire you? If we design work or home spaces with our comfort and needs in mind, why wouldn't we do that with the needs of our children in mind when we think of where they spend a part of their days learning.

DeeDee Jones
Cale Principal



Team 19 Classroom
Albemarle High School

A background image of a modern classroom. Students are seated at white tables, some working on laptops. The room has large windows on the right side, letting in natural light. The ceiling has recessed lighting. The overall atmosphere is bright and collaborative.

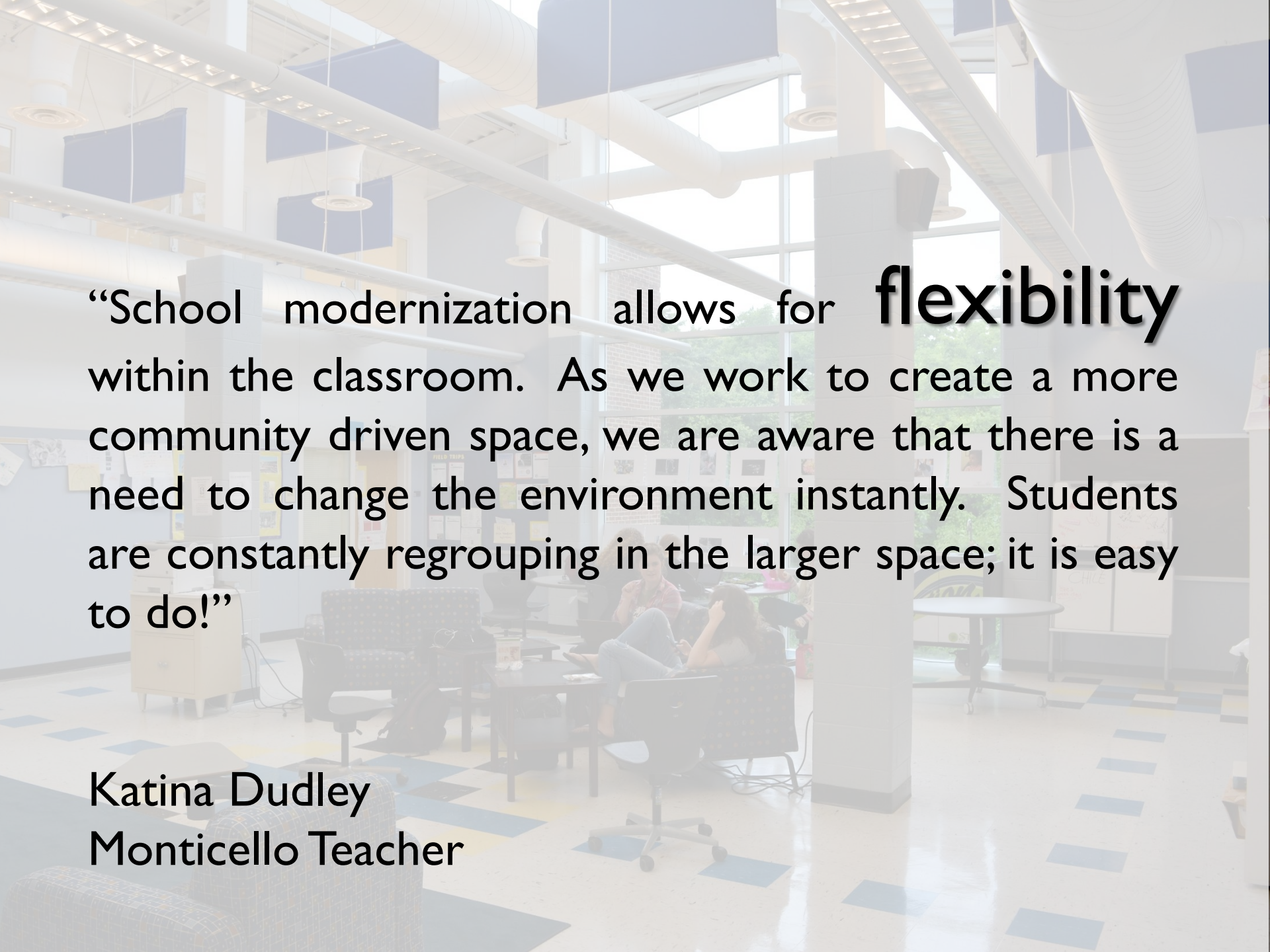
“The world we live in and the work environments our students will be in are constantly evolving and changing; why shouldn't the educational setting reflect or even drive that change? Anecdotal comments from our students are overwhelmingly positive about our modern classrooms. The furniture gives us the ability to manipulate the rooms into innumerable configurations. Simply put, our environment in the TEAM Program is **dynamic** and allows students opportunities that antiquated rows of desks cannot.”

TEAM 19 Teachers
Albemarle High School





HMSA
Monticello High School

A modern school interior with a high ceiling, exposed ductwork, and large windows. The floor is decorated with blue and yellow geometric patterns. In the background, students are sitting at tables, and there are various educational displays on the walls.

“School modernization allows for **flexibility** within the classroom. As we work to create a more community driven space, we are aware that there is a need to change the environment instantly. Students are constantly regrouping in the larger space; it is easy to do!”

Katina Dudley
Monticello Teacher

“The contemporary classrooms are no longer spaces that have a singular purpose of students going in quietly and sitting at a desk to be given their “lesson” for the day and then leaving. They are now wide open spaces with comfortable furniture spread out that invites all kids to flow freely through them. There is a sense of formal and informal learning taking place. The **choice** of space, furniture, and technology all play a crucial role in promoting a future generation of global thinkers that are comfortable working together and sharing ideas to better one another.”

Mia Shand,
Agnor-Hurt Teacher

Why choice matters?



“Differentiated learning spaces, comfortable seating and multiple technology tools allow students to make important instructional decisions. The more instructional decisions they can make about their own education, the more likely they will be to invest in the everyday process of learning.”

Michael Thorton

Agnor-Hurt Teacher

"As career and tech educators, we aim to develop citizens with valuable skills who will have access to as many future opportunities and successes as possible. Therefore, it's essential to prepare them in the most up-to-date and well-equipped spaces as is possible. Otherwise we risk taking away the competitive edge we hope to provide."

Todd Menadier
Albemarle CTE Teacher

“Modernizing our classrooms will promote individual, group, and whole class explorations into topics that (a) increase workforce readiness skills and (b) help us reach a goal of combining traditional academic paths with career and technical programs.”

Lisa Boyce
Henley CTE Teacher

Feedback from LED Pilot Program

Dimmability is
key feature

Lights have calming effect

Kids seemed calmer and more attentive

Easier to calm kids

Light is less tiring

Student alertness improved

Endurance of kids has improved

Especially beneficial for kids
with sensory and sound issues

No headaches from
flickering fluorescent lighting

Cleaner, brighter, and more inviting

Better color

What does it look like?







Work to be done...





Woodbrook Elementary Addition, Renovation & Modernization

Problem

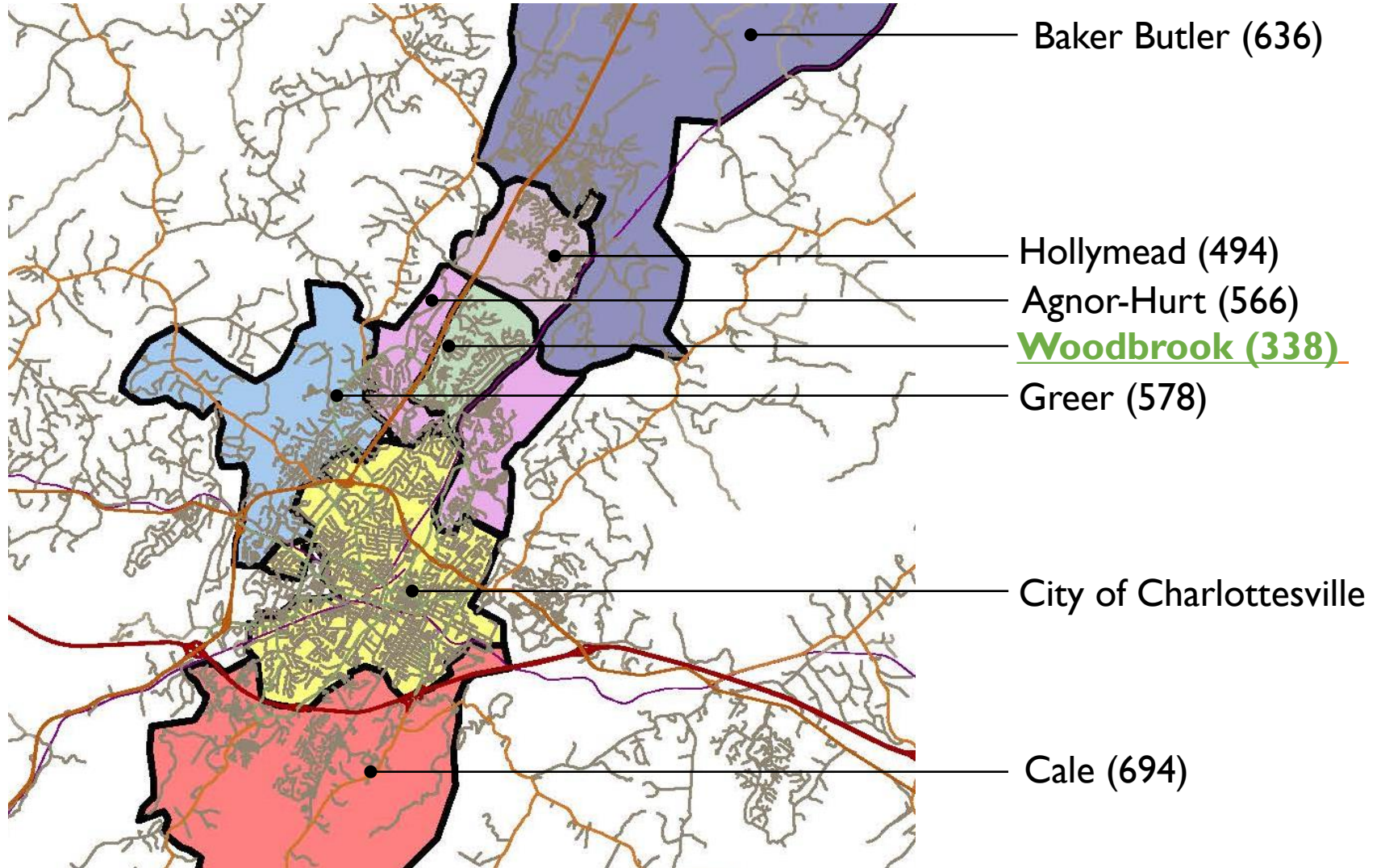
Overcrowding in our Urban Ring Elementary Schools

School	Building Capacity	Capacity Conflicts											# of Trailers
		15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	
Agnor-Hurt	566	32	4	(6)	(9)	(11)	(28)	(25)	(25)	(36)	(39)	(49)	0
Greer	578	(29)	(65)	(77)	(103)	(95)	(82)	(80)	(80)	(87)	(86)	(94)	2
Woodbrook	338	(18)	(17)	(15)	(25)	(14)	(7)	(9)	(9)	(12)	(10)	(9)	3
Total	1482	32	(43)	(104)	(138)	(126)	(78)	(96)	(96)	(115)	(115)	(118)	5

Solution

Addition onto Woodbrook Elementary

- Centrally located
- Addition would benefit multiple schools
- Smallest school in the area



Key: School Name (Building Capacity)

Scope

- Additions (40,000 sf)

- 16 classrooms (2 story)
- 2 SPED Rooms
- Support spaces
- Expanded Cafeteria
- A new Gymnasium and support spaces.

\$12.2M

- Improvements to existing building

- Classroom Modernization & Furniture
- Media Center Modernization
- Kitchen & Serving Line Improvements/Upgrades
- Cafeteria Renovation
- ADA Improvements
- Renovate bathrooms
- Expand admin area
- New signage
- New electrical switch gear

\$3.0M

Size


Item	# of Classrooms
Projected Enrollment Deficit	8
Current Auxiliary Room Deficit at Woodbrook (Classroom Equivalent)	3
Unmet Pre-K Need	3
Growth from Future Developments	2
Total	16

Addition vs. New School

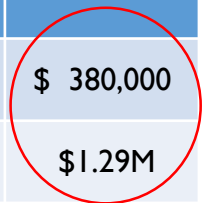
Key Differences:

- Timing
- Costs
- Redistricting Implications

Project	Schedule				
	2016/17	2017/18	2018/19	2019/20	2020/21
Woodbrook Addition	Design	Construct	Open		
New School - Proffered Site		Design	Construct	Construct	Open



Project	Class-rooms	Add. Seats	Capital Costs		Cost/ New Seat	Operating Costs
			New	Renovation/ Modernization		
Woodbrook Addition	16	288	\$ 12.2M	\$ 3.0M	\$ 42,361	\$ 380,000
New School - Proffered Site	22	400	\$ 18M	n/a	\$ 45,000	\$1.29M



Western Albemarle High School Science Lab Additions & Modernization



PURPOSE

Expand and improve science facilities
at Western Albemarle HS

SCOPE

Project includes 3 new science labs
and the modernization of 7 existing
science labs

Science Room Deficit

Summary	Rooms
ESA Science Classroom Need	4
WAHS Science Classroom Need	7
Science Classrooms Available	(8)
Science Classroom Deficit	(3)





School Security Improvements

Scope

- Purpose: Create a controlled entrance that forces all visitors to enter through the main office.
- Project began in FY14/15, and after this summer only four schools remain to be completed:
 - Baker-Butler Elementary
 - Scottsville Elementary
 - Henley Middle
 - Murray High School

Work Completed to Date

Schools	Prior Project	Summer 2014	Summer 2015	Summer 2016
Albemarle	x			
Greer	x			
Hollymead	x			
Broadus Wood		x		
Brownsville		x		
Crozet		x		
Meri. Lewis		x		
Murray ES		x		
Stone Robinson		x		
Stony Point		x		
Woodbrook		x		
Yancey		x		
Burley		x		
Sutherland		x		
Walton		x		
Monticello		x		
Agnor-Hurt			x	
Cale*			x	
WAHS			x	
Red Hill*				x
Jouett*				x



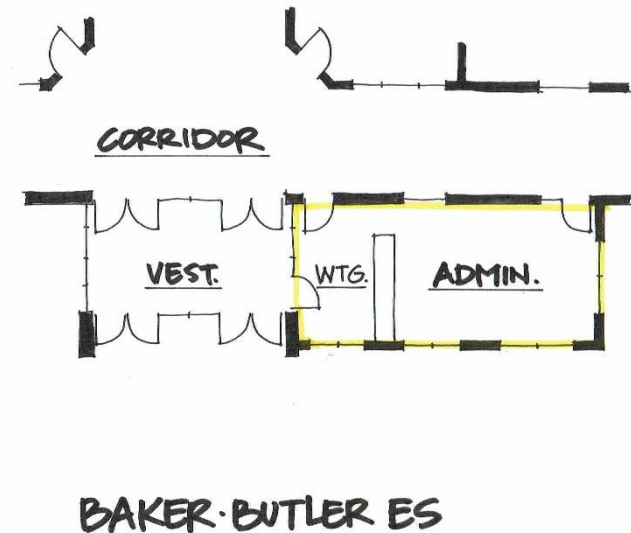
Woodbrook Elementary, 2014

* Small Additions

Front Entrance Additions

A small (>1,000 sf) addition will be added to the front of each school to relocate the admin. suite to front of building.

School	Cost
Baker-Butler	\$ 610,000
Scottsville	\$ 755,000
Henley	\$ 825,000
Murray HS	\$ 710,000
Total	\$2.9M



Timing

School	Original Request			Adopted CIP			Bond Referendum		
	FY17	FY18	FY19	FY17	FY18	FY19	FY17	FY18	FY19
Baker-Butler	x			→	x			x	
Scottsville		x			→	x		x ←	
Henley		x			→	x			x
Murray HS		x			→	x			x

(All projects were postponed by
1 year from the School Board's request)

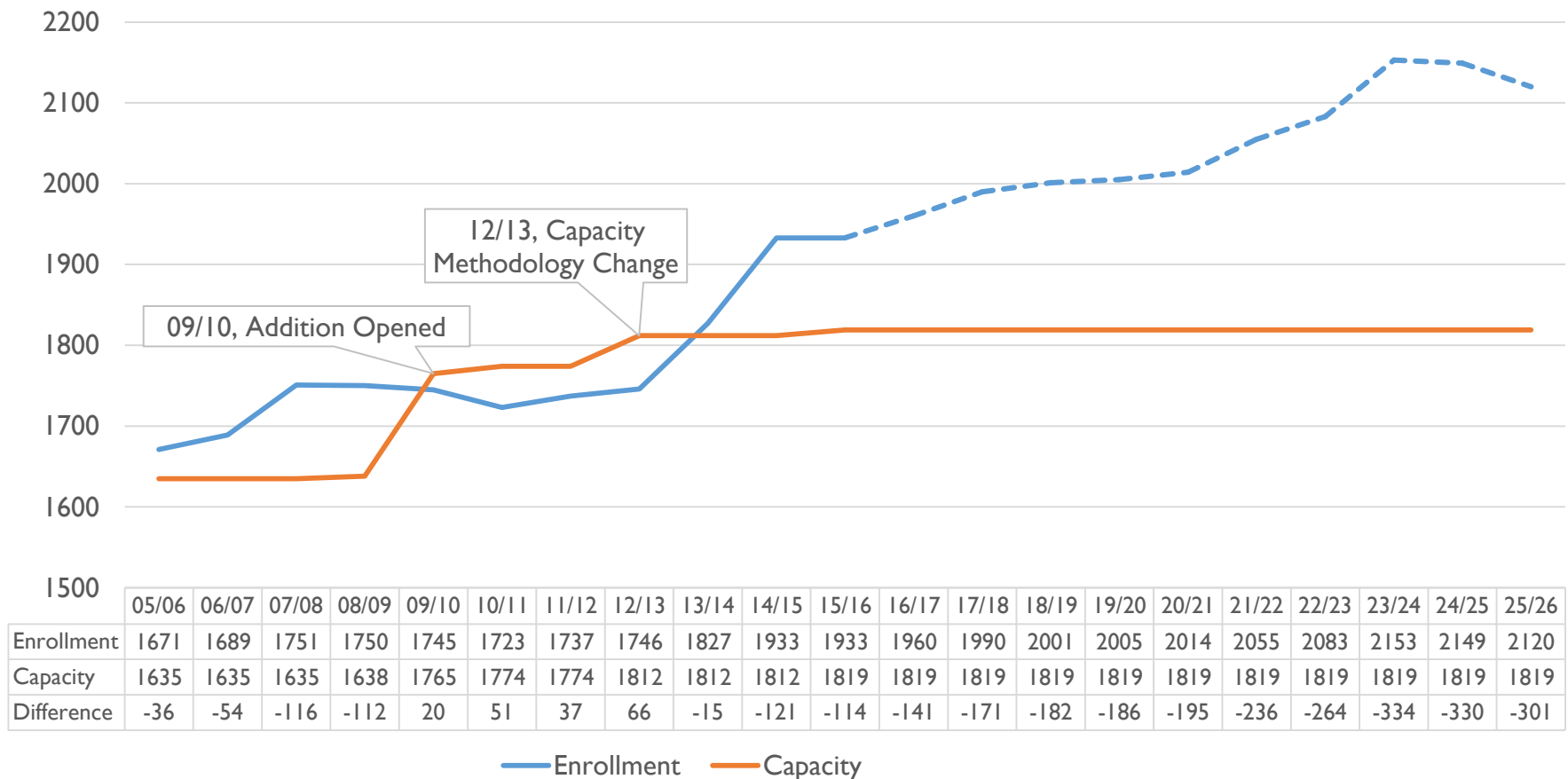
(Scottsville is accelerated by
1 year as compared to adopted CIP)

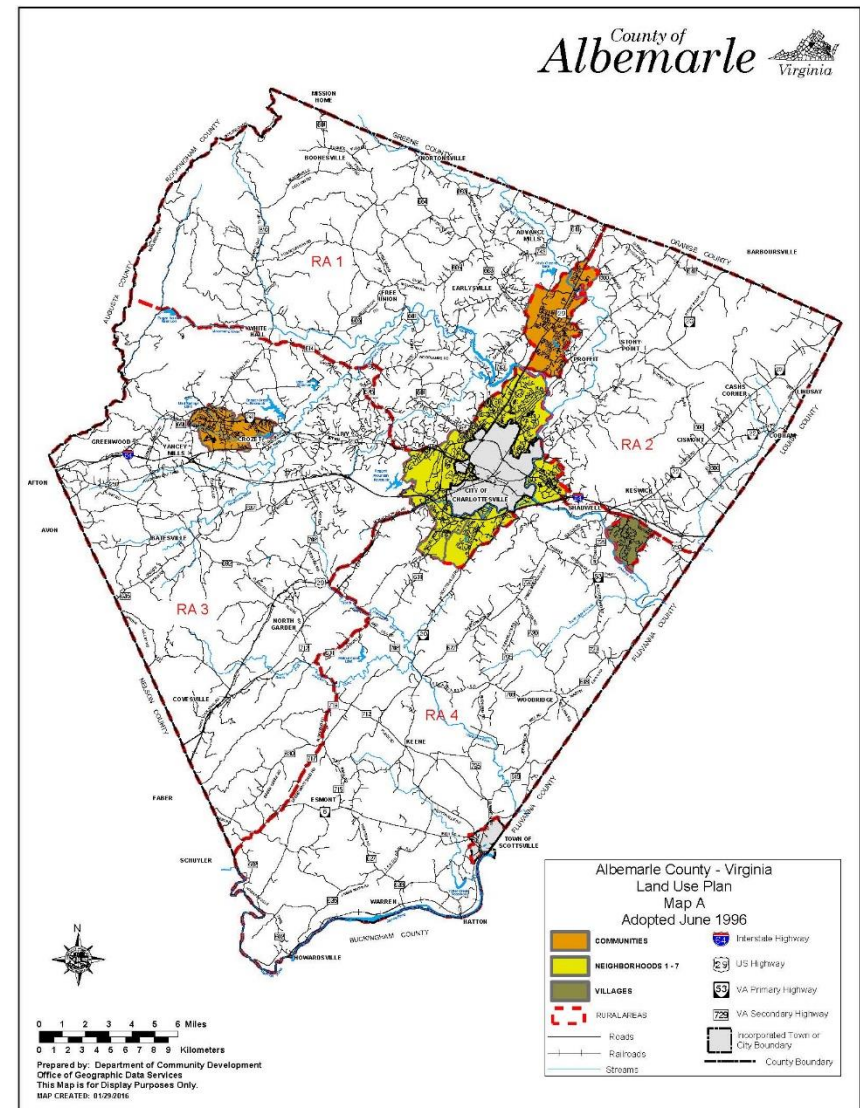
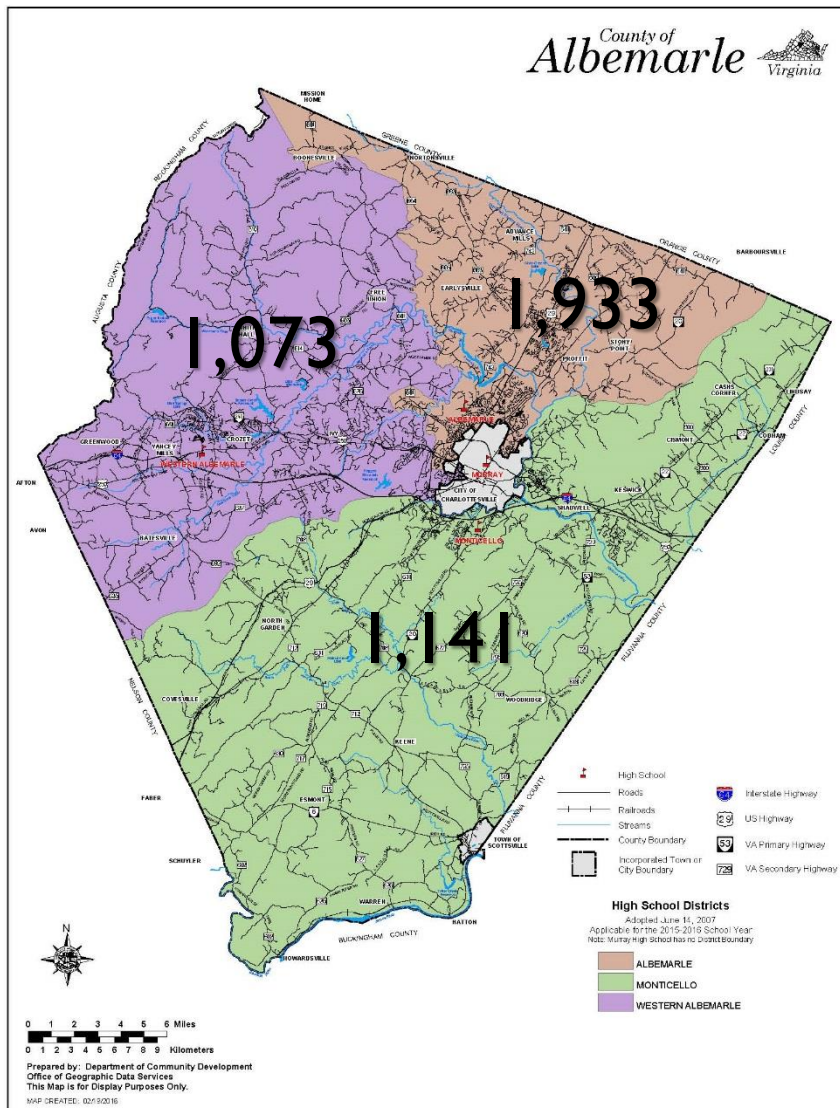
Main Difference:

Inclusion in a referendum, allows the Scottsville project (\$750,000) to be completed 1 year sooner than the adopted CIP.

High School Capacity Planning

AHS Past & Future Enrollment





Planning Study

- Real estate
- Economic modeling
- Land evaluation
- Architectural studies
- Program evaluation
- Repurpose vacated space
- Community input

Potential Options	Approximate Cost
Addition onto Albemarle	\$20M
New Comprehensive HS	\$70M
Magnet High School	TBD
Addition onto WAHS/MHS	TBD
Other	TBD

QUESTIONS?

School Board Requested Projects

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TOTAL	\$ 21,000,000	\$ 14,500,000	\$ 35,500,000