
Bond Update

Fredrick A. Davis, II, AIA, Chief Operating Officer
Patrick Florence, Director of Construction/Capital Planning
Marcus R. Thomas, AIA, Managing Principal, KEi Architects
Steve Hess, Founder, Project Management Consultants NC

March 24, 2025



ENGAGE. CHALLENGE. INSPIRE.

School Bond Projects-Where We Started

2024 Bond Referendum—Mission Presented on Monday February 10, 2025

\$ 125 Million
10-Year Plan

- 1 New Replacement Elementary Schools
- Orange Middle School Improvements
- New Addition/Comprehensive Renovation
(Support 21st Century Learning)



Introduction

Who We Are

KEi Architects + Clark Nexsen

KEi Architects

- 42 Years of Experience
- Offices in Charlotte + Richmond
- Guilford County Public Schools,
Charlotte-Mecklenburg Schools,
Richmond Public Schools

KE*i*architects



ENGAGE. CHALLENGE. INSPIRE.

Who We Are

KEi Architects + Clark Nexsen

Clark Nexsen

- 105 Years of Experience
- 9 Offices including Raleigh
- Guilford County Public Schools, Wake County Schools, Henderson County Schools



C L A R K N E X S E N



ENGAGE. CHALLENGE. INSPIRE.

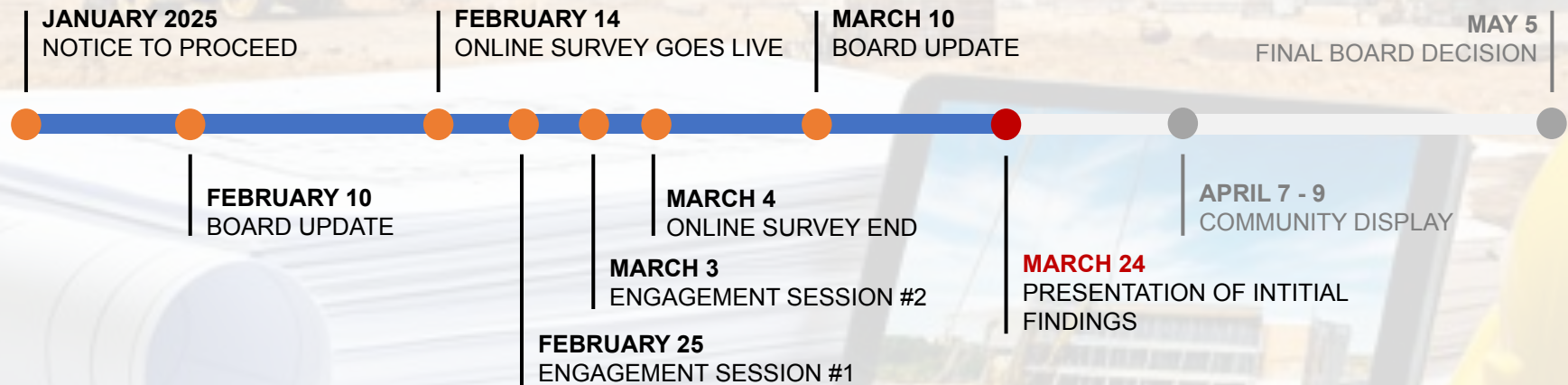
Who We Are

Project Management Consultants NC

- 37 Years of Experience
 - \$1.5 bn Delivered Projects
 - 22 Masterplan & Education Projects
 - Wake County Public School System
 - Durham Public Schools
 - Duke University
 - University of North Carolina



Schedule



ENGAGE. CHALLENGE. INSPIRE.

Methodology

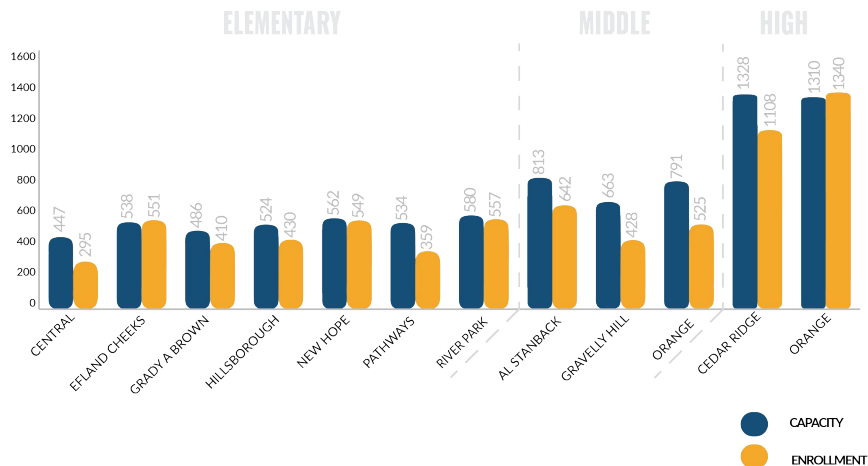
Woolpert Study Analysis

Phase 1

Facility	Strategy	Budget
Central ES	Replacement School	\$34.5M
New ES	New School	\$49.5M
Hillsborough ES	Consolidate	\$1.3M
Orange MS	Replacement School	\$71.5M
New Hope ES	Adequacy	\$13.0M
Partnership Academy	Replacement School	9.4M

Phase 2

Facility	Strategy	Budget
Efland Cheeks ES	Adequacy	\$3.4M
Grady Brown ES	High Priority Needs	\$4.8M
Pathways ES	High Priority Needs	\$4.7M
River Park ES	High Priority Needs	\$6.7M
Cedar Ridge HS	High Priority Needs	\$6.3M
Maintenance Department	High Priority Needs	\$0.0M
Orange HS	Replacement School	\$153.9M
Transportation Department	High Priority Needs	\$1.7M



School Name	Percentage
CENTRAL	66%
EFLAND CHEEKS	102%
GRADY A BROWN	84%
HILLSBOROUGH	82%
NEW HOPE	98%
PATHWAYS	67%
RIVER PARK	96%
AL STAINBACK	79%
GRAVELLY HILL	65%
ORANGE MIDDLE	66%
CEDAR RIDGE	83%
ORANGE HIGH	102%



Woolpert Study Recap

Phase Recommendations Based on OCS Facility Assessment



Phase 1

Facility	Strategy	Budget
Central ES (Partial Rebuild)	Replacement School	\$34.5M
New ES	New School	\$49.5M
Hillsborough ES	Consolidate	\$1.3M
Orange MS	Replacement School	\$71.5M
New Hope ES	Adequacy	\$13.0M
Partnership Academy	Replacement School	\$9.4M
	Total	\$179.2M

Phase 2

Facility	Strategy	Budget
Efland-Cheeks ES	Adequacy	\$3.4M
Grady Brown ES	High Priority Needs	\$4.8M
Pathways ES	High Priority Needs	\$4.7M
River Park ES	High Priority Needs	\$6.7M
Cedar Ridge HS	High Priority Needs	\$6.3M
Maintenance Department	High Priority Needs	\$0.0M
Orange HS	Replacement School	\$153.9M
Transportation Department	High Priority Needs	\$1.7M
	Total	\$181.5M

Phase 3

Facility	Strategy	Budget
Welcome Center	High Priority Needs	\$0.7M
A.L. Stanback MS	Renovation	\$54.0M
Gravelly Hill MS	Renovation	\$48.5M
	Total	\$103.2M

Community Engagement

Community Engagement Survey

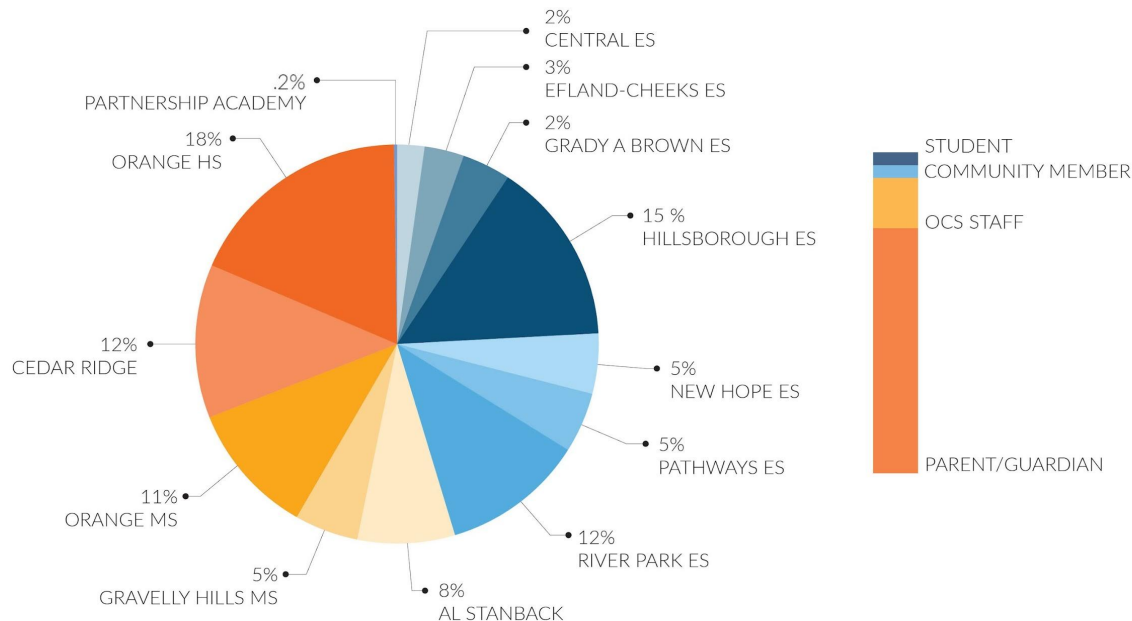
Seeking Community Input on School Construction

- Relationship to OCS
- Household size, attendance zone, and child(ren)'s school(s)
- Staff school or worksite
- How well do current school facilities meet student needs?
- How much do school facilities impact student learning?
- Facility concerns and recommendations
- Importance of:
 - Program options to meet student needs
 - Support for transition to 6th grade
- Preference for new or renovated school facilities
- Most important need—new or renovated elementary, middle, or high school—and why
- Opt-in for bond updates (50%)



Survey Results

391 Respondents – Household Schools & Respondent Type



Survey Results

Current Facilities & Impact on Learning



Current Facilities that Meet Needs



Facility Impact on Student Learning



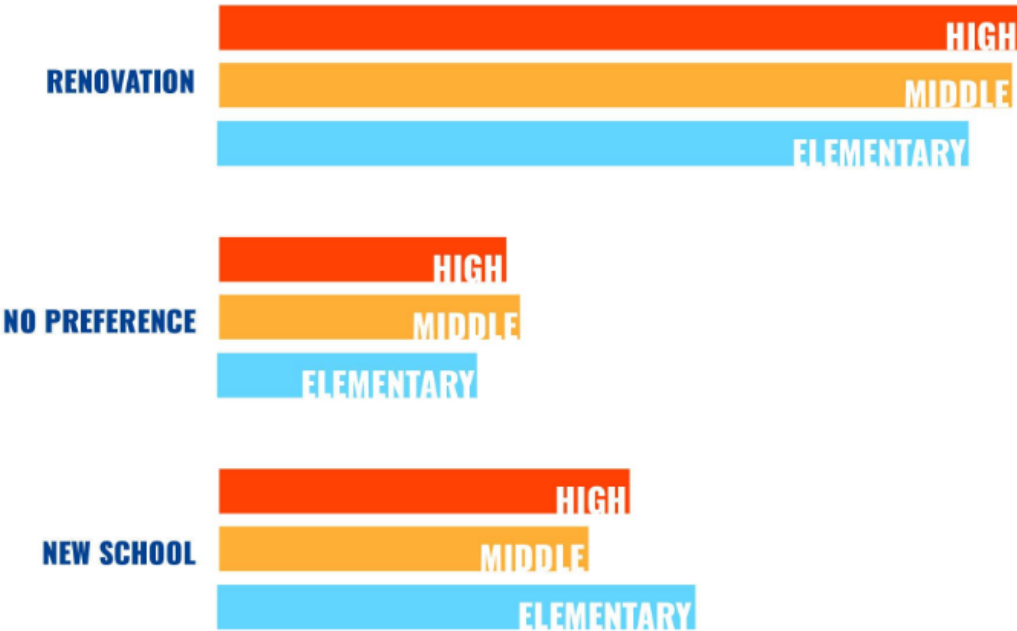
Importance of Program Options

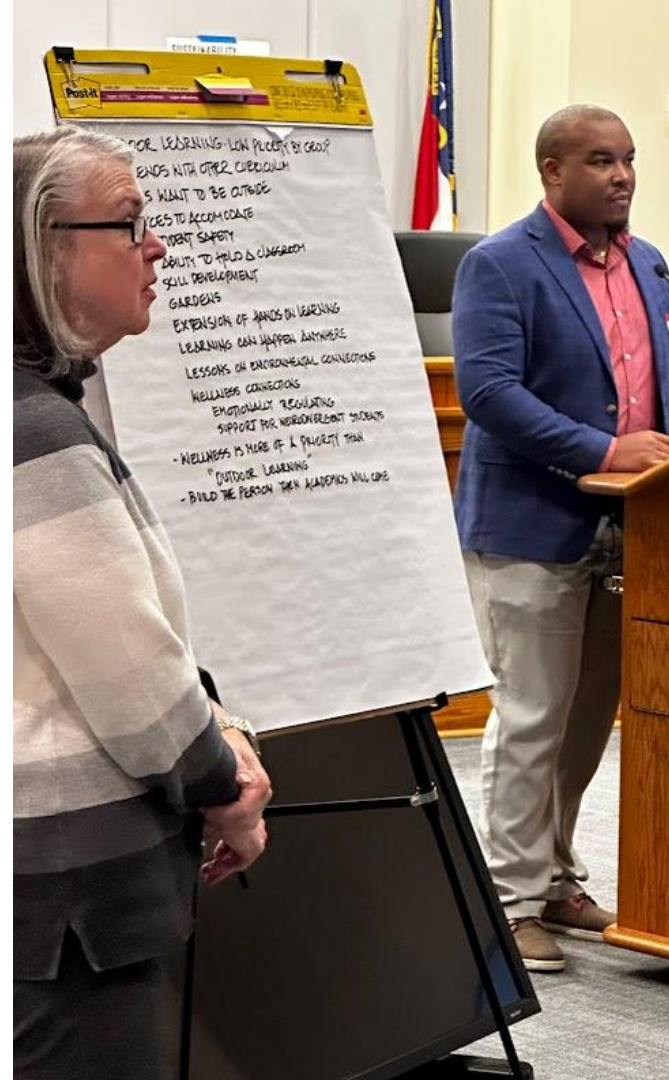


Importance of Transition to 6th grade



Preference for New vs. Renovated

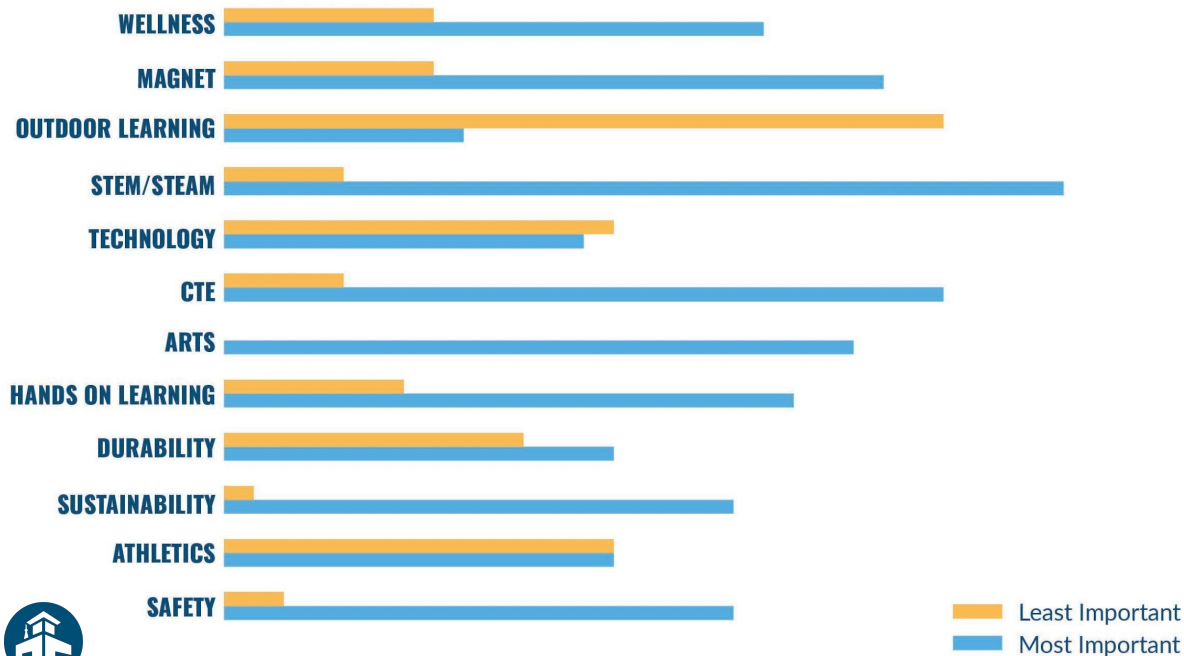




Community Engagement

25 Total Attendees | February 25 and March 3, 2025

OCS YOUR WAY



SPEND THE MONEY

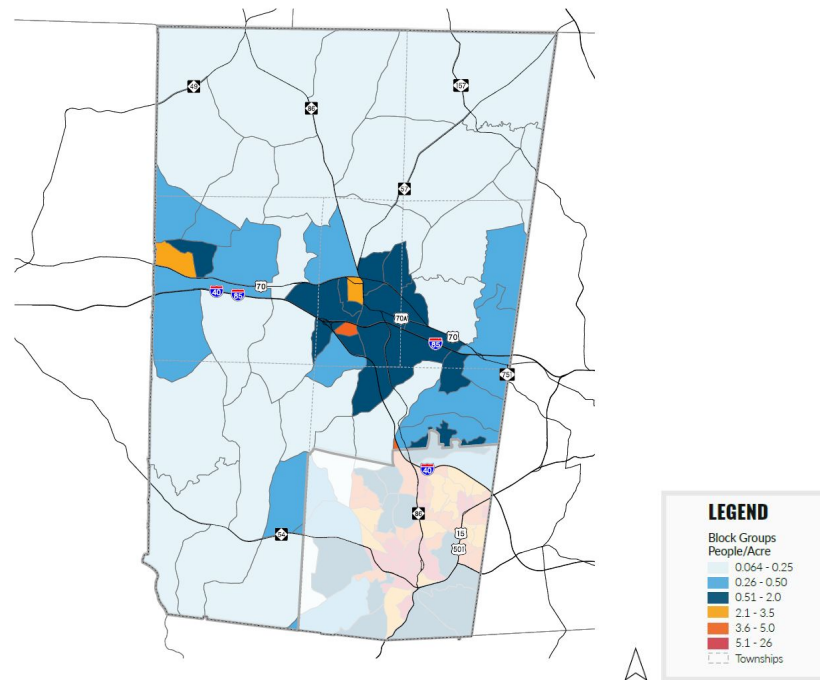
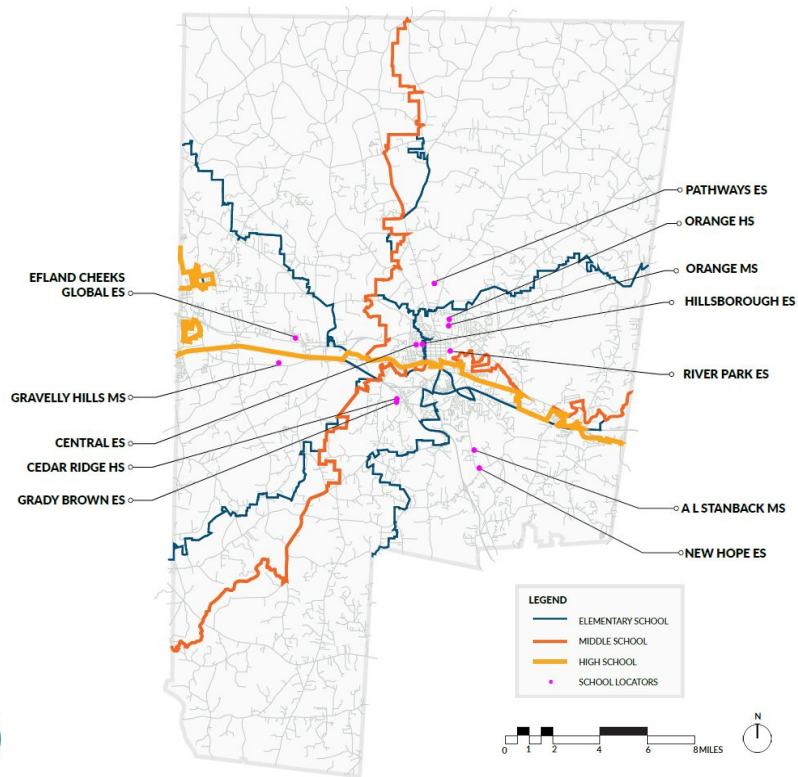
*This is not representative of how spending on bond projects will be allocated. This reflects the spending per category chosen by 25 participants at two engagement sessions.

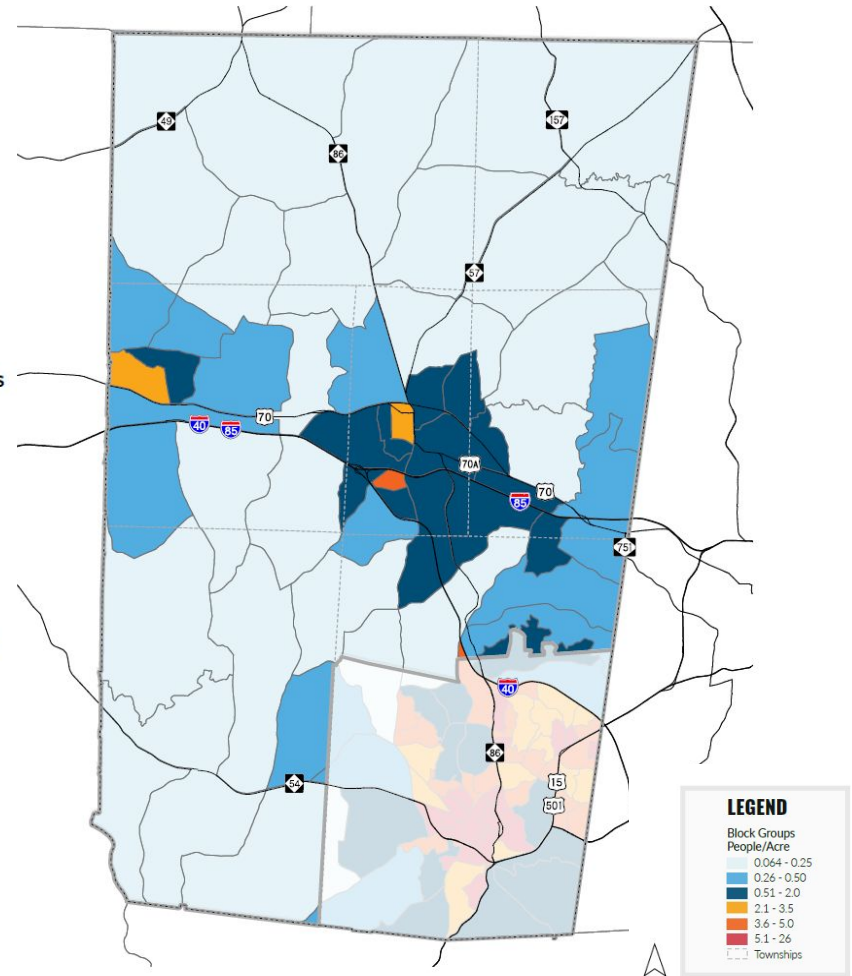
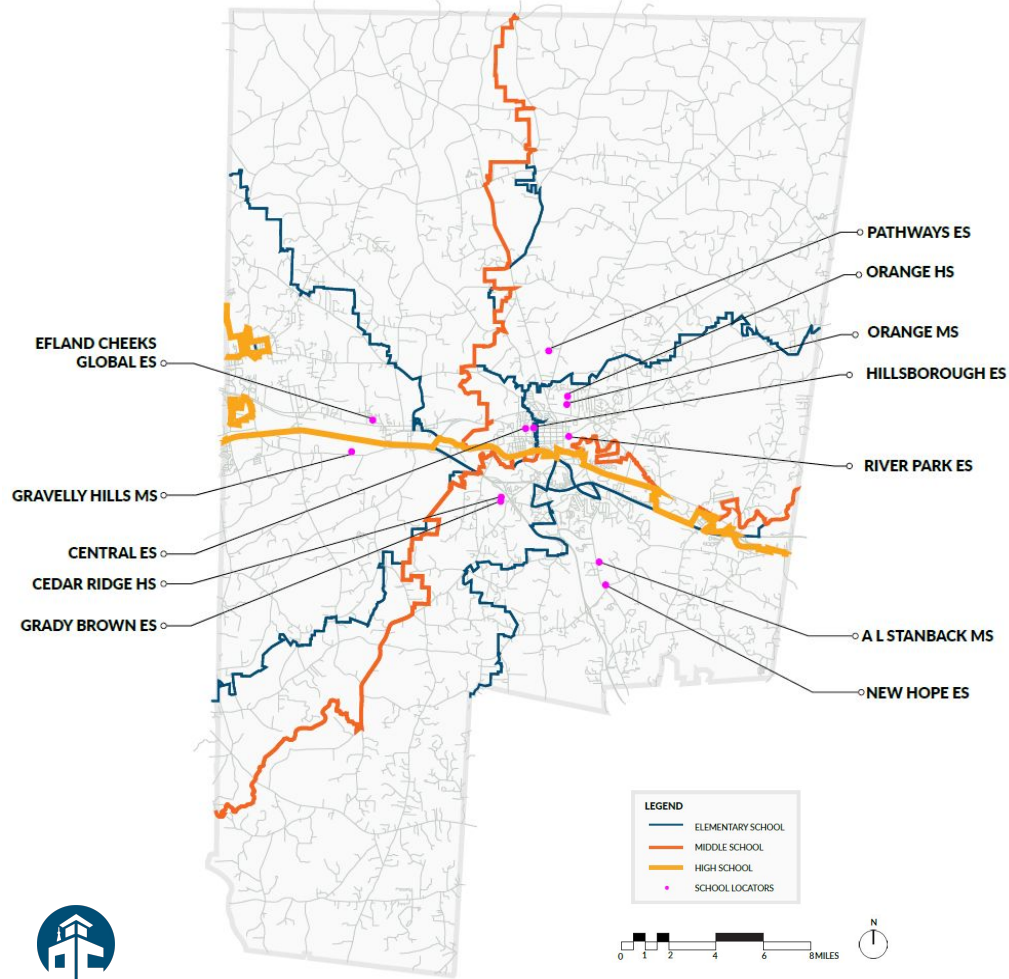
ENGAGE. CHALLENGE. INSPIRE.

Feasibility Study Options

Location

Current Districting & Population Growth (2020 Census)





Discovery Process

Three Rounds of Exploration and Feedback

Monday, February 10, 2025

New K-5 @ Hillsborough ES

New K-5 @ Land Purchase

New K-8

@ Hillsborough ES

@ Gravelly Hill ES

@ Orange MS

Monday March 10, 2025

New K-5 @ Central ES

New K-8 @ Orange MS

New K-5 @ Gravelly Hills MS

Monday March 24, 2025

New K-5 @ Central ES

Central Demolition + Replacement

Pathways Renovation

Orange MS Renovation

Repurpose Hillsborough ES

New K-8 @ Orange MS

Orange K-8 New Construction

Pathways Renovation

Repurpose Hillsborough ES

Repurpose Central ES

New K-5 @ Gravelly Hills MS

Gravelly Hills ES New Construction

Central ES Renovation

Orange MS Renovation

Repurpose Hillsborough ES



OPTION 1

New K-5 | On Site Replacement at Central ES

OPTION 2

New K-5 | Greenfield Site Adjacent to Gravelly Hill MS

OPTION 3

New K-8 | On Site Replacement at Orange MS

Phase 1

Facility	Strategy	Budget
Central ES (Partial Rebuild)	Replacement School	\$34.5M
New ES	New School	\$49.5M
Hillsborough ES	Consolidate	\$1.3M
Orange MS	Replacement School	\$71.5M
New Hope ES	Adequacy	\$13.0M
Partnership Academy	Replacement School	\$9.4M
	Total	\$179.2M



Option 1

New K-5 | On Site Replacement at Central ES

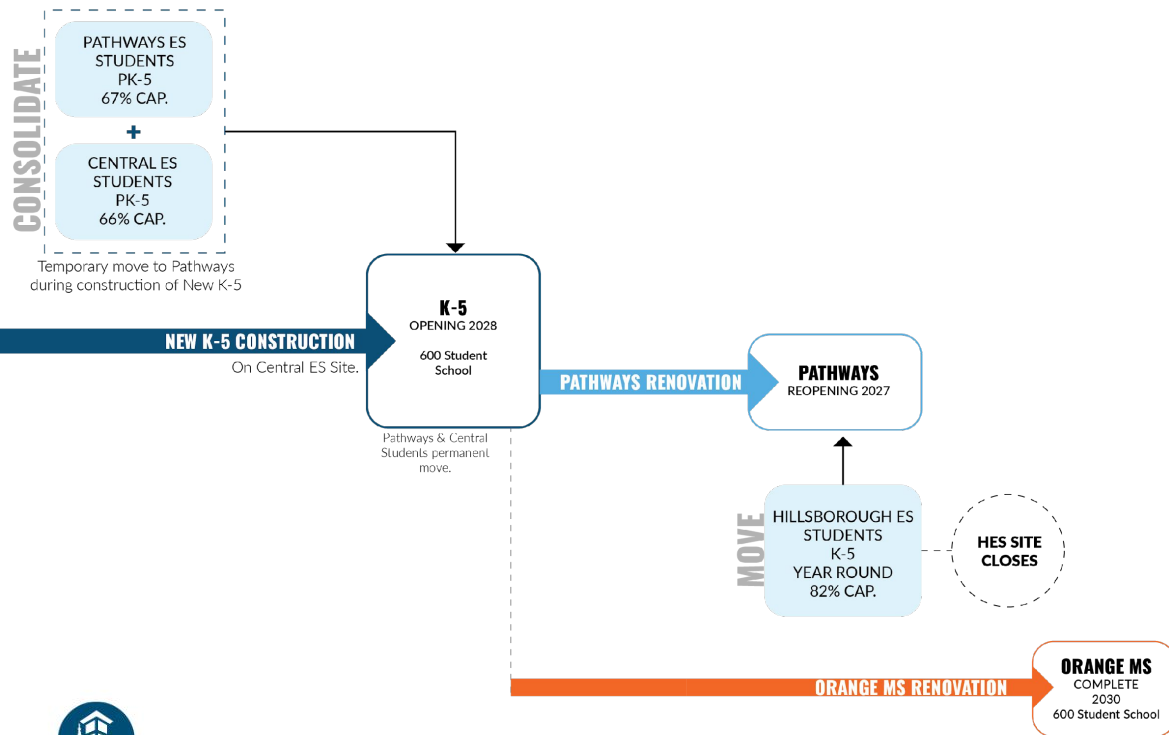
Considerations

- Swing space needed during construction
- Age of facility and educational adequacy



Option 1

New K-5 | On Site Replacement at Central ES



Phase 1

Facility	Strategy	Budget
Central ES	Replacement School	\$34.5M
New ES	New School	\$49.5M
Hillsborough ES	Consolidate Close	\$1.3M
Orange MS	Replacement School Renovation	\$71.5M
New Hope ES	Adequacy	\$13.0M
Partnership Academy	Replacement School	9.4M

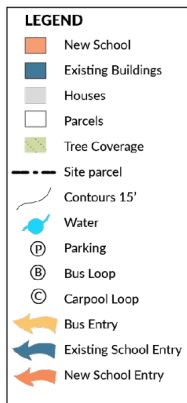
Phase 2

Facility	Strategy	Budget
Efland Cheeks ES	Adequacy	\$3.4M
Grady Brown ES	High Priority Needs	\$4.8M
Pathways ES	High Priority Needs Renovate	\$4.7M
River Park ES	High Priority Needs	\$6.7M
Cedar Ridge HS	High Priority Needs	\$6.3M
Maintenance Department	High Priority Needs	\$0.0M
Orange HS	Replacement School	\$153.9M
Transportation Department	High Priority Needs	\$1.7M



Option 1

New K-5 | On Site Replacement at Central ES



EXISTING



NEW K-5

ENGAGE. CHALLENGE. INSPIRE.



Option 1

New K-5 | On Site Replacement at Central ES

Pros

- Consolidates two low-capacity elementary schools
- Addresses accessibility issues on site
- Renovates Orange MS

Cons

- Only eliminates one school (HES) from OCS
- Lack of swing space could make on site replacement challenging
- Swing space challenges for Orange MS renovation
- Potential wetland issues on site



Option 2

New K-5 | Greenfield Site Adjacent to Gravelly Hill MS

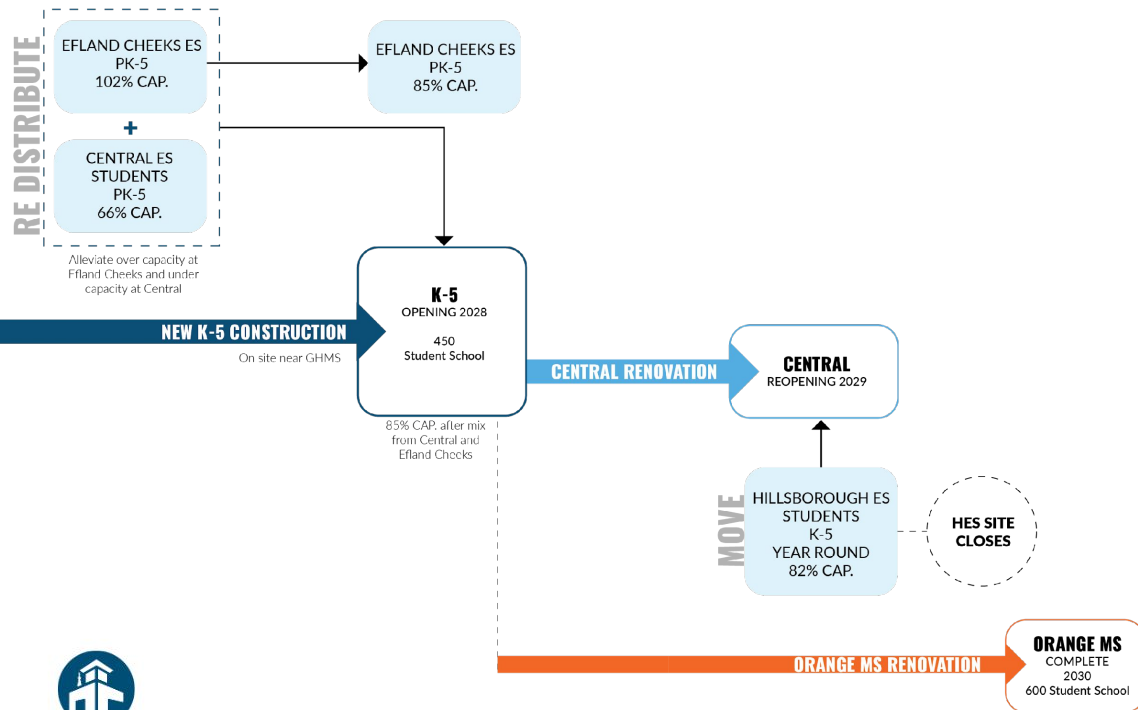
Considerations

- Land availability & educational suitability
- New transportation pattern
- Redistricting '28–'29 school year



Option 2

New K-5 | Greenfield Site Adjacent to Gravelly Hill MS



Phase 1

Facility	Strategy	Budget
Central ES	Replacement School Renovation	\$34.5M
New ES	New School	\$49.5M
Hillsborough ES	Consolidate Move & Close	\$1.3M
Orange MS	Replacement School Renovation	\$71.5M
New Hope ES	Adequacy	\$13.0M
Partnership Academy	Replacement School	9.4M

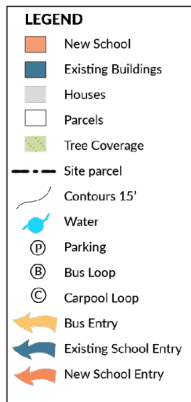
Phase 2

Facility	Strategy	Budget
Efland Cheeks ES	Adequacy	\$3.4M
Grady Brown ES	High Priority Needs	\$4.8M
Pathways ES	High Priority Needs	\$4.7M
River Park ES	High Priority Needs	\$6.7M
Cedar Ridge HS	High Priority Needs	\$6.3M
Maintenance Department	High Priority Needs	\$0.0M
Orange HS	Replacement School	\$153.9M
Transportation Department	High Priority Needs	\$1.7M

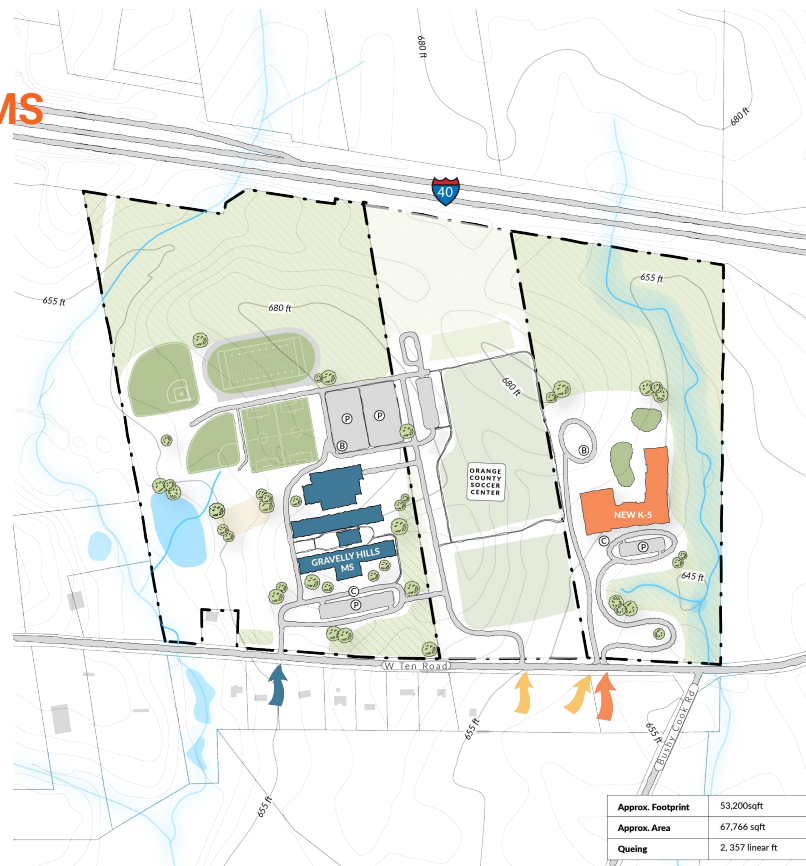


Option 2

New K-5 | Greenfield Site Adjacent to Gravelly Hill MS



EXISTING



NEW K-5

ENGAGE. CHALLENGE. INSPIRE.



Option 2

New K-5 | Greenfield Site Adjacent to Gravelly Hill MS

Pros

- Consolidates two low-capacity elementary schools.
- Addresses accessibility issues on site
- Renovates Orange MS

Cons

- Only eliminates one school (HES) from OCS
- Swing space challenges for Orange MS renovation
- Potential wetland issues on site



Option 3

New K-8 | On Site Replacement at Orange MS

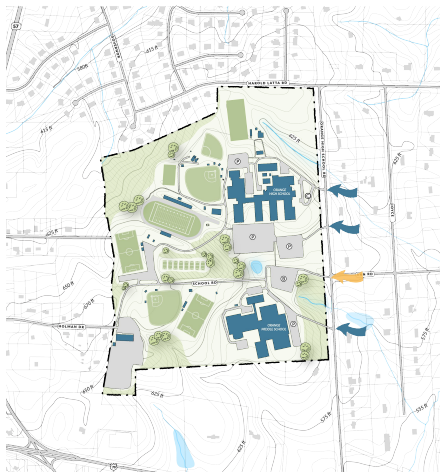
Considerations

- New ES & appropriate sizing for MS
- Improved retention from ES to MS
- Consolidate needs with one project
- Reduction of facility cost over time
- Phasing of construction
- Traffic

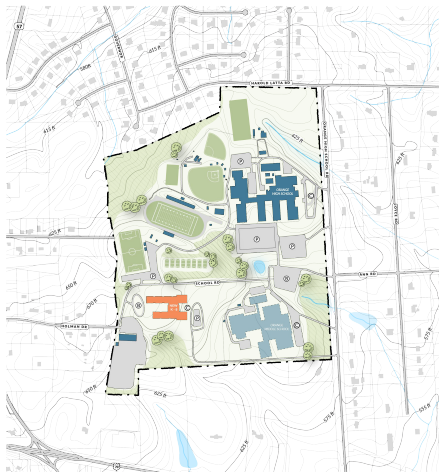


Option 3

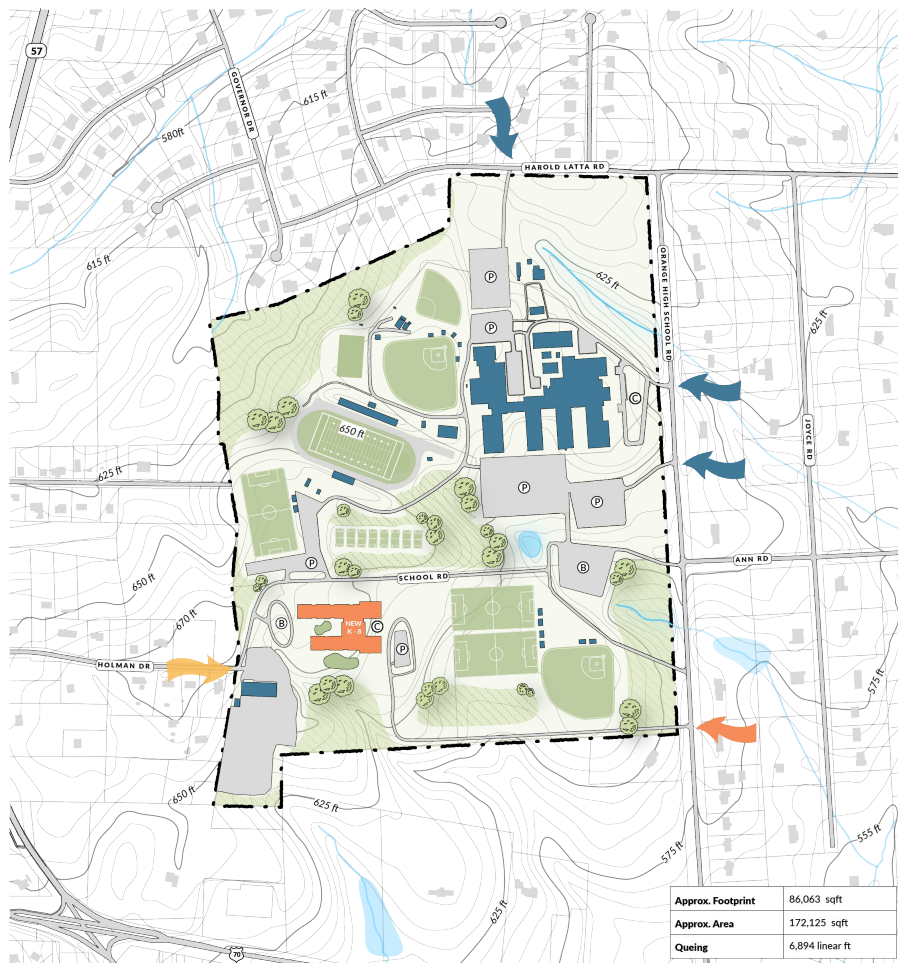
New K-8 | On Site Replacement at Orange MS



EXISTING



PHASING



NEW K-8

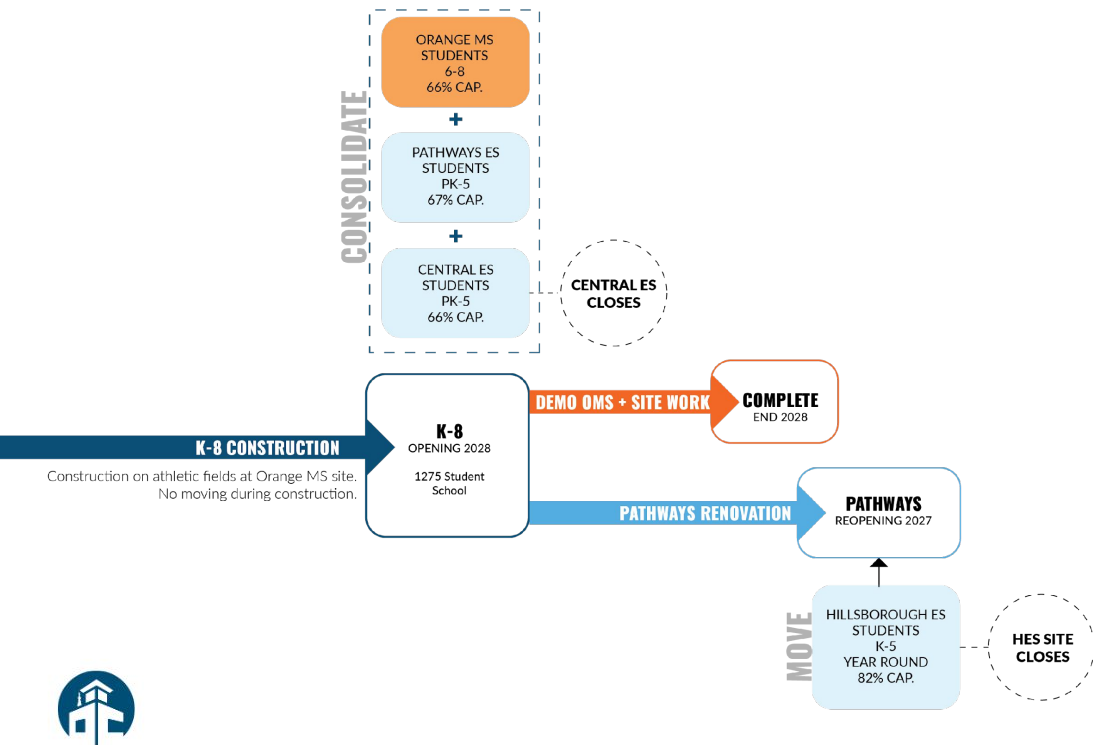
Approx. Footprint	86,063 sqft
Approx. Area	172,125 sqft
Queing	6,894 linear ft

ENGAGE. CHALLENGE. INSPIRE.



Option 3

New K-8 | On Site Replacement at Orange MS



Phase 1

Facility	Strategy	Budget
Central ES	Replacement School <i>Consolidate + Close</i>	\$34.5M
New ES	New School	\$49.5M
Hillsborough ES	Consolidate <i>Move + Close</i>	\$1.3M
Orange MS	Replacement School	\$71.5M
New Hope ES	Adequacy	\$13.0M
Partnership Academy	Replacement School	9.4M

Phase 2

Facility	Strategy	Budget
Efland Checks ES	Adequacy	\$3.4M
Grady Brown ES	High Priority Needs	\$4.8M
Pathways ES	High Priority Needs <i>Consolidate + Renovate</i>	\$4.7M
River Park ES	High Priority Needs	\$6.7M
Cedar Ridge HS	High Priority Needs	\$6.3M
Maintenance Department	High Priority Needs	\$0.0M
Orange HS	Replacement School	\$153.9M
Transportation Department	High Priority Needs	\$1.7M



Option 3

New K-8 | On Site Replacement at Orange MS

General K-8 Benefits

- Reduce motivational decline
- Reduce academic decline when MS transition is eliminated
- Better preparation for HS
- Greater sense of community and stronger relationships
- K-8s tend to have higher attendance, few disciplinary issues and higher overall academic achievement



Option 3

New K-8 | On Site Replacement at Orange MS

Pros

- Removes two ES from OCS inventory (Central & Hillsborough)
- HES Students move into a newer & renovated Pathways
- Addresses the most recommendations from the Woolpert Study

Cons

- Traffic concerns



Factors of Analysis

Improved Student Experience

Each Scenario Impacts ~ 1,700 students

Improving ~ 250,000 sf (21% of Portfolio)

Monday March 24, 2025

New K-5 @ Central ES

Central Demolition + Replacement

Pathways Renovation

Orange MS Renovation

New K-8 @ Orange MS

Orange K-8 New Construction

Pathways Renovation

New K-5 @ Gravelly Hills MS

Gravelly Hills ES New Construction

Central ES Renovation

Orange MS Renovation

Improved Facilities for Students

Central Replacement

Central Replacement	600
---------------------	-----

Pathways Renovation	525
---------------------	-----

Orange MS Renovation	600
----------------------	-----

Total Student Population	1725
---------------------------------	-------------

Orange K-8

Orange K-8 New Construction	1300
-----------------------------	------

Pathways Renovation	525
---------------------	-----

Total Student Population	1825
---------------------------------	-------------

Gravelly Hill ES

Gravelly Hill New Construction	450
--------------------------------	-----

Central Renovation	450
--------------------	-----

Orange MS Renovation	600
----------------------	-----

Total Student Population	1500
---------------------------------	-------------

Building Improvements

Central Replacement

Central Replacement	86,974
---------------------	--------

Pathways Renovation	85,282
---------------------	--------

Orange MS Renovation	96,476
----------------------	--------

Repurpose Hillsborough ES	
---------------------------	--

Total Area Improved	268,732
----------------------------	----------------

Orange K-8

Orange K-8 New Construction	172,125
-----------------------------	---------

Pathways Renovation	85,282
---------------------	--------

Repurpose Hillsborough ES	
---------------------------	--

Repurpose Central ES	
----------------------	--

Total Area Improved	257,407
----------------------------	----------------

Gravelly Hill ES

Gravelly Hill New Construction	67,766
--------------------------------	--------

Central Renovation	61,502
--------------------	--------

Orange MS Renovation	96,476
----------------------	--------

Repurpose Hillsborough ES	
---------------------------	--

Total Area Improved	225,744
----------------------------	----------------



ENGAGE. CHALLENGE. INSPIRE.

Woolpert Study Alignment

Number of Woolpert Recommendations Addressed by Each Option. 1 is Optimal.

Woolpert Strategy Alignment
Central Replacement
<i>Phase 1: Central ES (Renovation v. Replacement)</i>
Phase 1: Hillsborough ES (Consolidate)
<i>Phase 1: Orange MS (Renovation v. Replacement)</i>
Phase 2: Pathways ES (Renovation)
Orange K-8
Phase 1: Central ES (Replacement)
Phase 1: Hillsborough ES (Consolidate)
Phase 1: Orange MS (Replacement)
Phase 2: Pathways ES (Renovation)
Gravelly Hill ES
<i>Phase 1: Central ES (Renovation v. Replacement)</i>
Phase 1: Hillsborough ES (Consolidate)
<i>Phase 1: Orange MS (Renovation v. Replacement)</i>
Phase 1: New ES

Woolpert Study Alignment	
Central Replacement	2
Orange K-8	1
Gravelly Hill ES	2



Portfolio Optimization

Increasing Efficiency of School Buildings Through Consolidation.

Portfolio Optimization	
Central Replacement	
Original SF	1,429,031
Revised SF	1,355,247
Change in SF	(73,784)
Central Optimatization	-5.2%
Orange K-8	
Original SF	1,429,031
Revised SF	1,171,797
Change in SF	(257,234)
Orange K-8 Optimization	-18.0%
Gravelly Hill ES	
Original SF	1,429,031
Revised SF	1,397,541
Change in SF	(31,490)
Gravelly Hill ES Optimization	-2.2%

Portfolio Optimization	
Central Replacement	2
Orange K-8	1
Gravelly Hill ES	3



Operational Savings

Operational Savings Calculated Over Ten Years, Using Average Costs Based on Past Five Years.

Operations Costs over Ten Years @ 3%	
Central Replacement	
SF Reduction	(73,784)
Average \$/sf (2020-24)	\$ 1.92
Central Savings	(1,902,038)
Orange K-8	
SF Reduction	(257,234)
Average \$/sf (2020-24)	\$ 1.92
Orange K-8 Savings	(6,631,096)
Gravelly Hill ES	
SF Reduction	(31,490)
Average \$/sf (2020-24)	\$ 1.92
Gravelly Hill ES Savings	(811,764)

Operational Cost Savings	
Central Replacement	2
Orange K-8	1
Gravelly Hill ES	3



Schedule

Schedule Includes Design, Permitting and Summer Construction Starts, in Working Days.

Development Schedule	
Central Replacement	Opening
Central Replacement	2028
Pathways Renovation	2029
Orange MS Renovation	2030
Central Total Working Days	1,305
Orange K-8	Opening
Orange K-8 New Construction	2028
Pathways Renovation	2029
Orange K-8 Total Working Days	1,063
Gravelly Hill ES	Opening
Gravelly Hill New Construction	2028
Central Renovation	2029
Orange MS Renovation	2030
Gravelly Hill ES Total Working Days	1,305

Schedule	
Central Replacement	2
Orange K-8	1
Gravelly Hill ES	2



Total Project Budget

Costs Include Design, Construction, FFE in 2027 Dollars.

Total Project Budgets	
Central Replacement	
Central TPB	\$ 142,526,942
Total Students Served	1,725
Central Cost per Student	\$ 82,624
Orange K-8	
Orange K-8 TPB	\$ 147,262,870
Total Students Served	1,825
Orange K-8 per Student	\$ 80,692
Gravelly Hill ES	
Gravelly Hill New Construction	137,533,080
Total Students Served	1,500
Gravelly Hill per Student	\$ 91,689

Total Project Budget	
Central Replacement	2
Orange K-8	1
Gravelly Hill ES	3



Risks: Cost + Schedule

New Construction has Less Risk. Central has Highest Risk Due to Demo & Two Renovation Projects.

Risks: Cost + Schedule
Central Replacement
<i>Demo & New Construction: Central</i>
<i>Renovation: Pathways ES</i>
<i>Renovation: Orange MS</i>
Orange K-8
<i>New Construction: K-8</i>
<i>Renovation: Pathways ES</i>
Gravelly Hill ES
<i>New Construction: Gravelly Hill ES</i>
<i>Renovation: Central ES</i>
<i>Renovation: Orange MS</i>

Risks Cost +Schedule	
Central Replacement	3
Orange K-8	1
Gravelly Hill ES	2



School Traffic Impact

Site Characteristics Provide Design Solutions for Traffic Management.

School Traffic Impact	
Central Replacement	
Buildable Area	15.13 acres
Points of Access	Single
Hayes Street	
Orange K-8	
Buildable Area	60-65 acres
Points of Access	Multiple
Orange High School Road	
Harold Latta Road	
NC 70	
Gravelly Hill ES	
Buildable Area	45-50 acres
Point of Access	Single
West Ten Road	

School Traffic Impact	
Central Replacement	3
Orange K-8	1
Gravelly Hill ES	2



Construction Impact on Students

The Number of Students Who Need to Relocate or Experience Phased On-site Renovations.

Construction Impact on Students	
Central Replacement	
Central Replacement	600
Pathways Renovation	525
Orange MS Renovation	600
Total Student Population	1,725
Orange K-8	
Orange K-8 New Construction	
Pathways Renovation	
Total Student Population	0
Gravelly Hill ES	
Gravelly Hill New Construction	
Central Renovation	
Orange MS Renovation	600
Total Student Population	600

	Construction Impact
Central Replacement	3
Orange K-8	1
Gravelly Hill ES	2



Improved Facilities for Students

The Number of Students Who Benefit from New Facilities from This Phase of Improvements.

Improved Facilities for Students	
Central Replacement	
Central Replacement	600
Pathways Renovation	525
Orange MS Renovation	600
Total Student Population	1,725
Orange K-8	
Orange K-8 New Construction	1300
Pathways Renovation	525
Total Student Population	1,825
Gravelly Hill ES	
Gravelly Hill New Construction	450
Central Renovation	450
Orange MS Renovation	600
Total Student Population	1,500

Improved Facilities for Students	
Central Replacement	2
Orange K-8	1
Gravelly Hill ES	3



Overall Ranking of Options

The Lower Score is Optimal.

Orange County Schools 2024 Bond Options Rankings										The Lower Score is Optimal
	Woolpert Study Alignment	Portfolio Optimization	Operational Cost Savings	Schedule	Total Project Budget	Risks Cost + Schedule	Construction Impact	School Traffic Impact	# of Students with New Facilities	TOTAL
Central Replacement	2	2	2	2	2	3	3	3	2	21
Orange K-8	1	1	1	1	1	1	1	1	1	9
Gravelly Hill ES	2	3	3	2	3	2	2	2	3	22



Summary of Options

New K-5 | On Site Replacement at Central ES



Grading Scale

- Woolpert Study Alignment
- Portfolio Optimization
- Operational Cost Savings
- Schedule
- Construction Costs
- Risks Cost + Schedule
- Construction Impact
- School Traffic Impact
- Student Facilities Impact

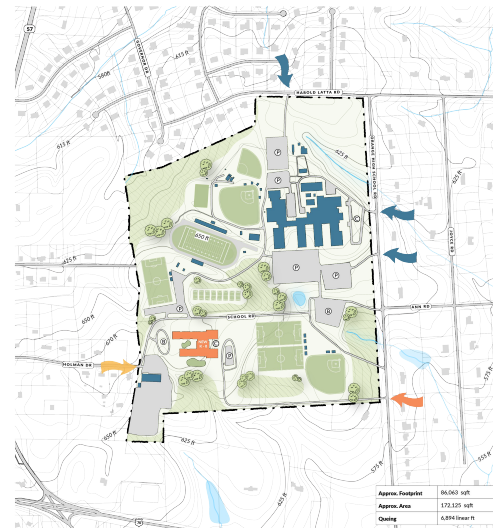
New K-5 | Greenfield Site Adjacent to Gravelly Hill MS



Grading Scale

- Woolpert Study Alignment
- Portfolio Optimization
- Operational Cost Savings
- Schedule
- Construction Costs
- Risks Cost + Schedule
- Construction Impact
- School Traffic Impact
- Student Facilities Impact

New K-8 | On Site Replacement at Orange MS



Grading Scale

- Woolpert Study Alignment
- Portfolio Optimization
- Operational Cost Savings
- Schedule
- Construction Costs
- Risks Cost + Schedule
- Construction Impact
- School Traffic Impact
- Student Facilities Impact



Public input sessions will take place
the week of April 7, 2025.

The next Bond Update to the Board will be
May 5, 2025 with a review of community
input and **all relevant data.**





Questions?





**Orange
County
Schools**

NORTH CAROLINA

ENGAGE. CHALLENGE. INSPIRE.