

Long Range Facilities Planning

NEWTON ELEMENTARY SCHOOLS

May 30, 2012

***Joint Meeting of the School Committee and the
Board of Aldermen***

Long Range Planning

- Part of overall City planning
- Part of NPS Strategic Plan
- One component = Elementary Facilities

Strategic Plan: Vision 2020

Goal: Ensure Up-to-Date Teaching and Learning Environments

Develop concrete next steps to address the short-term and long-term needs of facilities across the system

Complex Challenge

- Aging school buildings
- Inadequate program facilities
- Growing school population
- Potential residential development
- Fifteen relatively small schools
- Redistricting and buffer zones
- Balancing feeder patterns
 - Four middle schools
 - Two high schools
- Funding Issues
 - Local Sources
 - State Support
- Timing
- Swing space

HMFH Facility Condition Ratings

School	Building Condition
Angier	3.5
Cabot	3.5
Horace Mann	3.5
Ward	3.5
Burr	3.0
Countryside	3.0
Lincoln-Eliot	3.0
Mason-Rice	3.0
Zervas	3.0
Carr	3.0

School	Building Condition
Franklin	2.0
Peirce	2.0
Underwood	2.0
Williams	1.5
Bigelow	2.0
Brown	2.0
Day	2.0
Oak Hill	1.5
Ed Center	2.5

4= Poor condition with replacement required

3= Fair condition with repair or replacement required

2= Good condition with minor repairs required

1= New or in good condition with ordinary maintenance required

Site Potential for Expansion

School	Building SF	Site Acreage	Possible Space for Addition	Site Constraints and Options	*Building F.A.R.
Angier	51,300	1.98	No	site size, train tracks	0.59
Cabot	43,584	1.78	No	size	0.56
Horace-Mann	39,570	1.59	No	site size	0.57
Lincoln-Eliot	51,074	3.72	No	large building footprint & parking	0.32
Underwood	43,300	1.01	No	site size	0.98
Ward	38,000	3.16	No	large building footprint, parking, topography	0.28
Bowen	64,935	11.54	Yes	fields heavily used	0.13
Burr	54,167	8.65	Yes	topography and soil issues	0.14
Countryside	65,000	7.39	Yes	remove modulars, adjacent wetlands	0.20
Franklin	56,764	5.45	Yes	replace 1-story octagonal wing	0.24
Mason-Rice	39,000	3.99	Yes	replace 2-story octagonal wing	0.22
Memorial-Spaulding	68,775	5.59	Yes	none	0.28
Peirce	35,600	3.68	Yes	replace modulars	0.22
Williams	41,700	2.29	Yes	fields heavily used	0.42
Zervas	35,002	5.28	Yes	adjacent wetland; second story possible	0.15

*F.A.R. is the ratio of building square footage to lot size; the lower the ratio, the more space to build on.

Desired Outcomes

- Up-to-date teaching and learning facilities
- Capacity for 6,000+ elementary students
- Maximize state funding
- Explore/create model schools
- Project timing
 - Large projects - 4 year cycles
 - Mid-range projects - 2 year cycles
- Phased and continuous use of swing space
- Maintain neighborhood schools while optimizing school sizes
- Balance North/South feeder pattern
 - High Schools - equivalent
 - Middle Schools - manage capacity
- Eliminate/reduce modular classrooms
- Consolidate preschool location

Educational Program Spaces

MSBA Guidelines for Large Projects

- Core Academic Spaces
- Special Education
- Art & Music
- Health & Physical Education
- Media Center
- Dining & Food Service
- Medical
- Administration & Guidance/Social Services
- Custodial & Maintenance
- Other

Renovations

Mid-Range Projects

- Additional full size classrooms
- Replacement of modular classrooms
- Art and Music in regular classrooms
- Other instructional spaces
- Cafeteria
- After school space
- Code compliance
- Energy efficiencies

Planning Approach

- Create additional capacity and improve facilities
- Detailed spreadsheet analysis of school classroom capacity and need
- Alternate large and mid-range projects
- School sizes adjusted through renovations and expansions
 - Enlarge schools with 300-400 students
 - Maintain schools with 450 students

P l a n n i n g A s s u m p t i o n s

- Ten year enrollment projections through FY22
- Assume school sizes of 400-450 students
- Classrooms for art, music and other instructional purposes
- Use of swing space
- All modulares replaced by permanent construction; in use until construction ends
- MSBA reimbursement at 33% of total
- 3% annual cost escalation

Planning Assumptions - Riverside

- 290 units expected at Riverside, mix of units not known until conceptual review/special permit process complete summer/fall 2012
- Ratios based on NPS experience yield 33 to 73 students (assuming 5% 3BR and 31% 2BR)
- For comparison – 85 students reside at Avalon Newton Highlands with 20% 3BR units and 294 units
- NPS experience indicates roughly half of students would be at the elementary level
- Expansion scenarios include 45 new elementary students at Williams

Theoretical School Sizes

Target sizes to address enrollment, add capacity,
and balance North/South

Burr	450	Angier	465
Cabot	450	Bowen	450
Franklin	400	Countryside	450
Horace Mann	400	Mason-Rice	450
Lincoln-Eliot	400	Memorial-Spaulding	450
Peirce	400	Williams	400
Underwood	300	Zervas	450
Ward	400		
Total North Feeding	3,200	Total South Feeding	3,115
Total Elementary Students			6,315

Method

Elementary School Scenario - DRAFT 4/9/12 - Scenario 1

2018-19 (FY19)												
	Sq. Footage	HMFH Capacity	Enrollment	K - 5 # Core Academic Needed	# Special Education, Art & Music needed	# total rooms needed	# total rooms available	Diff.	Estimated Cost	Redistricting TBD	Status	
Burr	54,167	428	483	20	3	23	18	-5				
Cabot	43,584	384	396	18	2	20	20	0	\$24,800,000	To Carr	Construction	
Franklin	57,540	450	415	18	2	20	22	2			+4 new classrooms available	
Horace Mann	39,570	397	417	18	4	22	19	-3				
Lincoln-Eliot	51,074	350	337	15	2	17	19	2			4 Pre-K classes move TBD	
Peirce	48,602	400	323	16	3	19	19	0				
Underwood	43,300	280	314	14	2	16	17	1				
Ward	38,000	298	296	14	2	16	16	0	\$923,000		Feasibility Study - New School +4 classrooms	
Total North Feeding	375,837	2,987	2,981	133	20	153	150	-3	\$25,723,000			
Anqier	74,213	465	459	18	2	20	24	4				
Bowen	64,935	449	516	22	3	25	19	-6				
Countryside	55,900	450	410	18	4	22	22	0				
Mason-Rice	39,000	420	412	19	3	22	19	-3			Design	
Memorial-Spauiding	68,775	506	480	22	2	24	22	-2				
Williams	59,147	400	307	15	3	18	19	1				
Zervas	74,213	450	361	18	3	21	23	2			New Zervas Opens +7 new classrooms (-5 mods)	
Total South Feeding	436,183	3,140	2,945	132	20	152	148	-4	\$0			
Total Elementary	812,020	6,127	5,926	265	40	305	298	-7	\$25,723,000			
Bigelow	92,500		597									
Day	145,600		915									
Total North Feeding	238,100		1,512									
Brown	146,000		757									
Oak Hill	96,200		652									
Total South Feeding	242,200		1,409									
Total Middle	480,300		2,921									
North	410,000		2,139									
South	383,000		1,875									
Total High School	793,000		4,014									
Swing Space												
Carr										From Cabot		
TBD for Pre-K											+4 Pre-K classes from Lincoln-Eliot	
Ed Center	70,000											
Grand Total	2,155,320								\$25,723,000		11 # New Classrooms Added	
									\$131,446,000		31 Cumulative # New Classrooms Added	

TIMELINE: SCENARIO #1

Fiscal Year	School Year	New School / Major Renovation					Renovations / Additions										Carr	Pre-K	
		Angier (MSBA)	Zervas	Cabot (MSBA)	Ward	Lincoln-Eliot (MSBA)	Peirce	Williams	Country-side	Franklin	Mason-Rice	Burr	Under-wood	Horace Mann	Memorial-Spaulding	Bowen			
FY12	2011-12	Start MSBA																Plans to Vacate	
FY13	2012-13	Feasibility Study					Feasibility Study											Feasibility Study	
FY14	2013-14	Design				Move Pre-K: +4 Classrooms	Design	Feasibility Study										Construction	Consolidate Preschool
FY15	2014-15	Construction	Feasibility Study				Construction	Design	Feasibility Study									Angier Students	
FY16	2015-16	Construction	Design				+4 New Classrooms	Construction	Design	Feasibility Study								Angier Students	
FY17	2016-17	Completed: +6 Classrooms	Construction	Feasibility Study				+6 New Classrooms	Construction	Design								Zervas Students	
FY18	2017-18		Construction	Design					No New Classrooms	Construction	Feasibility Study							Zervas Students	
FY19	2018-19		Completed: +7 Classrooms	Construction	Feasibility Study					+4 New Classrooms	Design							Cabot Students	
FY20	2019-20			Construction	Design						Construction	Feasibility Study						Cabot Students	
FY21	2020-21			Completed: +4 Classrooms	Construction	Feasibility Study					+4 New Classrooms	Design						Ward Students	
FY22	2021-22				Construction	Design						Construction	Feasibility Study					Ward Students	
FY23	2022-23				Completed: +4 Classrooms	Construction						+3 New Classrooms	Design					Lincoln-Eliot Students	
FY24	2023-24					Construction							Construction	Feasibility Study				Lincoln-Eliot Students	
FY25	2024-25					Completed: +4 Classrooms						No New Classrooms	Design						
FY26	2025-26													Construction	Feasibility Study				
FY27	2026-27													+3 New Classrooms		Feasibility Study			

Scenario #1 Sequence

Large Projects on 2 Year Cycle

● Angier first large project

- South feeding
- SOI – 1st priority school
- MSBA
- 390 to 465 students

● Expand Peirce

- North feeding
- 300 to 400 students

● Zervas second large project

- Possible MSBA
- South feeding
- 330 to 450 students

● Expand Williams

- South feeding
- 300 to 400 students

● Cabot third large project (or concurrent with Zervas)

- North feeding
- SOI – 2nd priority school
- Second MSBA project
- 430 to 450 students

Scenario #1 Sequence, cont.

Large Projects on 2 Year Cycle

● Countryside renovation

- Replace modular classrooms
- Capacity maintained at 450 students

● Expand Franklin

- North feeding
- 350 to 400 students

● Expand Mason-Rice

- South feeding
- 420 to 450 students

● Ward fourth large project

- North feeding
- SOI 3rd priority school
- 300 to 400 students

● Expand Burr

- North feeding
- 425 to 450 students

Scenario #1 Sequence, continued

Large Projects on 2 Year Cycle

● Lincoln-Eliot fifth large project

- North feeding
- Third MSBA project
- 275 to 400 students

● Underwood Renovation

- No new classrooms
- North feeding
- 280 to 300 students; could serve up to 400 students

● Expand Horace Mann

- North feeding
- 350 to 400 students

● Memorial-Spaulding

- South feeding
- Feasibility study

● Bowen

- South feeding
- Feasibility study

Midpoint Snapshot: Scenario #1

- Consecutive Plan: Midpoint in FY19
- Construction completed at 7 school buildings
 - Carr
 - Peirce (+4)
 - Angier (new school +6) - MSBA
 - Williams (+6)
 - Countryside (replace modulars)
 - Zervas (new school +7)
 - Franklin (+4)
- Cabot - under construction – MSBA
- Lincoln-Eliot - move preschool (+4)
- Add 31 classrooms
- Estimated cost after reimbursement \$131M

Final Snapshot: Scenario #1

● Continue MSBA projects

- Cabot (new school +4)
- Lincoln-Eliot (new school +4)

● Address other facilities

- Ward (new school +4)
- Mason-Rice (+4)
- Burr (+3)
- Underwood (+0)
- Horace Mann (+3)
- Memorial-Spaulling and Bowen (feasibility studies)

● Possible preschool consolidation

● Add 22 additional classrooms (above) for capacity

● Estimated cost after reimbursement \$114M

➤ ***Scenario 1: Completion by FY27***

➤ ***Add 53 classrooms, net of modular replacement***

➤ ***Estimated cost after reimbursement \$245M***

TIMELINE: SCENARIO #2

Fiscal Year	School Year	New School / Major Renovation					Renovations / Additions											Carr	Pre-K
		Angier (MSBA)	Zervas (MSBA)	Cabot (MSBA)	Ward (MSBA)	Lincoln-Eliot (MSBA)	Peirce	Williams	Country-side	Franklin	Mason-Rice	Burr	Under-wood	Horace Mann	Memorial-Spaulding	Bowen			
FY12	2011-12	Start MSBA																Plans to Vacate	
FY13	2012-13	Feasibility Study																Feasibility Study	
FY14	2013-14	Design				Move Pre-K: +4 Classrooms	Feasibility Study											Construction	Consolidate Preschool
FY15	2014-15	Construction					Design											Angier Students	
FY16	2015-16	Construction					Design	Feasibility Study										Angier Students	
FY17	2016-17	Completed: +6 Classrooms	Feasibility Study				Construction	Design										Peirce Students	
FY18	2017-18		Design				+4 New Classrooms	Construction										Williams Students	
FY19	2018-19		Construction					+6 New Classrooms	Feasibility Study									Zervas Students	
FY20	2019-20		Construction						Design	Feasibility Study								Zervas Students	
FY21	2020-21		Completed: +7 Classrooms	Feasibility Study					Construction	Design								Countryside Students	
FY22	2021-22			Design					No New Classrooms	Construction								Franklin Students	
FY23	2022-23			Construction						+4 New Classrooms	Feasibility Study							Cabot Students	
FY24	2023-24			Construction							Design	Feasibility Study						Cabot Students	
FY25	2024-25			Completed: +4 Classrooms	Feasibility Study						Construction	Design						Mason-Rice Students	
FY26	2025-26				Design						+4 New Classrooms	Construction						Burr Students	

Scenario #2

- Expand time frame to four years between large projects
- Continue mid-range projects
- Use Carr for large and mid-range projects
- Add 27 classrooms by midpoint in FY22
- Add additional 26 classrooms by FY33
- Completion in FY33 (+53 classrooms, net of modulars)
- Estimated cost after reimbursement \$276M

Midpoint Snapshot: Scenario #2

- Consecutive Plan: Midpoint in FY22
- Address 6 school facilities
 - Carr
 - Angier (new school +6) - MSBA
 - Peirce (+4)
 - Williams (+6)
 - Zervas (new school +7) - MSBA
 - Countryside (replace modulars)
- Lincoln-Eliot – move preschool (+4)
- Add 27 classrooms
- Estimated cost after reimbursement \$111M

Final Snapshot: Scenario #2

● Continue MSBA Projects

- Cabot (new school +4)
- Ward (new school +4)
- Lincoln-Eliot (new school +4)

● Address other facilities

- Franklin (+4)
- Mason-Rice (+4)
- Burr (+3)
- Underwood (+0)
- Horace Mann (+3)
- Memorial-Spaulding and Bowen (feasibility studies)

● Possible preschool consolidation

● Add 26 additional classrooms (above) for capacity

● Estimated cost after reimbursement \$114M

➤ ***Completion by FY33***

➤ ***Add 53 classrooms, net of modular replacement***

➤ ***Estimated total cost after reimbursement \$276M***

Comparison of #1 and #2

Description	Scenario 1	Scenario 2
Ending Year	FY27	FY33
Total Number of Years	16	22
Total Number of Schools	14	14
Final Square Footage	904,603	904,603
Total Classrooms Created	53	53
Total Scenario Cost	\$282,488,000	\$362,953,000
Total MSBA Reimbursement	\$37,350,000	\$87,000,000
Net Scenario Cost	\$245,138,000	\$275,953,000
Midpoint Year	FY19	FY22
Midpoint Schools Completed	7	6
Midpoint Classrooms Created	31	27
Midpoint Scenario Cost	\$154,846,000	\$141,704,000
Midpoint MSBA Reimbursement	\$23,400,000	\$30,600,000
Midpoint Net Cost	\$131,446,000	\$111,104,000

Other Considerations

- Preschool location
- Permanent use of Carr
- Education Center use – school or administration
- Phased redistricting
- Buffer zones for ongoing flexibility
- MSBA funding alternatives
- Middle Schools
 - Capacity
 - Condition – Brown/Bigelow

Next Steps

- Continue School Committee discussion
- Ongoing collaboration with City Capital Improvement Plan (CIP) process
- Refine five year plan and beyond including prioritized needs of school projects
- Joint discussion School Committee – Board of Aldermen
- Provide process for public input
- Examine funding alternatives