

School Building Committee

2010

Annual Town Meeting

Committee Members

- Elizabeth Lewis, Chair
- Barbara Bartlett
- Joe Grady
- John Heinstadt
- Neil Johnson
- Lee Kennedy
- Jon Lemieux
- Andre Martecchini
- Mickey McGonagle
- Dennis Nolan
- Sue Skeiber, ex officio
- Susan Nauman, ex officio

Chandler Roof Replacement Design and Construction

- **2009 ATM voted to approve \$1.54 million for design and construction**
- **Design completed in April / May**
- **Bids received in June**
- **Work completed in July and August**
- **Total project cost \$975,780**
- **Cost to taxpayers \$585,470**

Feasibility Study for DMS and DHS

- **The purpose of the study was to provide valuable information for capital planning with anticipated scope of work and costs for both DMS and DHS**
- **Substantiate our Statement of Interest (SOI) submitted to MSBA**
- **\$200,000 was approved for this study**
- **Total cost will be less than \$140,000**

Timeline

- Issued a Request for Proposal in August 2009
- Approx. 20 proposals received – 3 firms interviewed
- Retained Dore and Whittier Architects in September to perform the study
- Dore and Whittier assisted with the update of our SOI submitted to MSBA in November
- Visioning Sessions with administrators, teachers, parents and at- large residents
- Held two public presentations with the architect, in December and February
- Final report will be available after April 1st

Duxbury Middle School and High School Feasibility Study

Town Meeting Presentation

13 March 2010



Presentation Outline

- Feasibility Study Process
- Conceptual Design Options
- Estimated Project Costs



Feasibility Study Process

- Previous Study Review
- Design Team Site Visits
- Administration Meetings
- MSBA Statements of Interest (SOI)
- Visioning Sessions
- Educational Programming
- Conceptual Design Options
- Public Presentations



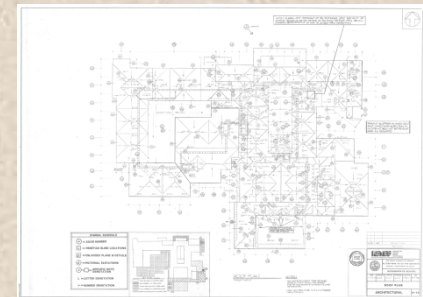
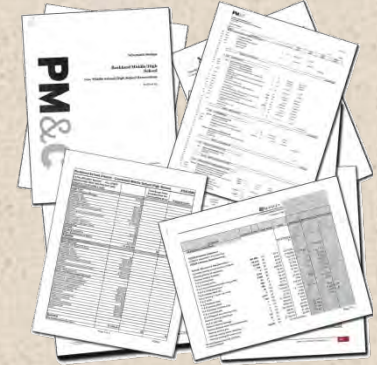
MSBA – Initial Phase

- Statement of Interest (SOI)
- Criteria for Advancement
 - Building Condition
 - Building Capacity
 - Educational Program
 - Structural Deficiency
- MSBA Assessment/Senior Study
- Board Feasibility Study Acceptance

Name of School: Duxbury High	
Massachusetts School Building Authority	
School District:	Duxbury
Element Contact:	Sam K. Stiller TEL: (508) 534-7000
Name of School:	Duxbury High
Submission Date:	12/17/2006
Note:	
The following Priorities have been included in the Statement of Interest:	
1. <input type="checkbox"/> Replacement or renovation of a building which is structurally unsound or otherwise in a condition seriously jeopardizing the health and safety of school children, where no alternative exists.	
2. <input type="checkbox"/> Elimination of existing safety overcrowding.	
3. <input type="checkbox"/> Prevention of the loss of accreditation.	
4. <input type="checkbox"/> Prevention of severe overcrowding expected to result from increased enrollments.	
5. <input type="checkbox"/> Replacement, renovation or modernization of the heating system in a schoolhouse to increase energy conservation and decrease energy related costs in the schoolhouse.	
6. <input type="checkbox"/> Short term enrollment growth.	
7. <input type="checkbox"/> Replacement of or addition to school buildings in order to provide for a full range of programs consistent with state and approved local requirements.	
8. <input type="checkbox"/> Transition from state-funded and approved special education school districts to walk-to, unincorporated, or other school districts.	
Potential Project Scope:	Major Project
In this SOI the District Priority SOI:	NO
The MSBA ID for the District Priority SOI:	2009 Duxbury Middle
Project Goal for School: Please explain the educational goals of any potential project at this school.	
The goal of Duxbury High School is to prepare students in the many aspects of learning that is included in the full scope of 21 century skills. This includes the academic knowledge in the areas of English, reading or language arts, mathematics, science, foreign language, civics, government, economics, arts, history, and geography while equally preparing them with the 21st Century skills necessary for them to compete effectively in the global community. This will involve their understanding of the emerging areas that are critical to their success in communication and workplaces. These include: global awareness, financial, economic, business, and entrepreneurial literacy, civic literacy, and health and wellness awareness. Additionally to academic content is essential, it is also equally critical that students be prepared with learning and thinking skills that will provide them with the effective and innovative use of what they will be required to know throughout their lives. These skills include: critical thinking and problem solving, communication, creativity and innovation, collaboration, contextual learning, and information and media literacy skills. Included in all of these areas is also the information and communication technology literacy that will provide students with the ability to use these technology skills to develop 21st century content and knowledge skills that will allow them to utilize them in the context of learning core subjects. These will also provide them with the skills, which assist them in how to learn, think critically, solve problems, use information, communicate, innovate, and collaborate. Additionally the role of education at Duxbury High School is to incorporate essential life skills into our schools, deliberately, strategically, and broadly.	
Massachusetts School Building Authority	1
Statement of Interest	

MSBA – Second Phase

- Feasibility Study/Schematic Design
- Project Scope and Budget
- Board Acceptance
- Local Authorization (120 day timeframe)
- Project Design
- Project Construction



Existing Conditions Analysis

- Site
 - Site Utilization
 - Access, Parking, and Circulation
 - Open/Athletic Space
- Building
 - Architecture
 - Structure
 - HVAC
 - Plumbing and Fire Protection
 - Electrical
 - Technology
 - Hazardous Materials



Visioning Workshops

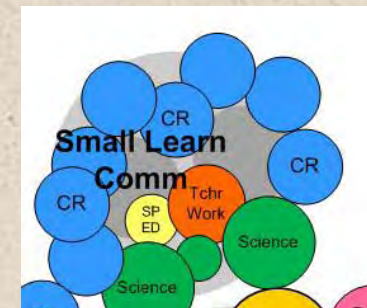
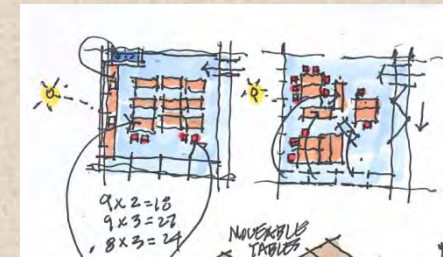
Nov. 9, 10 & Dec. 2



Frank Locker
Educational Planning

Key Ideas:

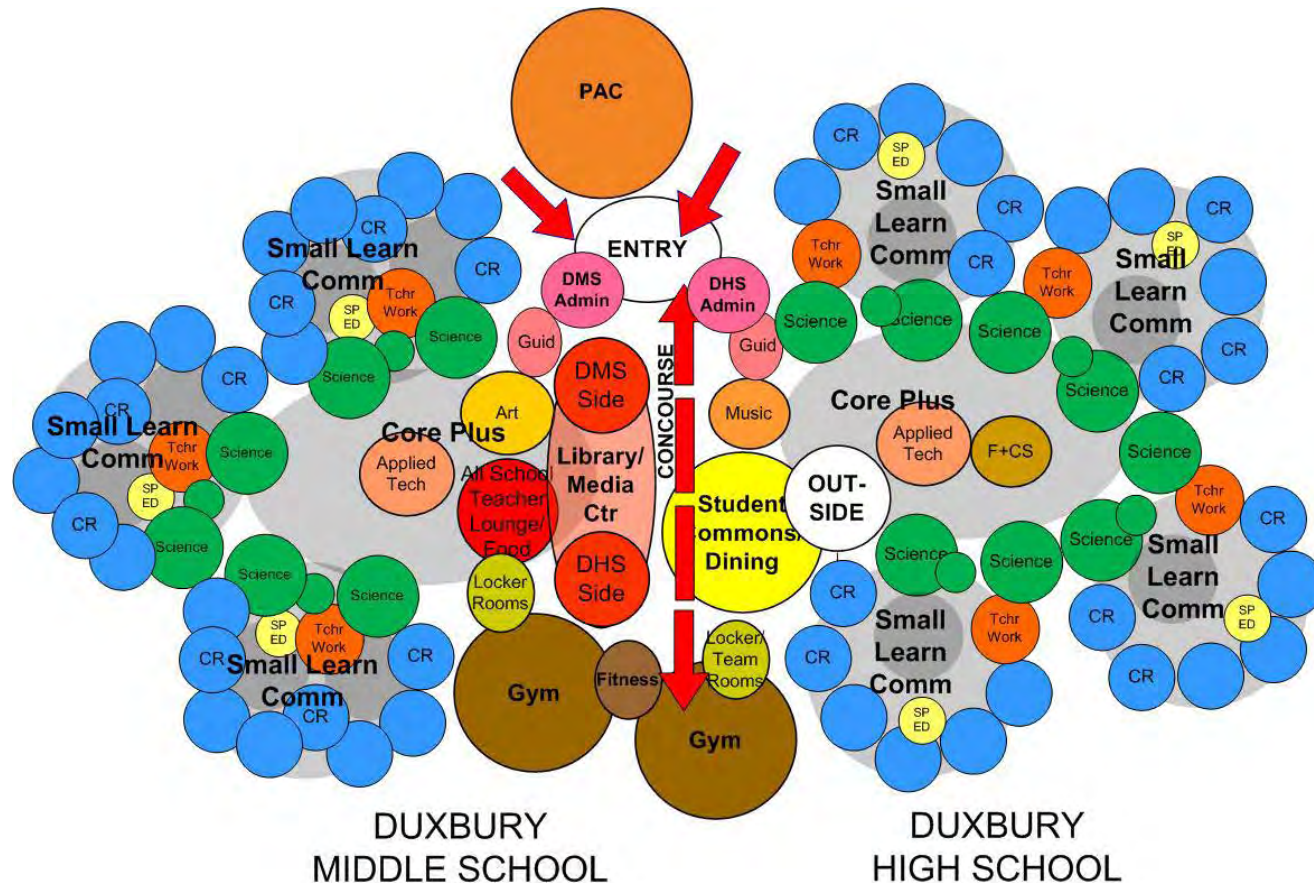
- Project Based Learning
- Spatial Use Flexibility
- Unified Schedule (MS-HS)
- Clustered /Core Plus Classrooms
- HS and MS Identities



Educational Programming



Frank Locker
Educational Planning



13 March 2010

Duxbury Middle & High Schools Feasibility Study

Conceptual Design Options

Considerations

- Educational Objectives
- Project Costs
- Construction Phasing
- Green Building Components
- MSBA Acceptance

Enrollment

MS Grades 6-8

850 (+/-) Students

HS Grades 9-12

1050 (+/-) Students

Design Options

Upgrade/Replacement Items Considered

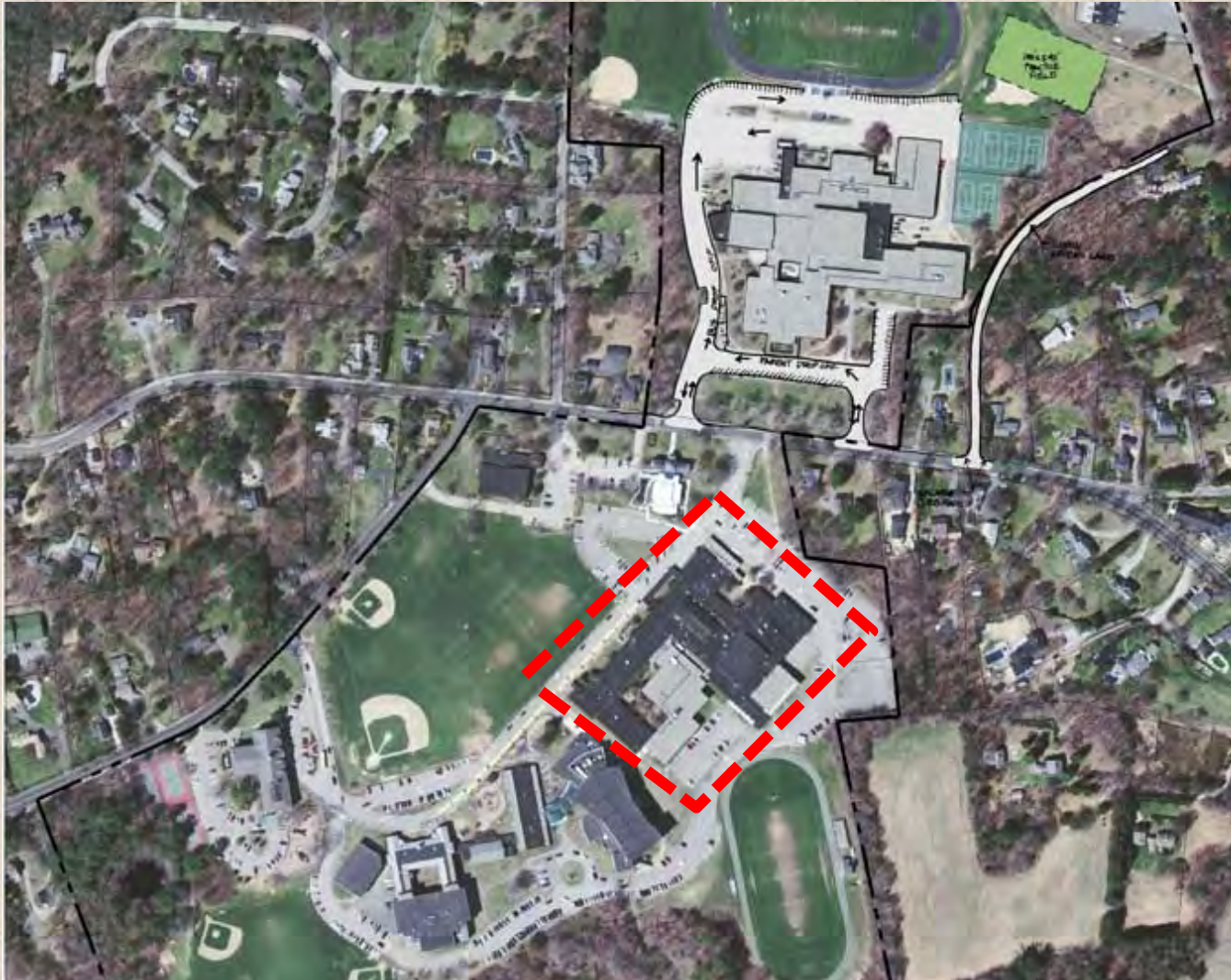
Roofs
Windows/ Doors
MEP Systems
Gym Floors
Kitchens
Science Labs
Locker Rooms
Handicapped Accessibility
Fire Sprinkler
Building Finishes

Infrastructure Upgrades

“Infrastructure Upgrades” is a reference option used by MSBA to establish baseline scope to evaluate all options

Design Options

Option #1a Middle School Renovation

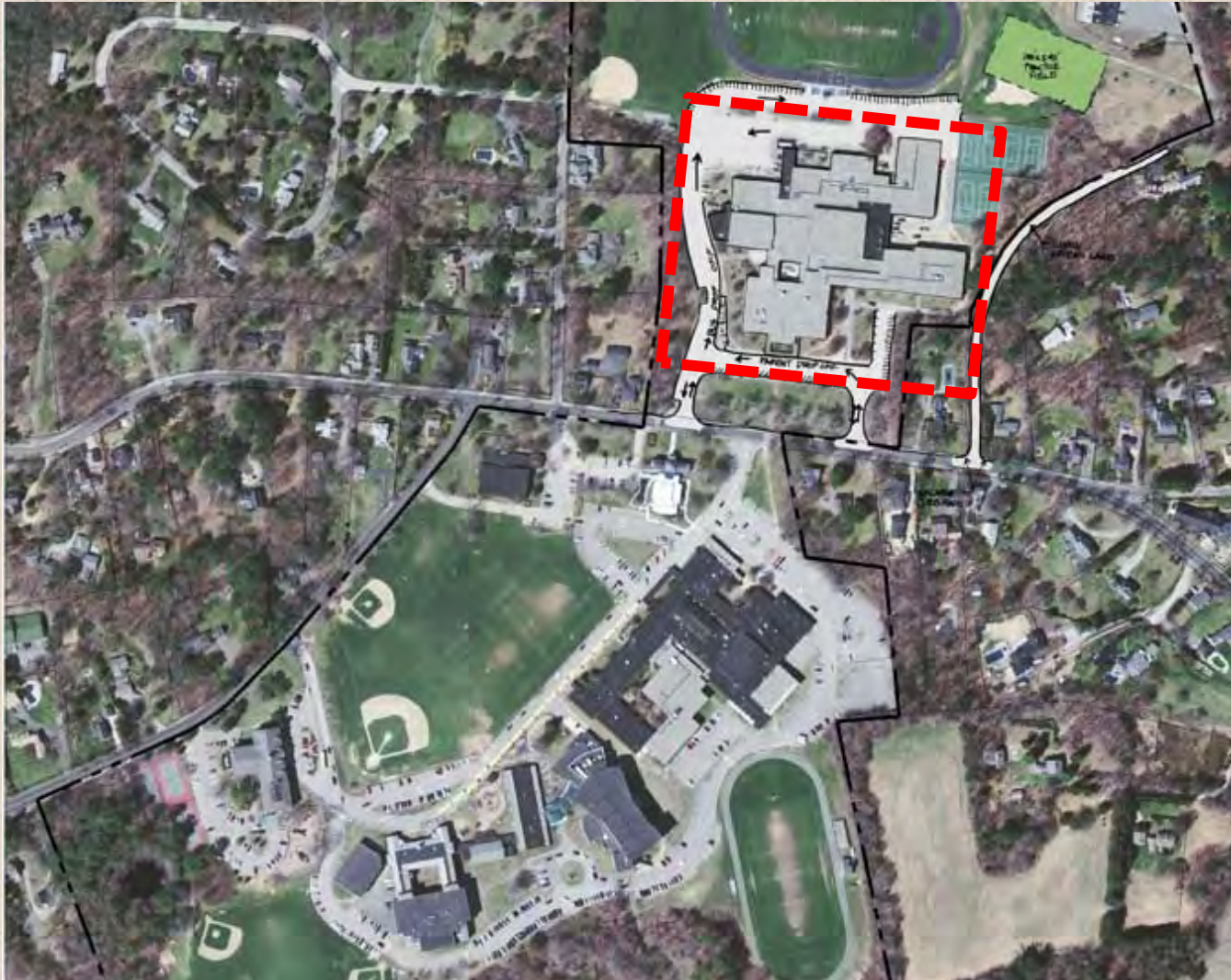


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Duxbury Middle & High Schools Feasibility Study

Design Options

Option #1b High School Renovation



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Duxbury Middle & High Schools Feasibility Study

Design Options

Option # 2 New Middle School



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Duxbury Middle & High Schools Feasibility Study

Design Options

Option # 3 New High School



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Duxbury Middle & High Schools Feasibility Study

Design Options

Option # 4 New Middle/ High School



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Duxbury Middle & High Schools Feasibility Study

Design Options

Option # 5 New Middle/ High School



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Duxbury Middle & High Schools Feasibility Study

Design Options

Option # 6 New Middle/High School



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Duxbury Middle & High Schools Feasibility Study

Project Costs Summary

Single School	Option 1a Reno MS	Option 1b Reno HS	Option 2 New MS	Option 3 New HS
Scope:	150,000sf	213,000sf	136,000sf	220,000sf *
Project Cost:	\$46,850,000	\$70,523,000	\$54,049,000	\$84,486,000
Construct. Phasing:	2-3 years	2-3 years	2 years	2 years

Two Schools	Infrastructure Upgrades as Needed	Option 4 New MS/HS	Option 5 New MS/HS	Option 6 New MS/HS
Scope:	363,000sf	349,000sf	356,000sf*	356,000sf*
Project Cost:	\$74,087,000	\$125,606,000	\$145,541,000	\$138,034,000
Construct. Phasing:	Undetermined	3 years	3 years	2 years

* Includes Renovation of HS Gym as Athletic Complex (26,000sf)

Thank-you



13 March 2010

Duxbury Middle & High Schools Feasibility Study

Tax Implications for Potential DMS and DHS construction projects

Assumptions

- Estimated construction cost for both schools is \$120 million
- 40% of the total cost is reimbursed by MSBA
- Net cost to town is \$80 million
- 25 year bond term
- Median home value of \$502,400
- FY2010 tax rate and appraised home values

Cost to Taxpayers

- Year 1 increase in tax bill = \$877.91
(quarterly tax = \$219.48)
- Decreases annually for 25 years
- Year 25 increase in tax bill = \$431.72

Next steps

- **MSBA will review our SOI and, if it merits consideration, will perform a site visit to evaluate criteria for advancement of project:**
 - Building condition, capacity, educational programming or structural deficiency.**
- **Based on need and available funding, MSBA would perform an assessment / Senior Study. Design options will be further explored further with MSBA.**
- **In order to obtain MSBA reimbursement, scope and cost of any construction project would have to be approved by MSBA.**

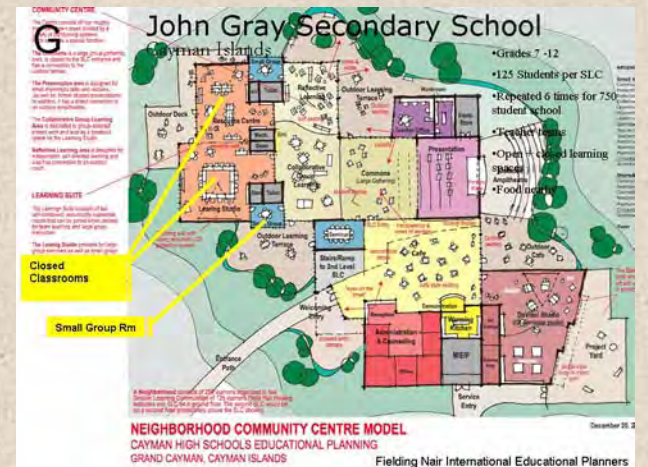
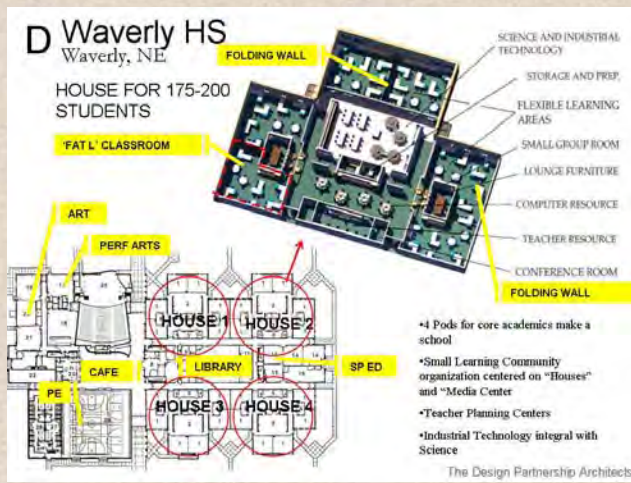
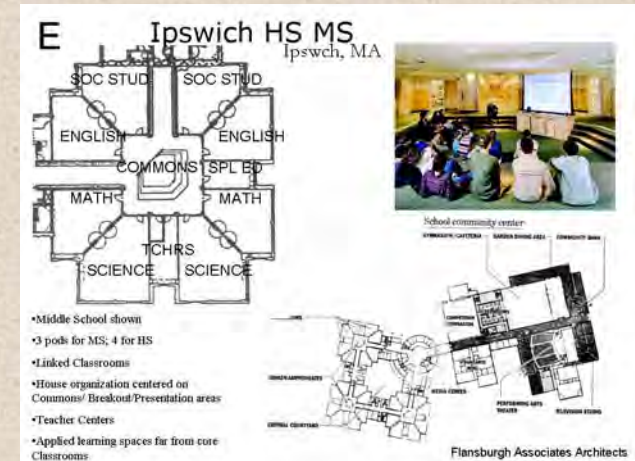
Duxbury Middle & High Schools Feasibility Study



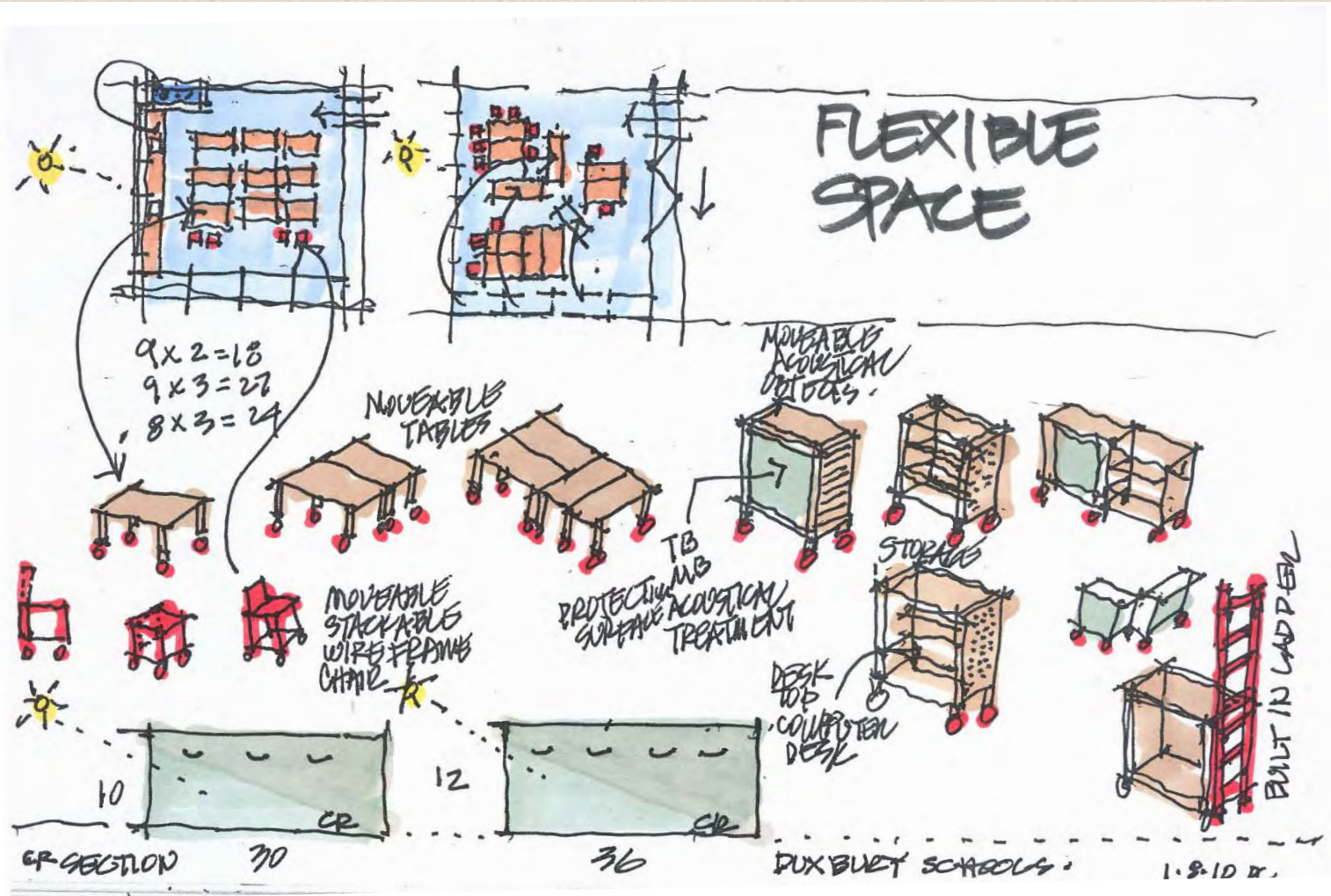
Visioning Workshops

HS Model Schools

- Ipswich, MA
- Waverly, NE
- John Gray, Cayman Is.



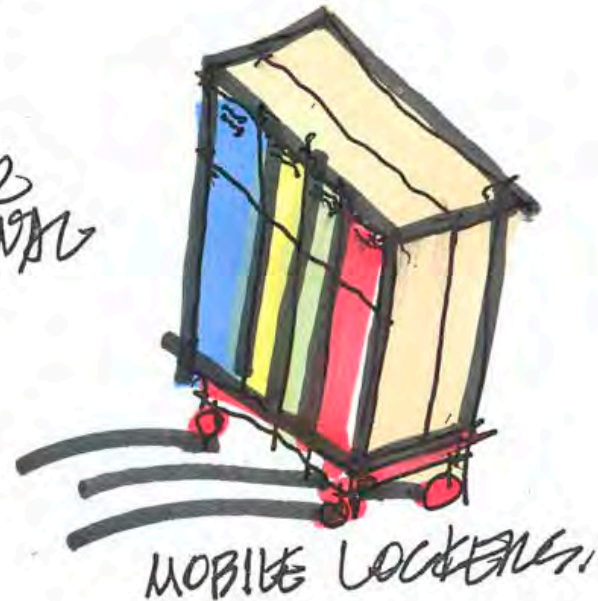
Educational Programming



Educational Programming



RETROFIT
EXISTING
DOUBLE
LOADED
CORRIDOR
EDUCATIONAL
SPACE



Retro-fit Flexibility

Study Schedule

- October/November 2009
 - Investigation and Programming
- December 09/January 2010
 - Design Options
- February 2010
 - Public Information
 - Study Completion
- Spring 2010
 - Town Meeting Update



MS Existing Space Inventory

- Typical classroom 770sf (MSBA 850-950sf)
- Special Education 4,895sf -less than MSBA
- Art & Music exceed MSBA standard size
- Vocation & Technology 4,118sf -less than MSBA
- Gymnasias & Phys. Ed. -substantially larger than MSBA
- Cafeteria - undersized

Proposed Space Summary - Middle Schools				Dunbury, MA	
Building Details	Current (2020)		Proposed (2025)		
	Current (sq ft)	2025 (sq ft)	Proposed (sq ft)	2025 (sq ft)	Comments
Elementary School					
1. Elementary School	1,200	1,200	1,200	1,200	
2. Elementary School	1,200	1,200	1,200	1,200	
3. Elementary School	1,200	1,200	1,200	1,200	
4. Elementary School	1,200	1,200	1,200	1,200	
5. Elementary School	1,200	1,200	1,200	1,200	
6. Elementary School	1,200	1,200	1,200	1,200	
7. Elementary School	1,200	1,200	1,200	1,200	
8. Elementary School	1,200	1,200	1,200	1,200	
9. Elementary School	1,200	1,200	1,200	1,200	
10. Elementary School	1,200	1,200	1,200	1,200	
11. Elementary School	1,200	1,200	1,200	1,200	
12. Elementary School	1,200	1,200	1,200	1,200	
13. Elementary School	1,200	1,200	1,200	1,200	
14. Elementary School	1,200	1,200	1,200	1,200	
15. Elementary School	1,200	1,200	1,200	1,200	
16. Elementary School	1,200	1,200	1,200	1,200	
17. Elementary School	1,200	1,200	1,200	1,200	
18. Elementary School	1,200	1,200	1,200	1,200	
19. Elementary School	1,200	1,200	1,200	1,200	
20. Elementary School	1,200	1,200	1,200	1,200	
21. Elementary School	1,200	1,200	1,200	1,200	
22. Elementary School	1,200	1,200	1,200	1,200	
23. Elementary School	1,200	1,200	1,200	1,200	
24. Elementary School	1,200	1,200	1,200	1,200	
25. Elementary School	1,200	1,200	1,200	1,200	
26. Elementary School	1,200	1,200	1,200	1,200	
27. Elementary School	1,200	1,200	1,200	1,200	
28. Elementary School	1,200	1,200	1,200	1,200	
29. Elementary School	1,200	1,200	1,200	1,200	
30. Elementary School	1,200	1,200	1,200	1,200	
31. Elementary School	1,200	1,200	1,200	1,200	
32. Elementary School	1,200	1,200	1,200	1,200	
33. Elementary School	1,200	1,200	1,200	1,200	
34. Elementary School	1,200	1,200	1,200	1,200	
35. Elementary School	1,200	1,200	1,200	1,200	
36. Elementary School	1,200	1,200	1,200	1,200	
37. Elementary School	1,200	1,200	1,200	1,200	
38. Elementary School	1,200	1,200	1,200	1,200	
39. Elementary School	1,200	1,200	1,200	1,200	
40. Elementary School	1,200	1,200	1,200	1,200	
41. Elementary School	1,200	1,200	1,200	1,200	
42. Elementary School	1,200	1,200	1,200	1,200	
43. Elementary School	1,200	1,200	1,200	1,200	
44. Elementary School	1,200	1,200	1,200	1,200	
45. Elementary School	1,200	1,200	1,200	1,200	
46. Elementary School	1,200	1,200	1,200	1,200	
47. Elementary School	1,200	1,200	1,200	1,200	
48. Elementary School	1,200	1,200	1,200	1,200	
49. Elementary School	1,200	1,200	1,200	1,200	
50. Elementary School	1,200	1,200	1,200	1,200	
51. Elementary School	1,200	1,200	1,200	1,200	
52. Elementary School	1,200	1,200	1,200	1,200	
53. Elementary School	1,200	1,200	1,200	1,200	
54. Elementary School	1,200	1,200	1,200	1,200	
55. Elementary School	1,200	1,200	1,200	1,200	
56. Elementary School	1,200	1,200	1,200	1,200	
57. Elementary School	1,200	1,200	1,200	1,200	
58. Elementary School	1,200	1,200	1,200	1,200	
59. Elementary School	1,200	1,200	1,200	1,200	
60. Elementary School	1,200	1,200	1,200	1,200	
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62. Elementary School	1,200	1,200	1,200	1,200	
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64. Elementary School	1,200	1,200	1,200	1,200	
65. Elementary School	1,200	1,200	1,200	1,200	
66. Elementary School	1,200	1,200	1,200	1,200	
67. Elementary School	1,200	1,200	1,200	1,200	
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69. Elementary School	1,200	1,200	1,200	1,200	
70. Elementary School	1,200	1,200	1,200	1,200	
71. Elementary School	1,200	1,200	1,200	1,200	
72. Elementary School	1,200	1,200	1,200	1,200	
73. Elementary School	1,200	1,200	1,200	1,200	
74. Elementary School	1,200	1,200	1,200	1,200	
75. Elementary School	1,200	1,200	1,200	1,200	
76. Elementary School	1,200	1,200	1,200	1,200	
77. Elementary School	1,200	1,200	1,200	1,200	
78. Elementary School	1,200	1,200	1,200	1,200	
79. Elementary School	1,200	1,200	1,200	1,200	
80. Elementary School	1,200	1,200	1,200	1,200	
81. Elementary School	1,200	1,200	1,200	1,200	
82. Elementary School	1,200	1,200	1,200	1,200	
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87. Elementary School	1,200	1,200	1,200	1,200	
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90. Elementary School	1,200	1,200	1,200	1,200	
91. Elementary School	1,200	1,200	1,200	1,200	
92. Elementary School	1,200	1,200	1,200	1,200	
93. Elementary School	1,200	1,200	1,200	1,200	
94. Elementary School	1,200	1,200	1,200	1,200	
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96. Elementary School	1,200	1,200	1,200	1,200	
97. Elementary School	1,200	1,200	1,200	1,200	
98. Elementary School	1,200	1,200	1,200	1,200	
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42. High School	1,200	1,200	1,200	1,200	
43. High School	1,200	1,200	1,200	1,200	
44. High School	1,200	1,200	1,200	1,200	
45. High School	1,200	1,200	1,200	1,200	
46. High School	1,200	1,200	1,200	1,200	
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54. High School	1,200	1,200	1,200	1,200	
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56. High School	1,200	1,200	1,200	1,200	
57. High School	1,200	1,200	1,200	1,200	
58. High School	1,200	1,200	1,200	1,200	
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69. High School	1,200	1,200	1,200	1,200	
70. High School	1,200	1,200	1,200	1,200	
71. High School	1,200	1,200	1,200	1,200	
72. High School	1,200	1,200	1,200	1,200	
73. High School	1,200	1,200	1,200	1,200	
74. High School	1,200	1,200	1,200	1,200	
75. High School	1,200	1,200	1,200	1,200	
76. High School	1,200	1,200	1,200	1,200	
77. High School	1,200	1,200	1,200	1,200	
78. High School	1,200	1,200	1,200	1,200	
79. High School	1,200	1,200	1,200	1,200	
80. High School	1,200	1,200	1,200	1,200	
81. High School	1,200	1,200	1,200	1,200	
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86. High School	1,200	1,200	1,200	1,200	
87. High School	1,200	1,200	1,200	1,200	
88. High School	1,200	1,200	1,200	1,200	
89. High School	1,200	1,200	1,200	1,200	
90. High School	1,200	1,200	1,200	1,200	
91. High School	1,200	1,200	1,200	1,200	
92. High School	1,200	1,200	1,200	1,200	
93. High School	1,200	1,200	1,200	1,200	
94. High School	1,200	1,200	1,200	1,200	
95. High School	1,200	1,200	1,200	1,200	
96. High School	1,200	1,200	1,200	1,200	
97. High School	1,200	1,200	1,200	1,200	
98. High School	1,200	1,200	1,200	1,200	
99. High School	1,200	1,200	1,200	1,200	
100. High School	1,200	1,200	1,200	1,200	

Educational Programming

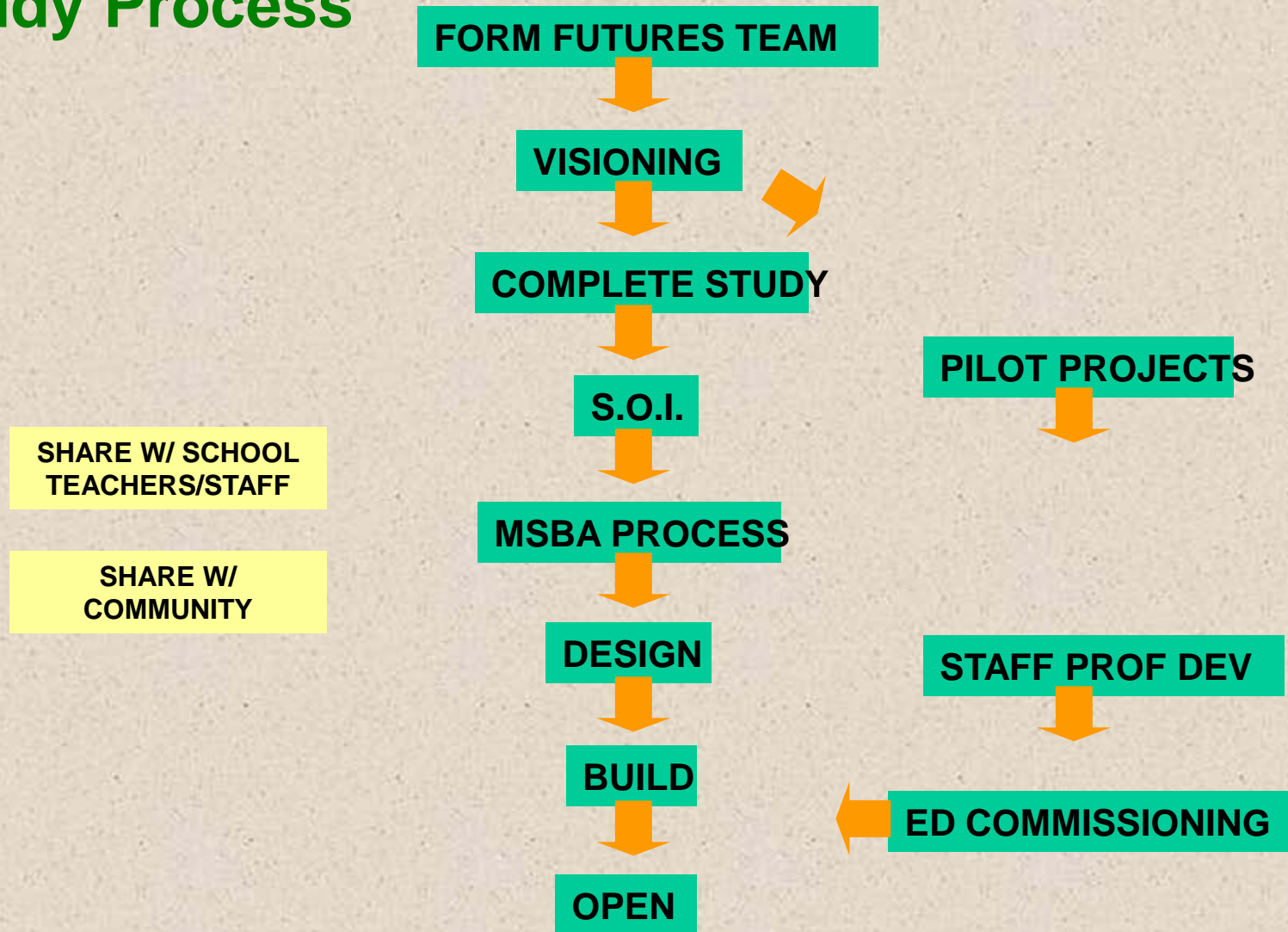


DUXBURY PUBLIC SCHOOLS School Building Committee

2nd December 2009

Frank Locker, PhD

EDUCATIONAL PLANNING Study Process



EDUCATIONAL PLANNING

Futures Team

50+- people representing

- DHS
- DMS
- Central Office
- Community/Business
- Parents

3 Full Day Workshops



Duxbury Middle & High Schools Feasibility Study

EDUCATIONAL PLANNING

Futures Team

Activities/Challenges/Issues Considered Include:

DAY I: SCHOOL SNAPSHOT

- 21st Century Schools
- What is relevant?
- What Works at DHS, DMS? What Can be Improved?
- Defining Success:
- Review of Current Programs + Services
- School Transformation + Development Map
- Homework



EDUCATIONAL PLANNING

Futures Team

Activities/Challenges/Issues Considered Include:

DAY 2: EFFECTIVE TEACHING/EMPOWERED LEARNING

- High School + Middle School: Educational Opportunities
- Project Based Learning
- Scheduling
- Future Vision: Teaching + Learning in 2030
- School Organizational Structure



EDUCATIONAL PLANNING Futures Team

Activities/Challenges/Issues Considered Include:

DAY 3: DEFINING SCHOOL

- Key Words
- Places for Learning
- High School + Middle School Connections + Separations
- Defining Places + Spaces
 - Library/Media Center
 - Supporting Applied/Project Learning
 - Dining/Food Service
 - Student Life
- Guiding Principles
- Overall School(s) Organizational Diagram
- Next Steps



Educational Programming

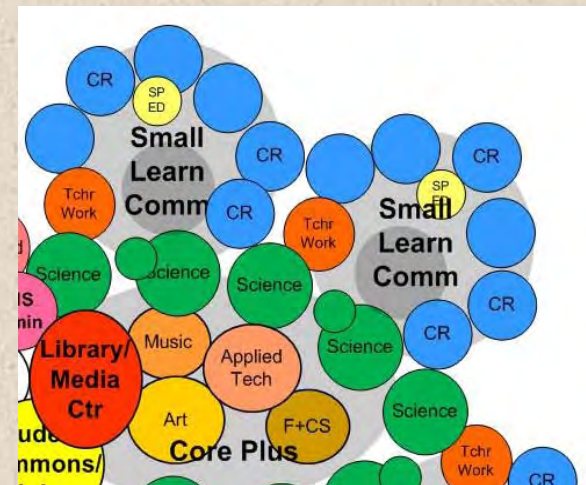
Core Plus

The Futures Team developed a concept they called “core plus.” In traditional school planning, core subjects, and the spaces they occupy, are considered separate from other subjects and their spaces. Thus English, Math, social studies/history, science, and sometimes world languages are thought of as being related, and therefore near each other, but learning in the arts, family and consumer, physical education, health, and applied learning are thought of as not related, and therefore could be located anywhere.

“Core plus” thinking seeks to integrate these traditionally unrelated learning areas with English, math, social/studies, science, and world languages as a major step in creating a school building that supports integrated learning. A straw vote was taken after the Team developed the chart. In response to the question “Knowing what you know now, would you support a co-located high school-middle school?”

the results were:

- Support: 34 votes
- Not support: 12 votes



HS Existing Space Inventory

- Typical classroom 740sf (MSBA 850-950sf)
- Special Education 4,980sf -less than MSBA
- Art & Music exceed MSBA standard size
- Auditorium 9,740sf - at MSBA target
- Vocation & Technology 12,800sf - at MSBA target
- Gymnasias & Phys. Ed. - larger than MSBA
- Cafeteria – aggregate area on target, but function compromised by layout

[illegible]