Brookline High School Further Study

Brookline High School - Community Presentation & Discussion

SMMA | SYMMES MAINI & McKEE ASSOCIATES

March 2, 2015

Steering Committee

Public Schools of Brookline

William Lupini, Superintendent

Peter Rowe, Deputy Superintendent for Administration and Finance

Jennifer C. Fischer-Mueller, Deputy Superintendent for Teaching and Learning

Deborah Holman, Brookline High School Headmaster

Hal Mason, Brookline High School Assistant Headmaster

Ray Masak, Project Manager, Brookline Building Department

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Philip Poinelli, Educational Planner

Alex Pitkin, Design Architect

Visioning – David Stephen, NewVistaDesign

AGENDA:

- Define the Problem
- Opportunities for 21st Century Teaching and Learning
- Conceptual Options

Define the Problem

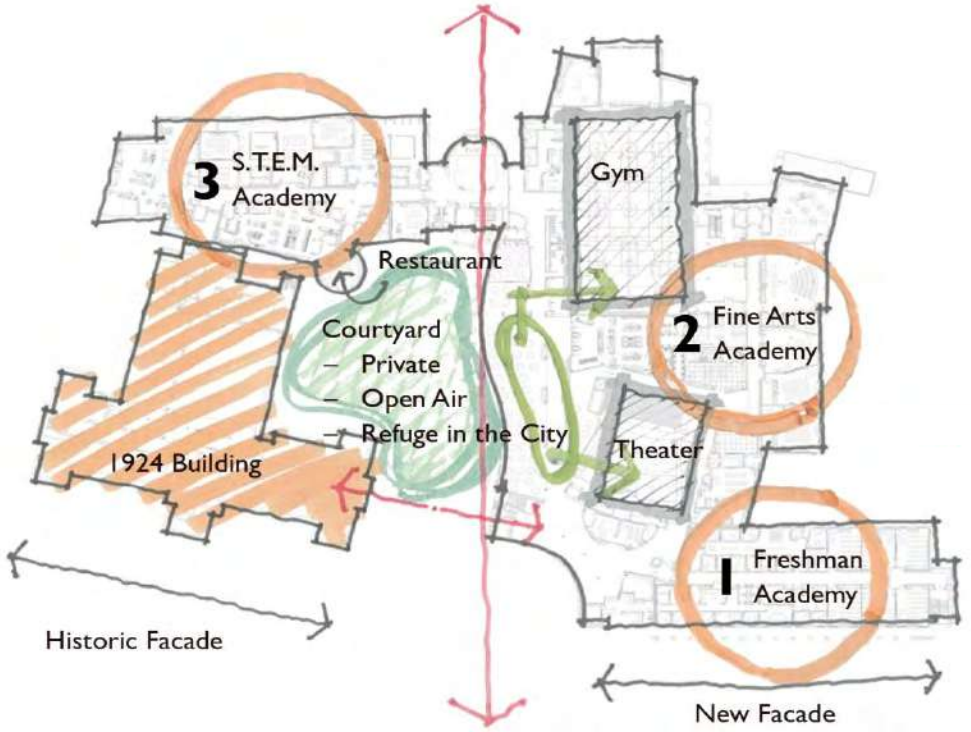
- Population Growth (students are here now at lower grades)
- Need for Additional Classrooms, Labs, Support Spaces
- Provide Appropriate Size Teaching Spaces
- Provide Flexibility to Accommodate Current and Future Educational Delivery Methodologies
- Develop 21st Century Teaching and Learning Environments

Opportunities for 21St Century Teaching and Learning

- 4 C's Skills – Communication, Collaboration, Creativity, Critical Thinking and Problem Solving
- Methodologies to Deliver the 4 C's
  - Active Learners
  - Project Based Learning (PBL) – interdisciplinary, hands on,
  - Integration of Technology - Blended Learning
  - Flipped Classroom
  - Differentiated and Personalized Learning
  - The Third Teacher

Conceptual Options - Educational

- Status Quo
- Academic Houses
- Freshman Academy
- Thematic Houses
- Science, Technology, Engineering and Math (STEM) or STE**A**M, Integration of the **A**rts in STEM

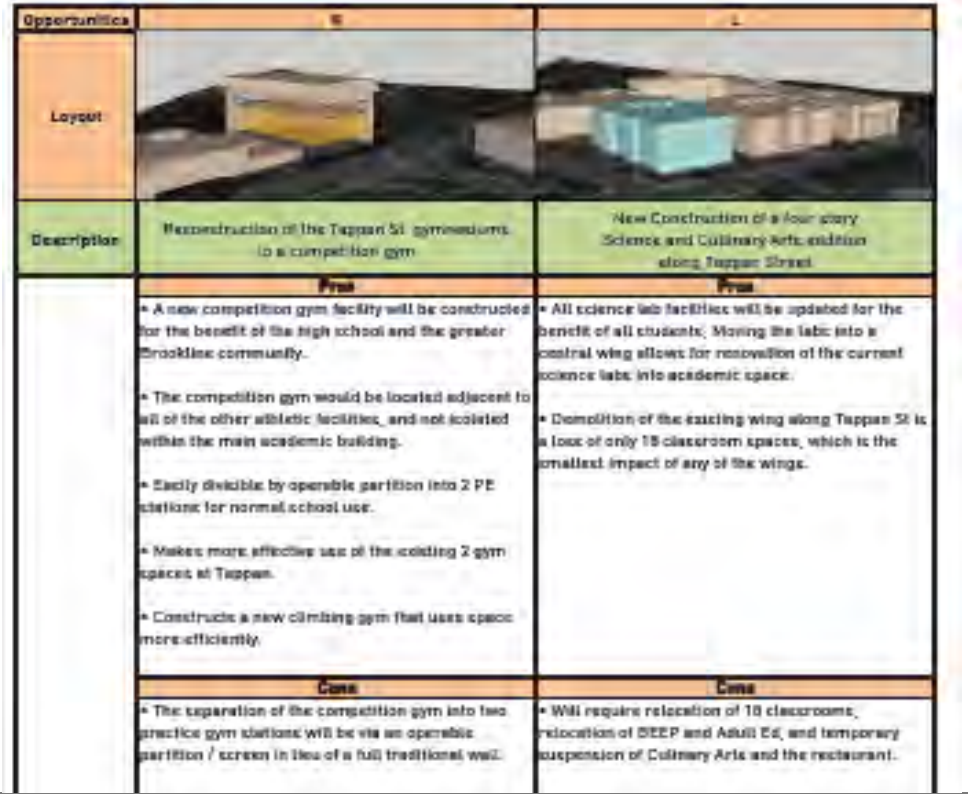


Conceptual Options- Physical

- Expansion within Existing Building
- Expansion of Main Campus
  - Tappan Gym, UAB
  - Old Lincoln School
  - Boylston Street Playground
  - 111 Cypress Street
- New School
  - New BHS
  - New Second School
  - Second Campus of BHS

History of Study

- Previous Studies: 2012 Masterplan (MGT)
  2013 BHS Concept Study (HMFH)
  2013 B-Space Report



Opportunities	9	1
Layout		
Description	Reconstruction of the Tappan St. gymnasiums to a competition gym	New Construction of a four story Science and Culinary Arts addition along Tappan Street
	Pros	**Pros**
	• A new competition gym facility will be constructed for the benefit of the high school and the greater Brookline community. • The competition gym would be located adjacent to all of the other athletic facilities, and not isolated within the main academic building. • Easily divisible by operable partition into 2 PE stations for normal school use. • Makes more effective use of the existing 2 gym spaces at Tappan. • Constructs a new climbing gym that uses space more efficiently.	• All science lab facilities will be updated for the benefit of all students. Moving the labs into a central wing allows for renovation of the current science labs into academic space. • Demolition of the existing wing along Tappan St is a loss of only 10 classroom spaces, which is the smallest impact of any of the wings.
	Cons	**Cons**
	• The separation of the competition gym into two practice gym stations will be via an operable partition / screen in lieu of a full traditional wall.	• Will require relocation of 10 classrooms, relocation of BEEP and Adult Ed, and temporary suspension of Culinary Arts and the restaurant.

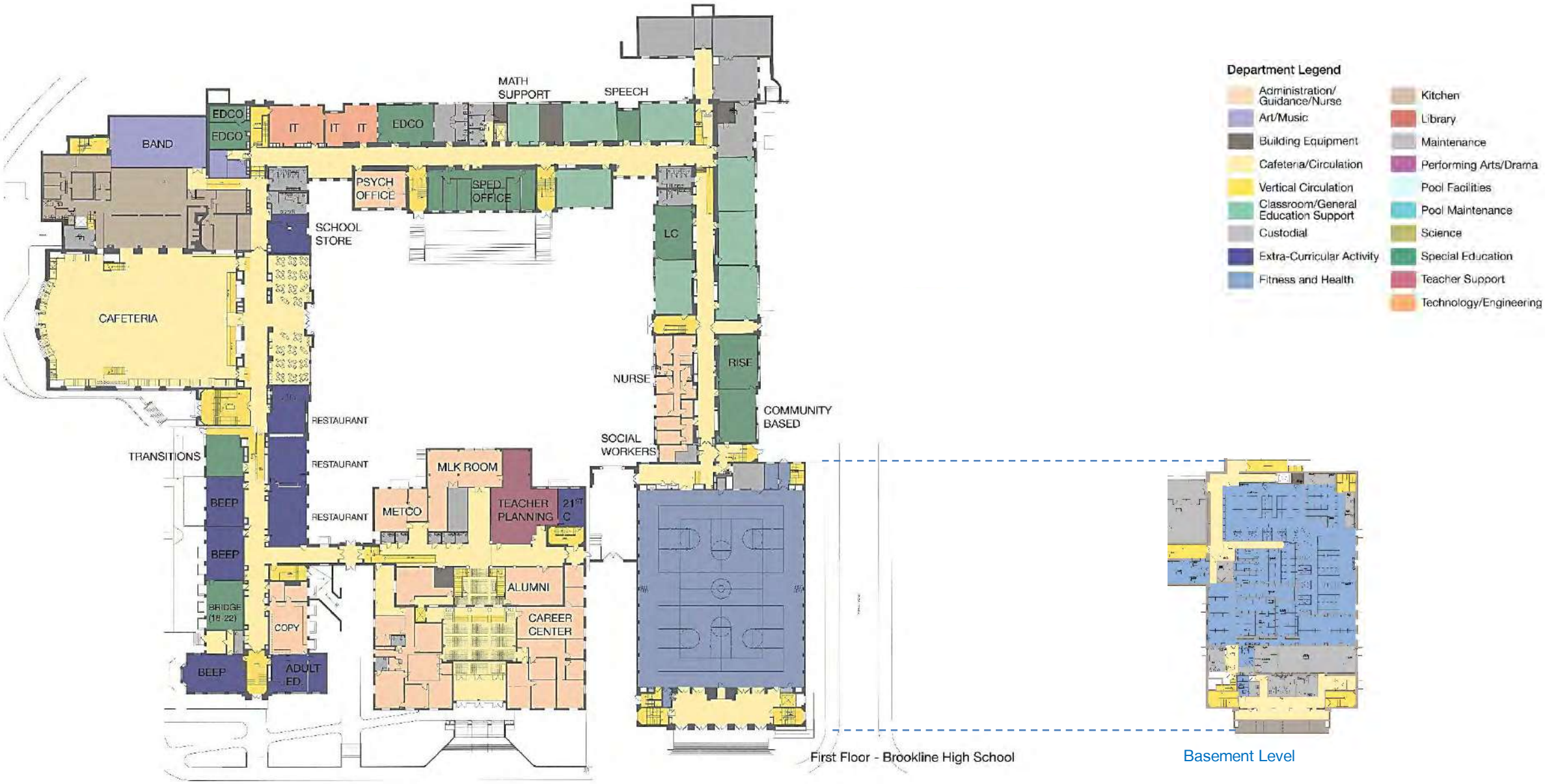
- 15 Options Reviewed
- Remains a valid source of ideas

Anticipated Growth

- Population (2013 - 2014): 1,802
- Current Population (2014 - 2015): 1,877 (+77)
- Short Term Population (2019 - 2020): 2,288 (+486)
- Projected Population (2024 - 2025): 2,600 (±798)
  - say 800 or 44% Increase!

Educational Space Requirements: Core Curriculum

		Current Classrooms	Classrooms Required for 1800 Students	Classrooms Required for 2100 Students	Classrooms Required for 2300 Students	Classrooms Required for 2600 Students	Net SF Current	Net SF 2600	Delta (Net SF)
Core Academic									
EN	English	14	14	16	18	19	9,805	17,100	
WL	World Languages	15	15	17	18	20	10,865	18,000	
WL	Language Lab	1	1	1	1	1	1,275	1,275	
SO	Social Studies	11	11	12	14	15	7,600	13,500	
MA	Math	13	15	17	19	21	9,125	18,900	
HF	Wellness	0	1	2	2	2	0	1,800	
	Classroom TOTAL	54	57	65	72	78	38,670	70,575	**31,905**
			+3 CR's	**+11 CR's**	**+18 CR's**	**+24 CR's**			
Science									
SC	Physics		5	5	6	7			
SC	Chemistry		5	6	6	7			
SC	Biology		4	5	6	7			
SC	Applied Science		2	2	2	2			
	Science TOTAL	22	16	18	20	23	18,775	33,120	**14,345**
	STEM?								



Existing First Floor Plan: Current Program

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LEGEND

- Appropriately Used within 5%
- 5 to 24% Under MSBA
- 25% or More < MSBA
- 10% or More > MSBA
- Not Part of MSBA Project

*Based on 2015 Population

Existing First Floor Plan: MSBA Deficiency Plan

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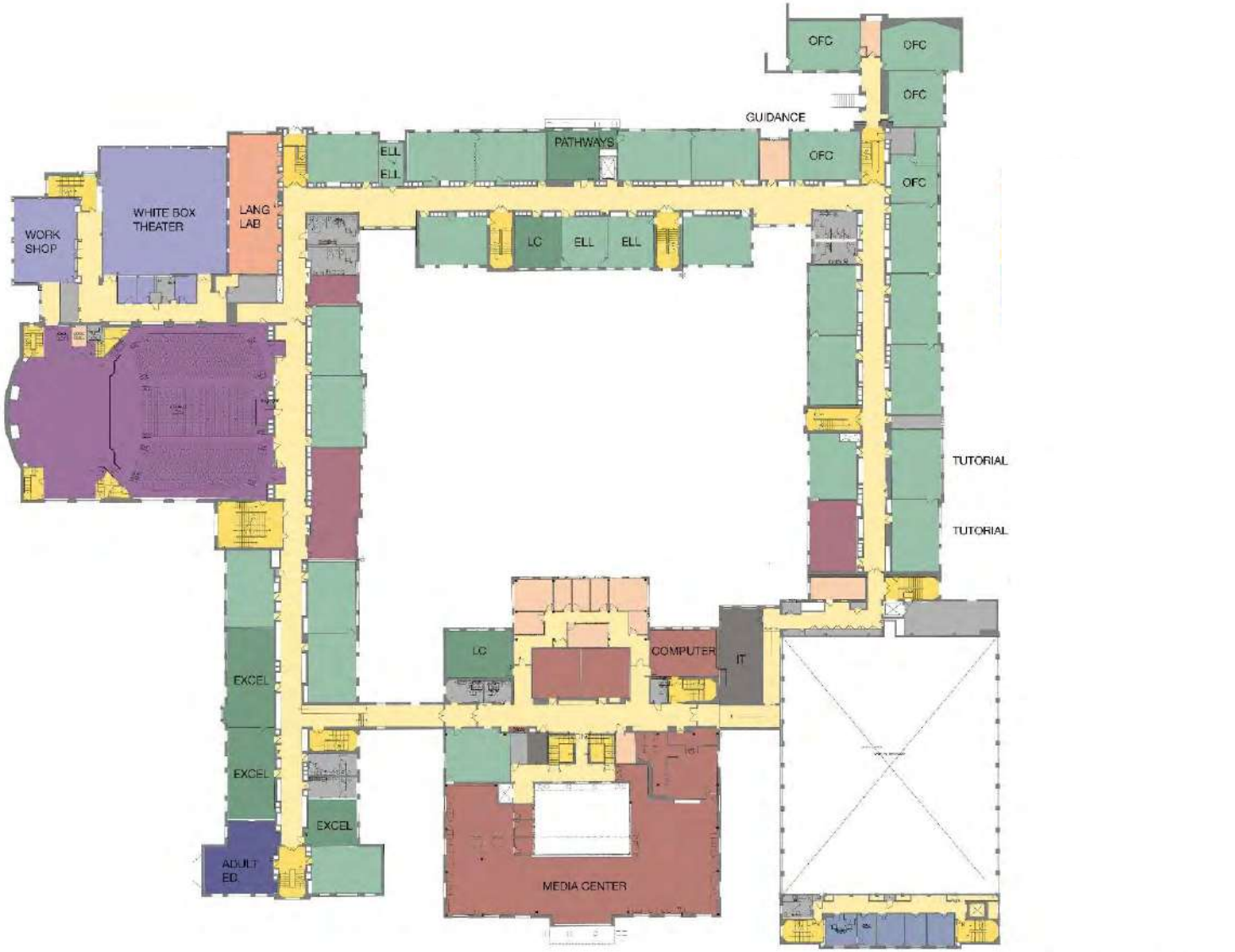

Second Floor - Brookline High School

Department Legend

- Administration/ Guidance/Nurse
- Art/Music
- Building Equipment
- Cafeteria/Circulation
- Vertical Circulation
- Classroom/General Education Support
- Custodial
- Extra-Curricular Activity
- Fitness and Health
- Kitchen
- Library
- Maintenance
- Performing Arts/Drama
- Pool Facilities
- Pool Maintenance
- Science
- Special Education
- Teacher Support
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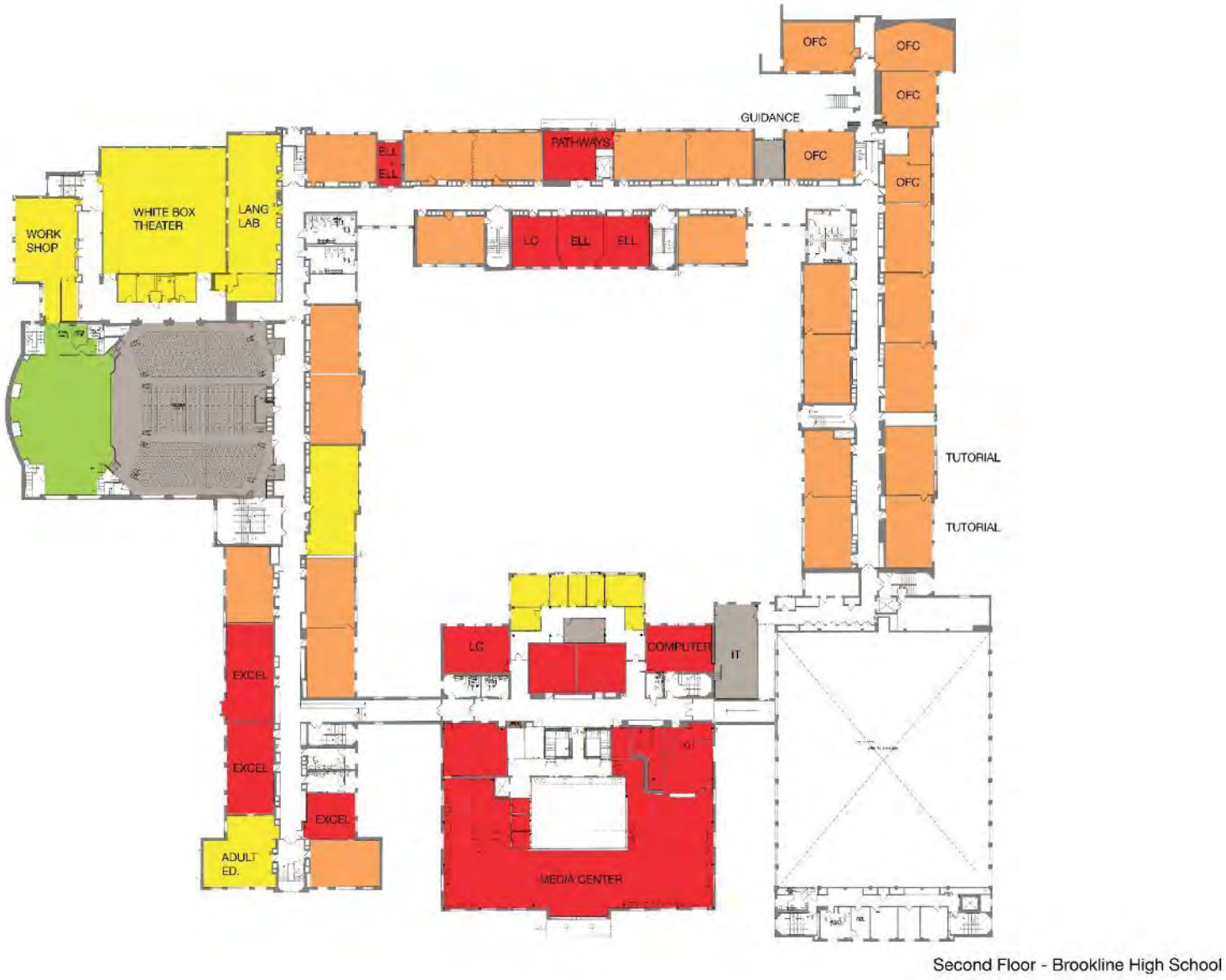

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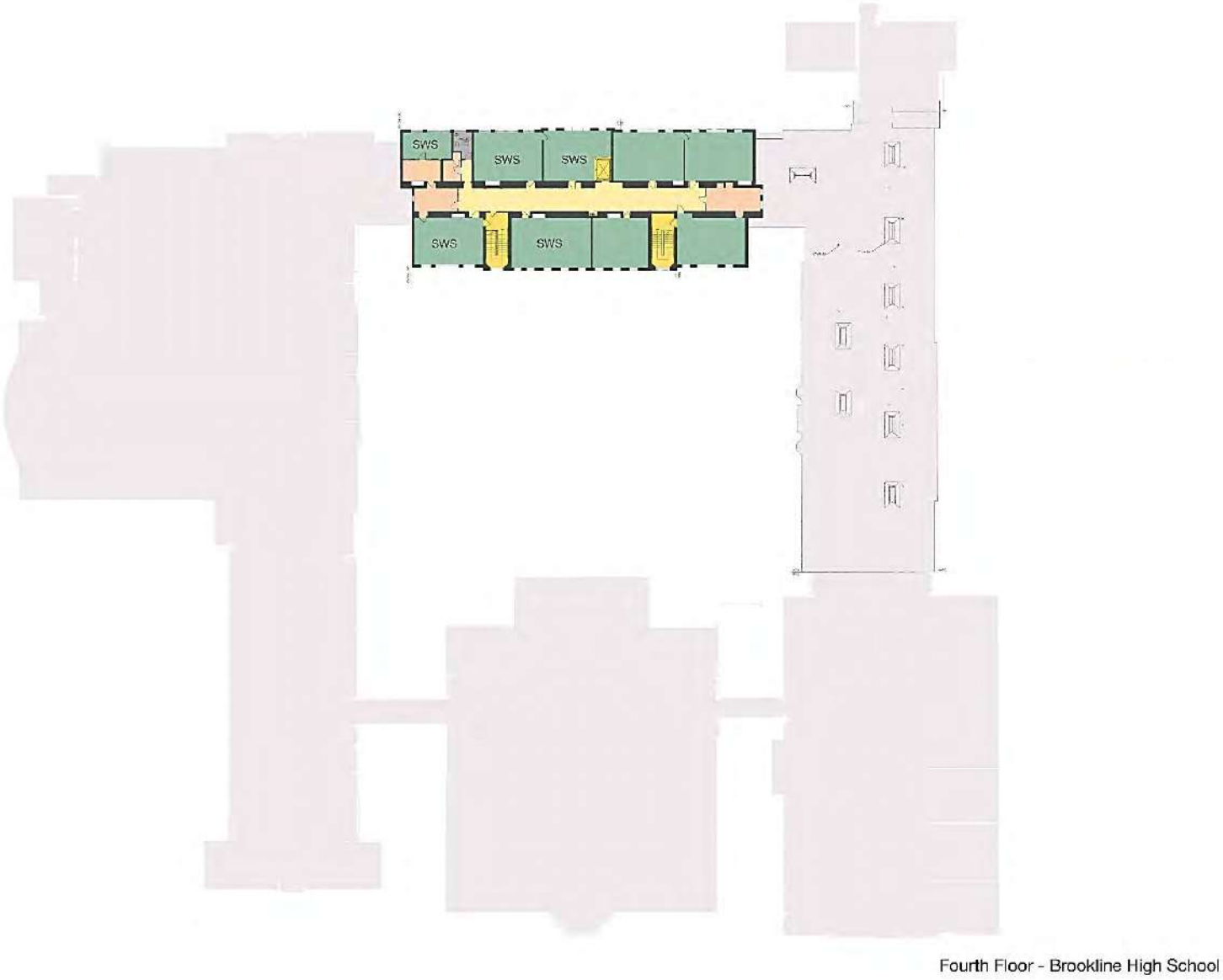

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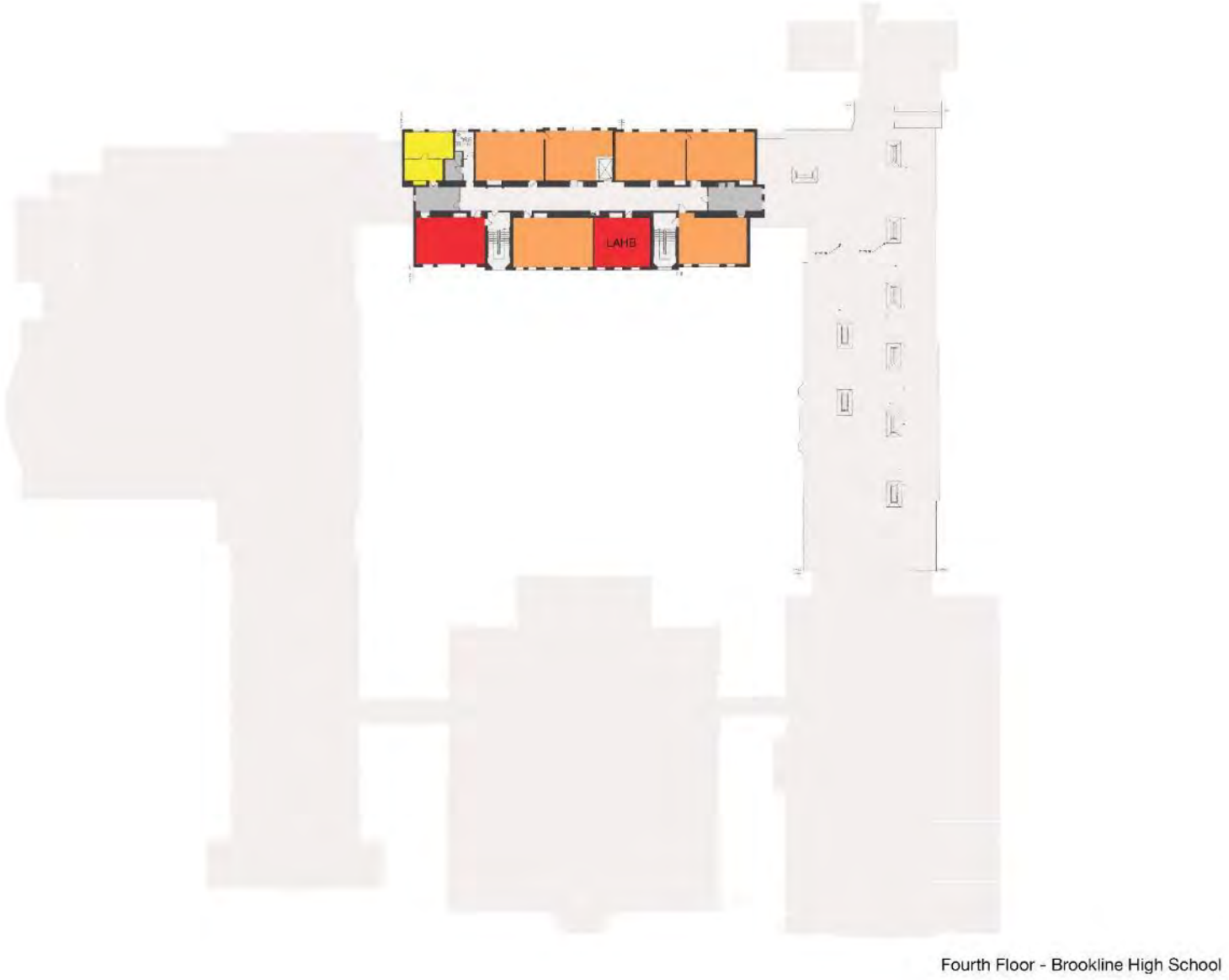

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Growth Impact on Space – 2,600 Students Total

- 24 Additional General Education Classrooms needed (Core Curriculum)
- 23 Appropriately Sized Science Lecture Labs needed
- Additional Special Education Rooms and Support Space
- Larger Cafeteria (increases 70%)
- Larger Library/Media Center (increases 100%)
- Few Increases to Number of Specialty Rooms, But Increase sizes
- Additional Support Areas:
  - Offices: Administration, Guidance, Deans

Visioning Process

- Visioning Sessions 1 & 2 (June and September 2014)
  - The intent of the Visioning process was to engage a representation of the Brookline community to understand and contribute to the High School further study process
  - Inclusion of: District administrators, BHS administrators, BHS teachers, BHS students; BHS parents, school committee, selectmen, planning board, building commission, members of the business community

Visioning & Visioning Reflected 6/24/2014 & 9/23/2014

- Key Spaces and Adjacencies that Align with Changing Needs
  - Flexible Media Commons vs. “traditional” Library, All Day (dining) Commons vs. Cafeteria
- Self Directed Learning
  - School Within a School (SWS) – early adopter
- Conversational Classrooms
  - Flexible Furniture, Right Sized Classrooms
- Hands-on and Experiential Learning, Learn by Doing
  - Maker Space(s); CTE; expand Project Based Learning
- Integration Between Disciplines/Departments
  - STEM, STE**A**M
- Flexible Technology
  - 1:1 Campus Environment

Visioning & Visioning Reflected 6/24/2014 & 9/23/2014

- Collaborative Spaces for Students and Faculty (Jointly)
  - Small Group Instruction, Maker Spaces, Informal Learning Spaces
- Use of the Entire Building / Campus for Teaching & Learning
- Green / Sustainability
  - School as a Teaching Tool
- Big School, Small Feel
  - Small Learning Communities

Other Phrases:

Original Research
Accomplishment
Adult Experiences
Going Outside One's Comfort Zone
Willingness to Fail
On-Line Learning
Autonomy
Creativity
Imagination
Inventive Thinking
Emotional Intelligence
Effective Communication
No Corridors-Just Learning Environments
Play and Joy

Existing Library

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Learning Commons

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Existing Typical Classroom

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21st Century Classrooms

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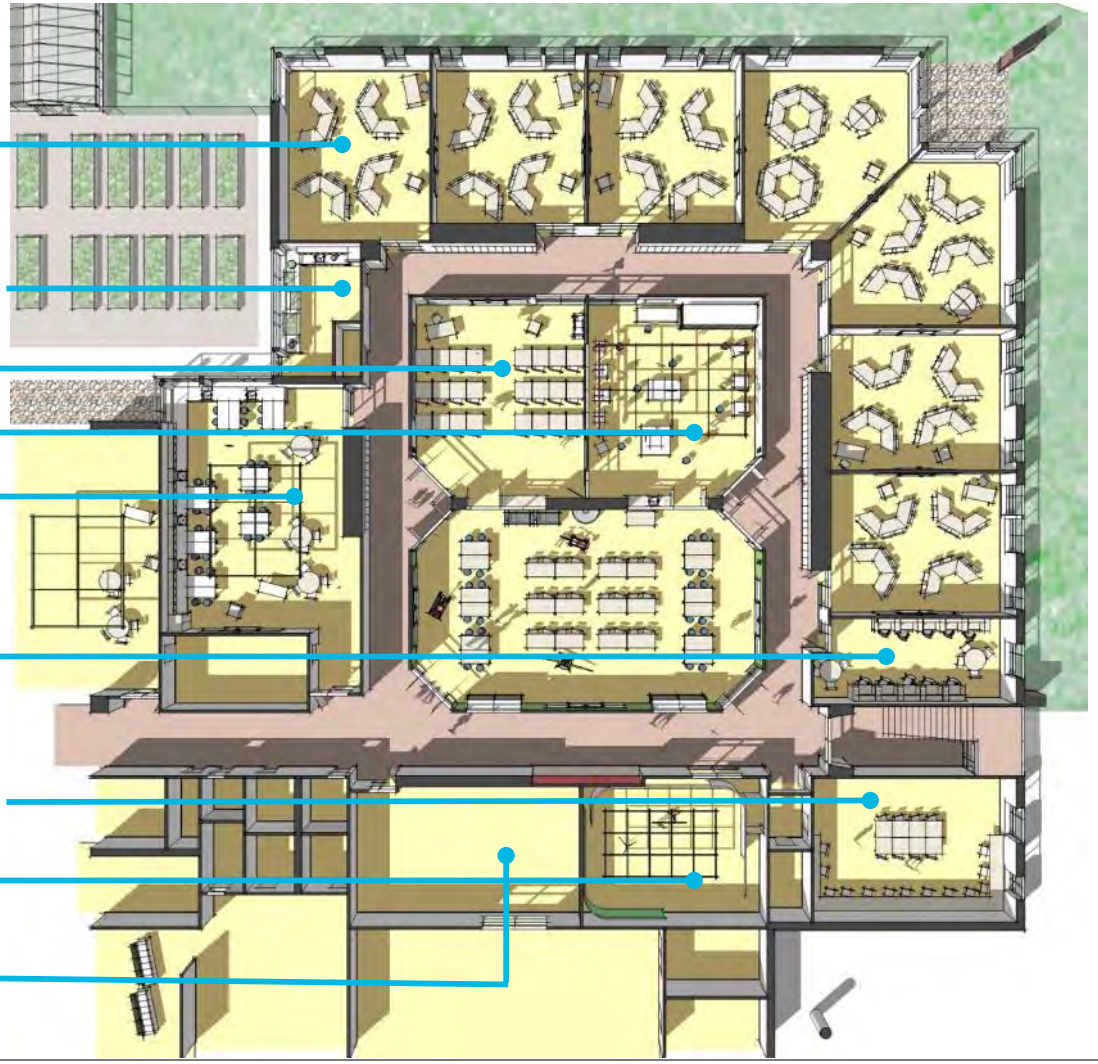
Spaces for 21st Century Learning

Existing Corridors

Spaces for 21st Century Learning

Corridors of Power
Self Directed Learning

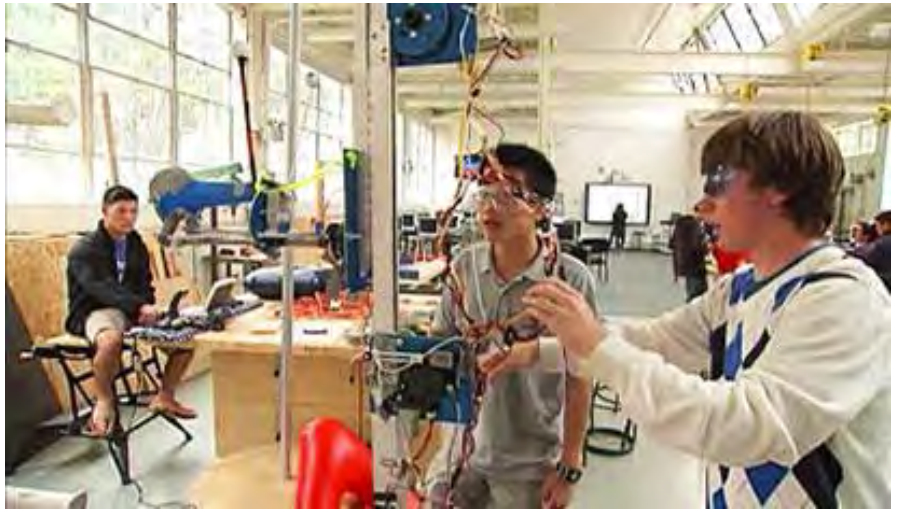
Critical Adjacencies



Visioning Reflected – Fab Lab

- Integration Between Disciplines / Departments
  - STEM, STEAM
- Collaborative Spaces for Students and Faculty (Jointly)
  - Maker Spaces, Informal Learning Spaces

Fab Lab



Equipment Examples

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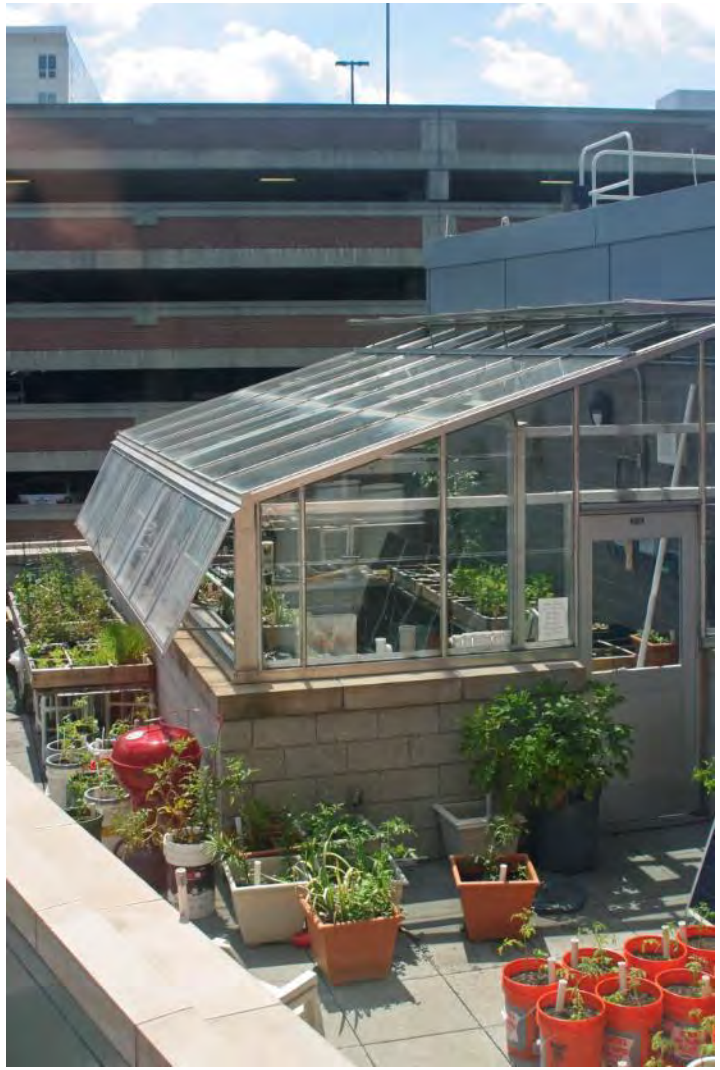
Visioning Reflected

Learn by Doing: Project-Based Learning and Display

Visioning Reflected

Green/Sustainability: School as a Teaching Tool



Student Restaurant and Bakery Example

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Conceptual Options: Physical

Expansion within Existing Building

Expansion of Main Campus

New School on One Campus or Two Campuses

Existing Campus Aerial

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Existing High School Campus Site

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Existing Building Options

- Expand Inside Footprint: 1949 Gymnasium
- Expand Cafeteria/Restaurant Core Spaces
- Rethink Media Center as Learning Commons
- Expand Fourth Floor Footprint/Efficiency
- Rethink Sciences (right size rooms, reuse spaces as classrooms)

  Move/distribute as many as 6 to 8 Science Labs

  STEM/STEAM
- Expand Campus at Courtyard

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Existing First Floor Plan: Current Program

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- Add Administration, Guidance, Dean's Space?
- Move Nurse Near Cafeteria?
- Potential for 4 Additional Classrooms and 1 Teacher Planning Space

Option 1 First Floor Plan: Expand Inside Gymnasium, Add to Cafeteria

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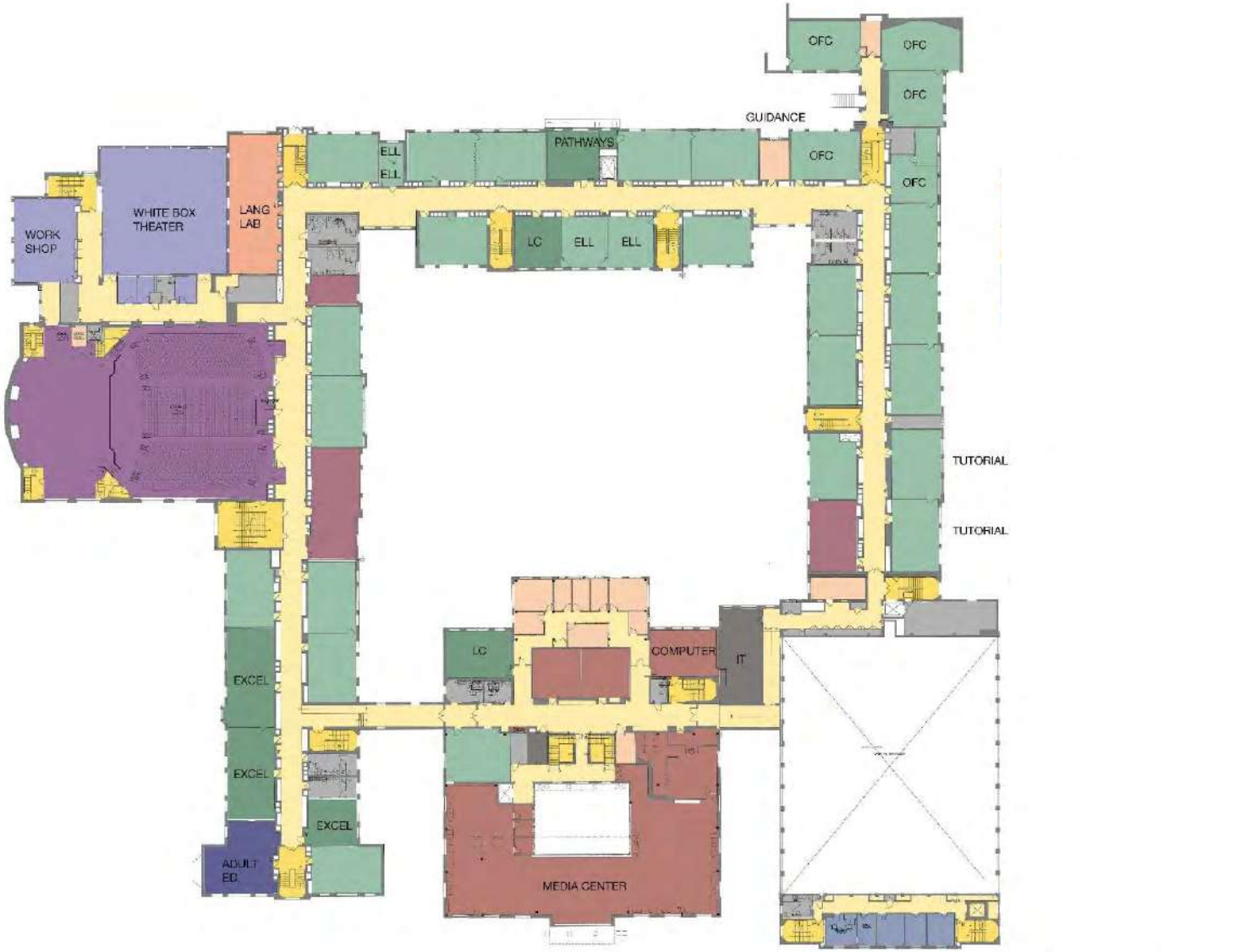

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Existing Second Floor Plan: Current Program

Public Schools of Brookline

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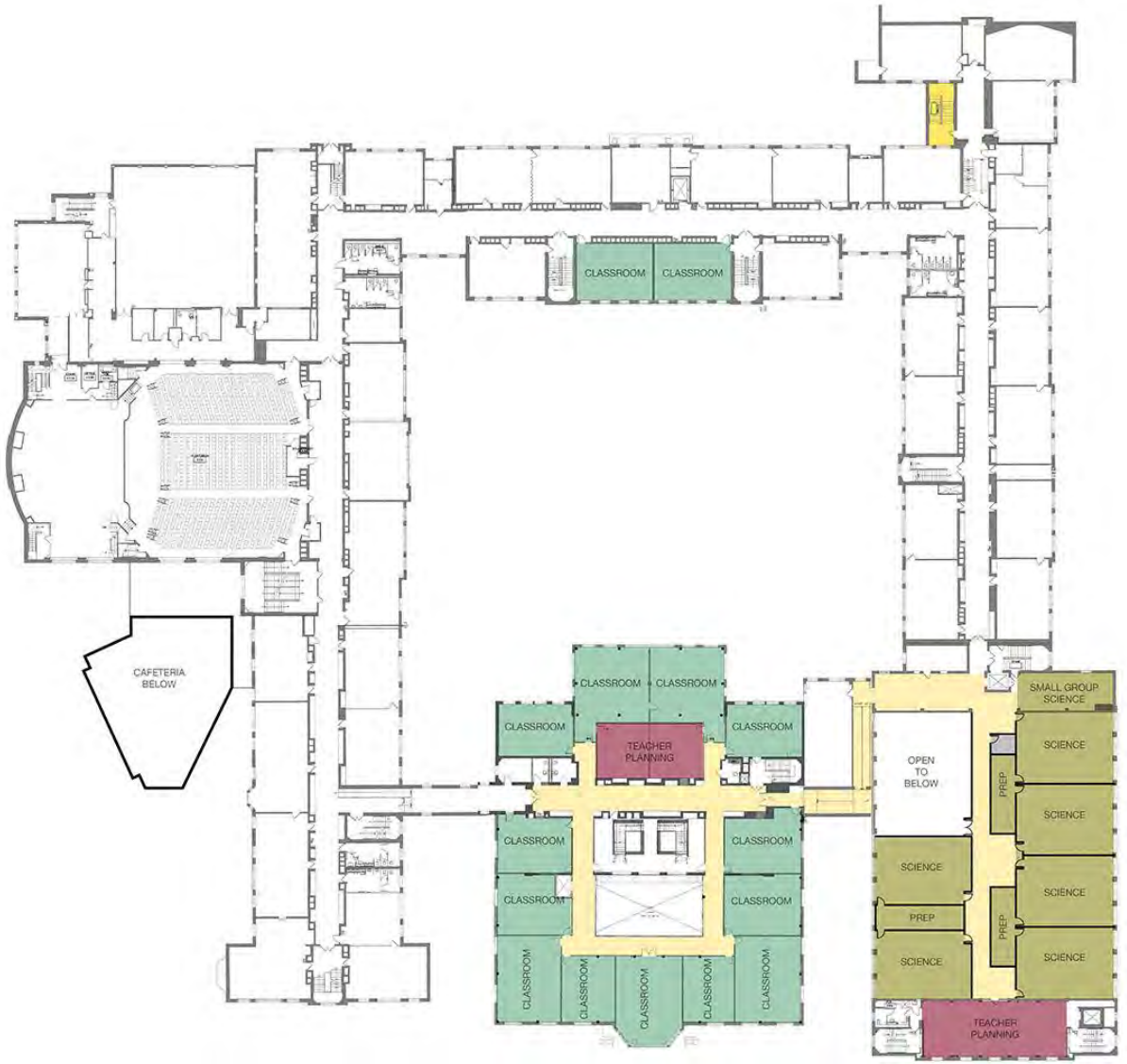

- Use Library Space More Efficiently – Match 3rd Floor Layout
- Total 13 “Full Size” Science Labs
- 13 Classrooms±
- 1 Teacher Planning Center

Option 1 Second Floor Plan: Expand Inside Gymnasium with Added Floor

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Third Floor - Brookline High School

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Existing Third Floor Plan: Current Program

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- Relocate Library to Create Media Center Space Over Gymnasium
- Renovate 11 Undersized Science Labs to 13 Classrooms (TBD)

Option 1 Third Floor Plan: Create Learning Commons on Third Floor

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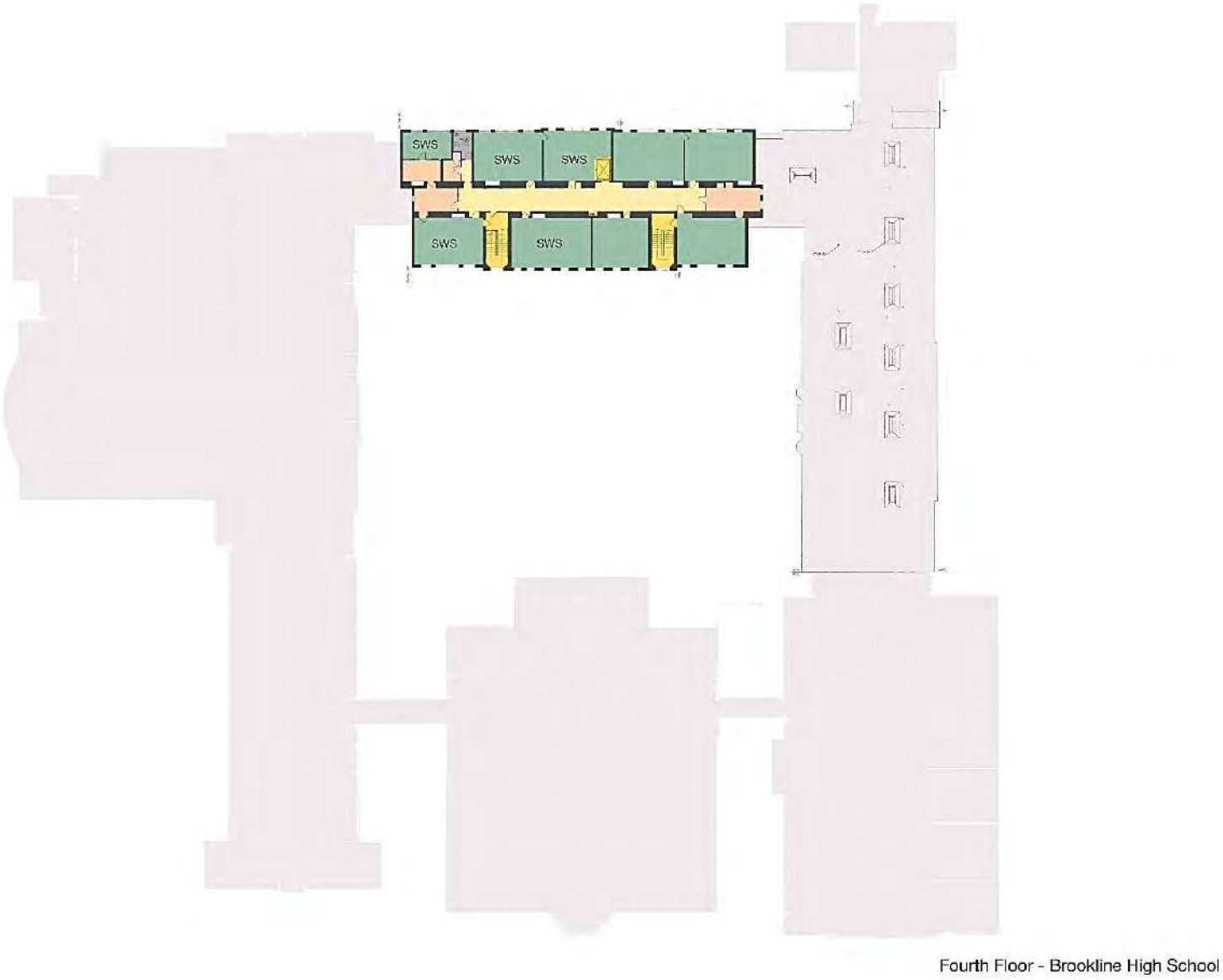

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Existing Fourth Floor Plan: Current Program

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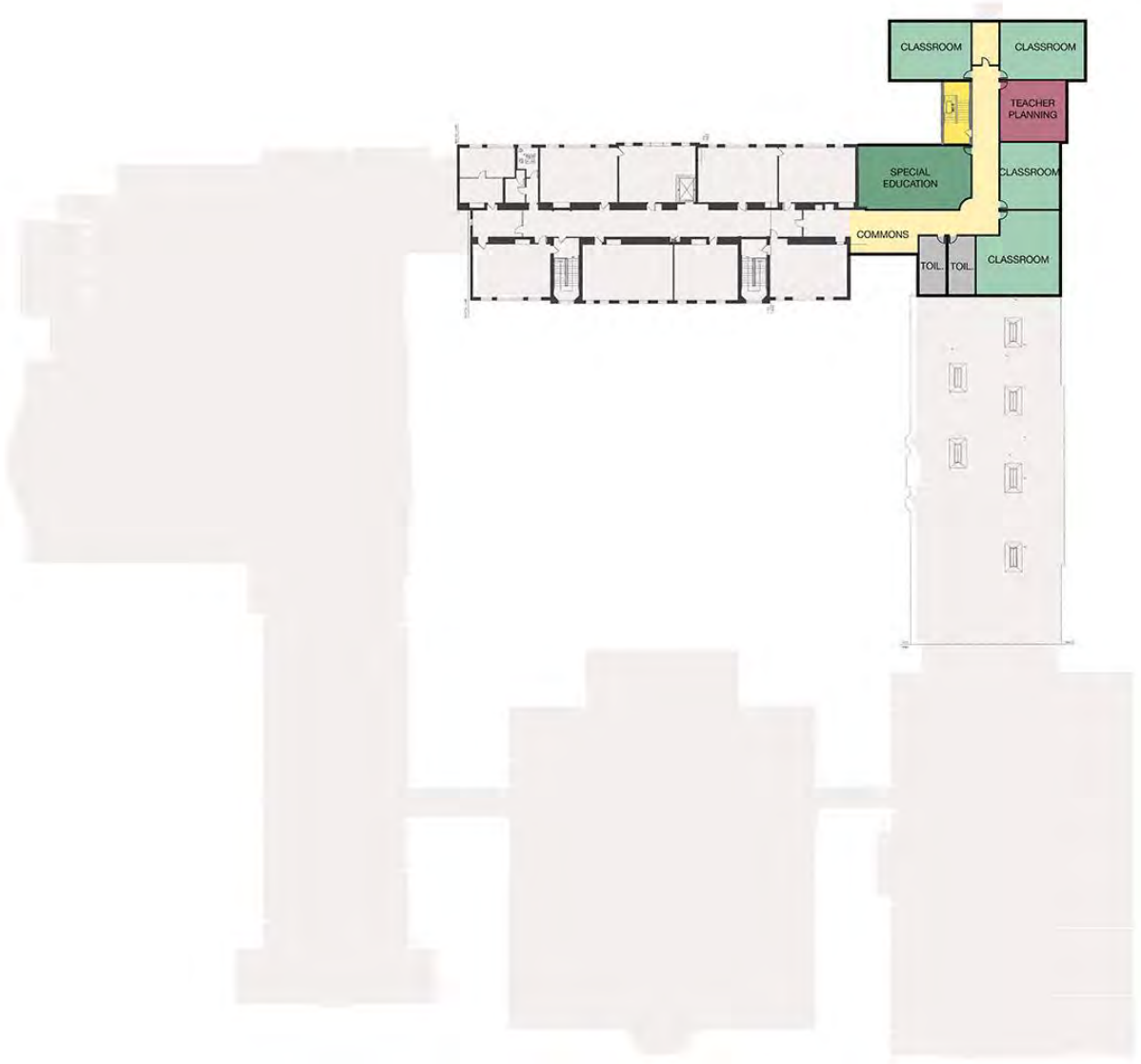

- Add 4 Classrooms, 1 SPED CR Teacher Planning, Toilets

Option 1 Fourth Floor Plan: Expand Fourth Floor Footprint to NW

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Rethinking “Egg Crate” Corridors

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Rethinking “Egg Crate” Corridors

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Existing Building: Option 1 Space Opportunities

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Potential Building: Option 1 Space Opportunities

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Existing Courtyard

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Cafeteria as Central Commons Courtyard Examples

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Brookline High School

One Campus Options

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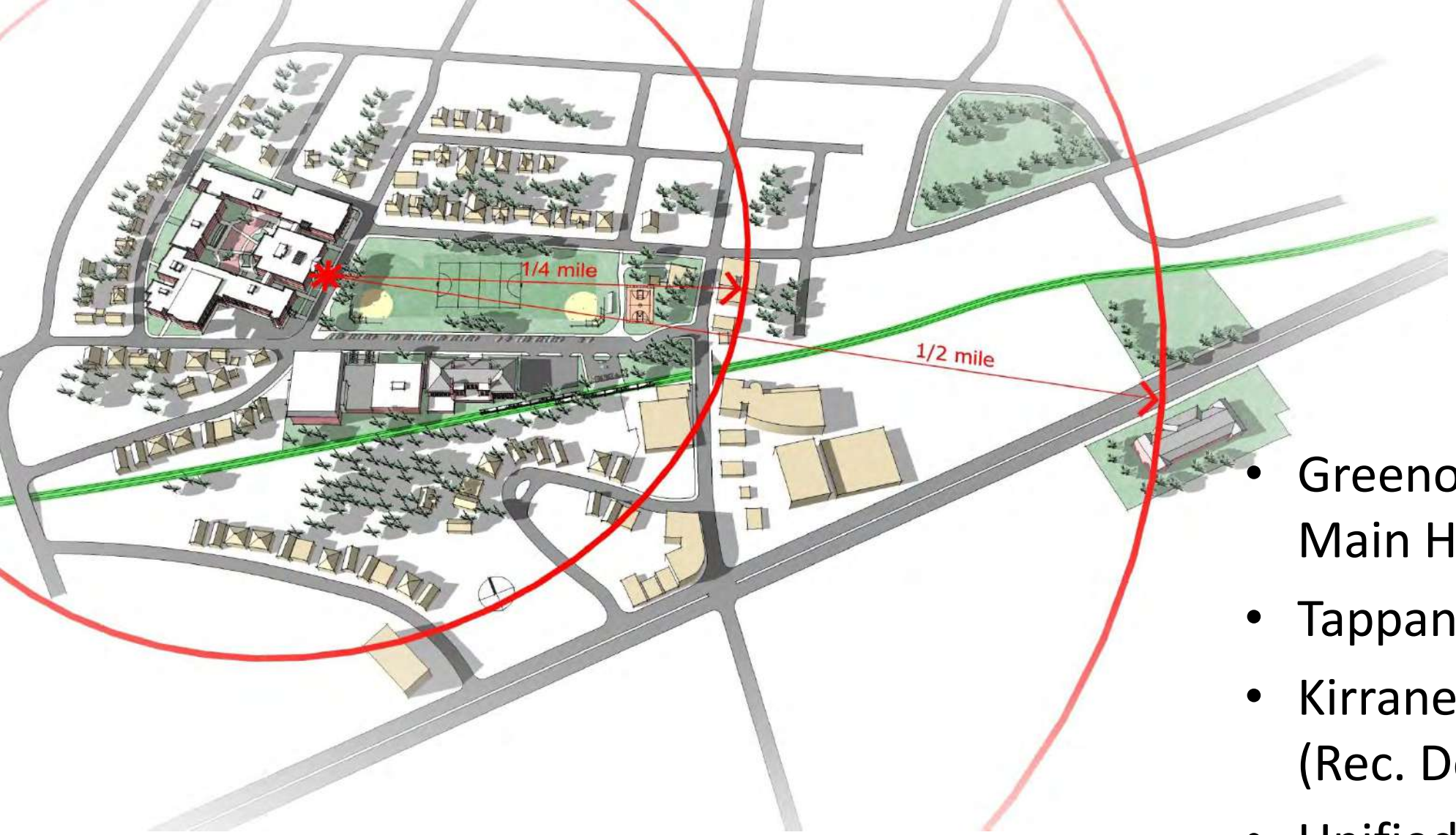
February 3, 2014



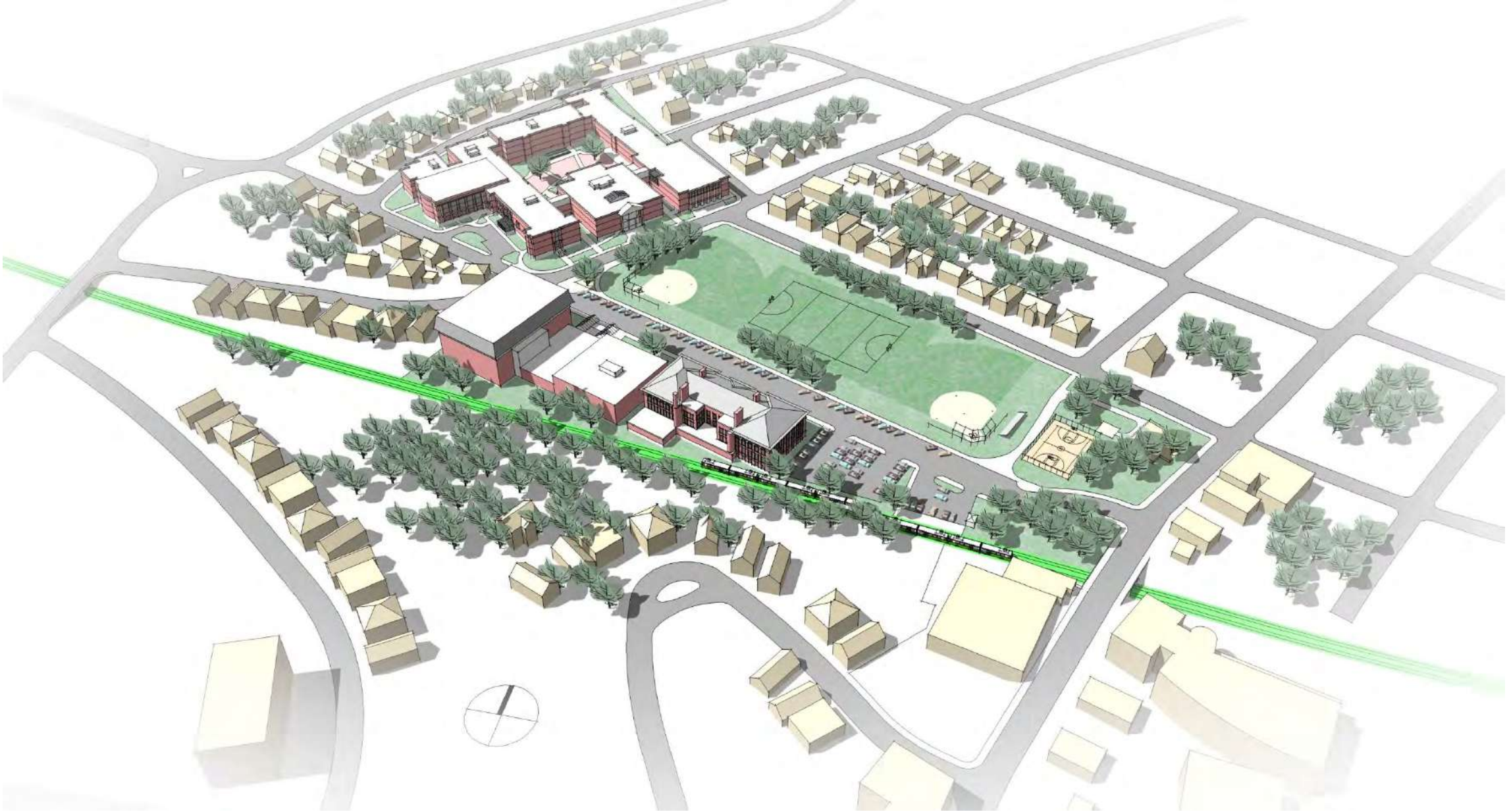
- Greenough Street Main HS Building
- Tappan Gym Building
- Kirrane Aquatics Center (Rec. Department)
- Unified Arts Building

Expanding the Campus Options

- Renovate Tappan Gymnasium for Competition and P.E. facility
- Rethink Sciences STEM/STEAM

  Move as many as 6 to 8 Science Labs to Unified Arts Building

  Build on parking lot
- Expand Campus Boundaries: 111 Cypress Street, Old Lincoln School, Lincoln School playground, Other
- Build on open park space (Not feasible with Article 97 process)
- Remove swimming pool to expand school



Existing High School Campus Site

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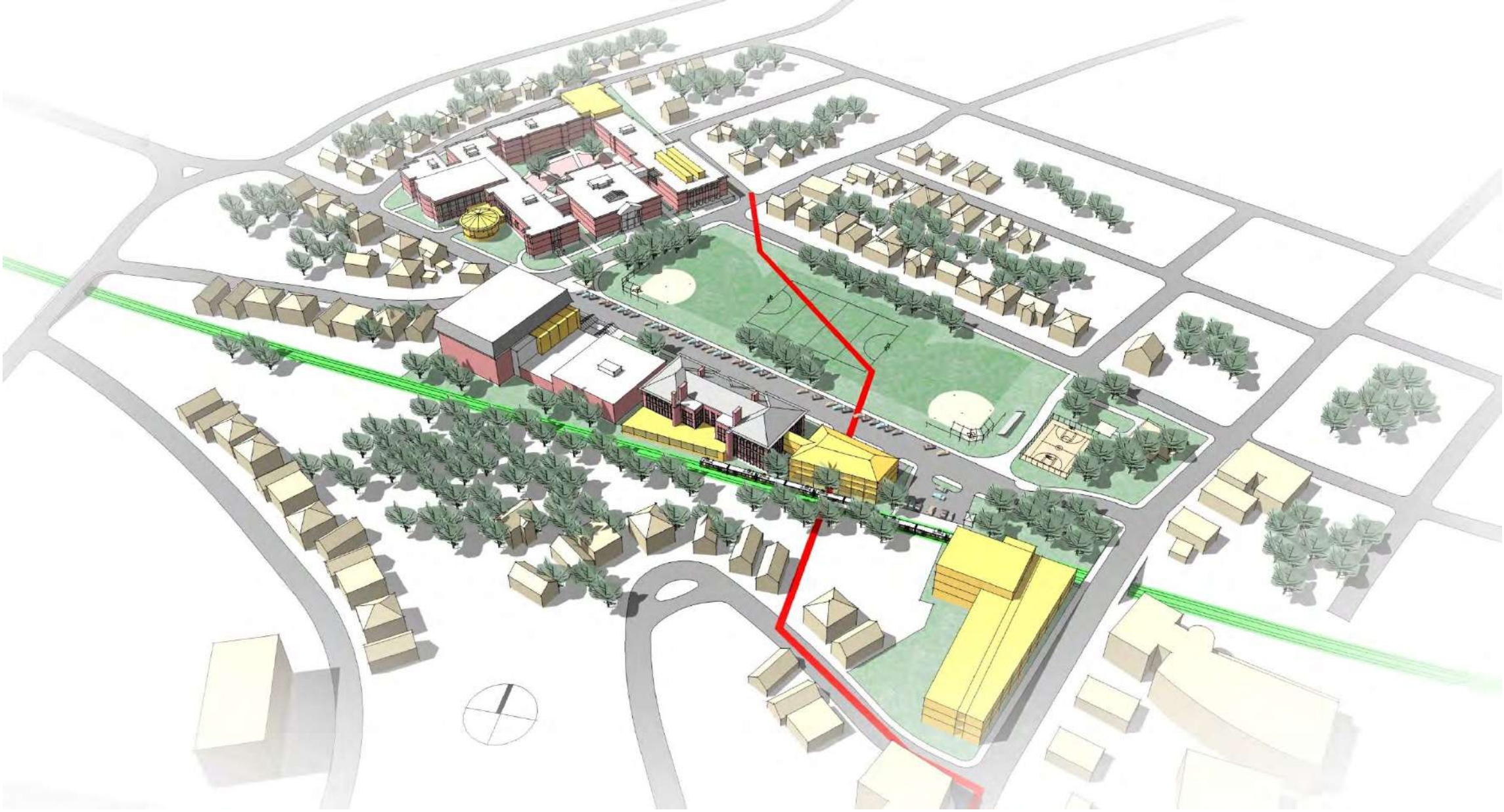

Potential Campus Build-Out

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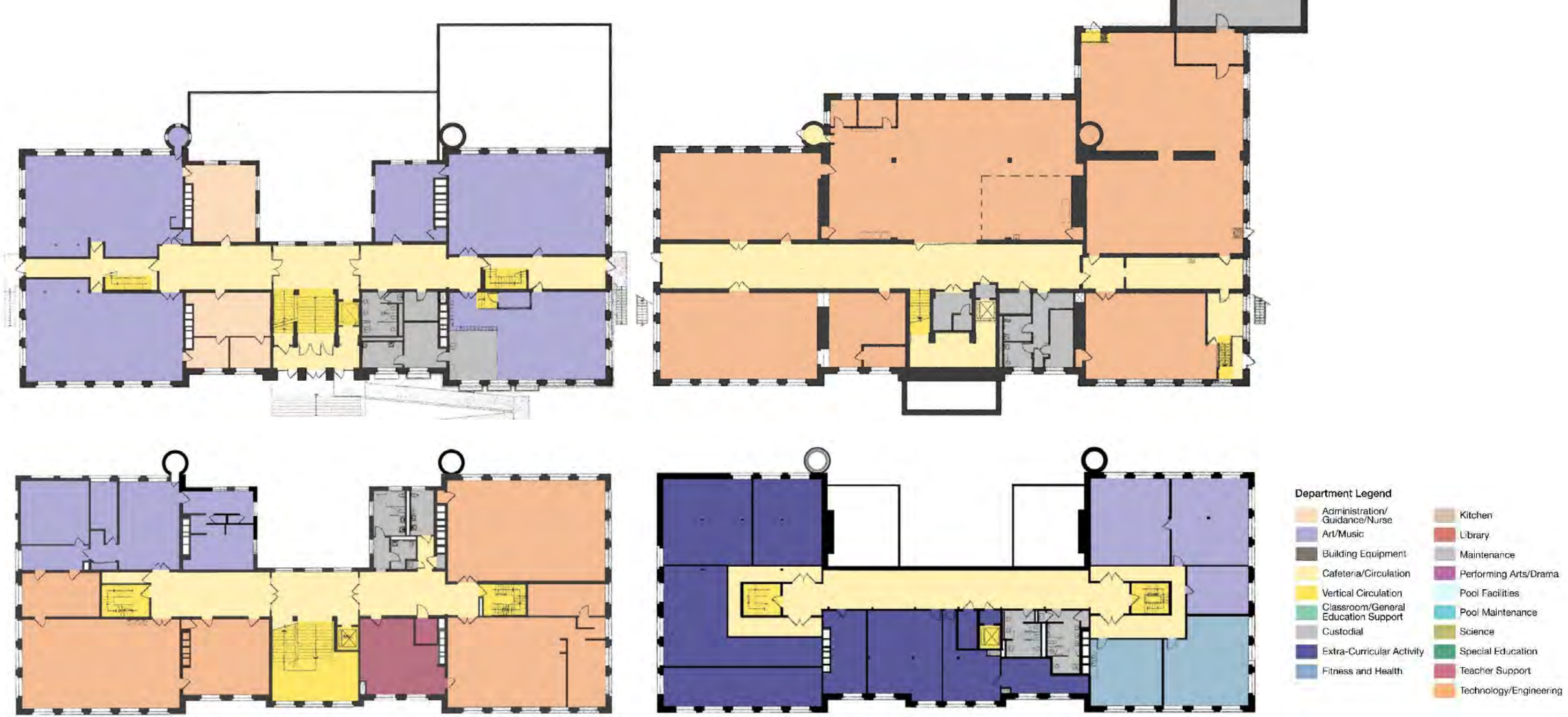
111 Cypress Street: Medical Office Building

Site



Unified Arts Building: Existing Floor Plans

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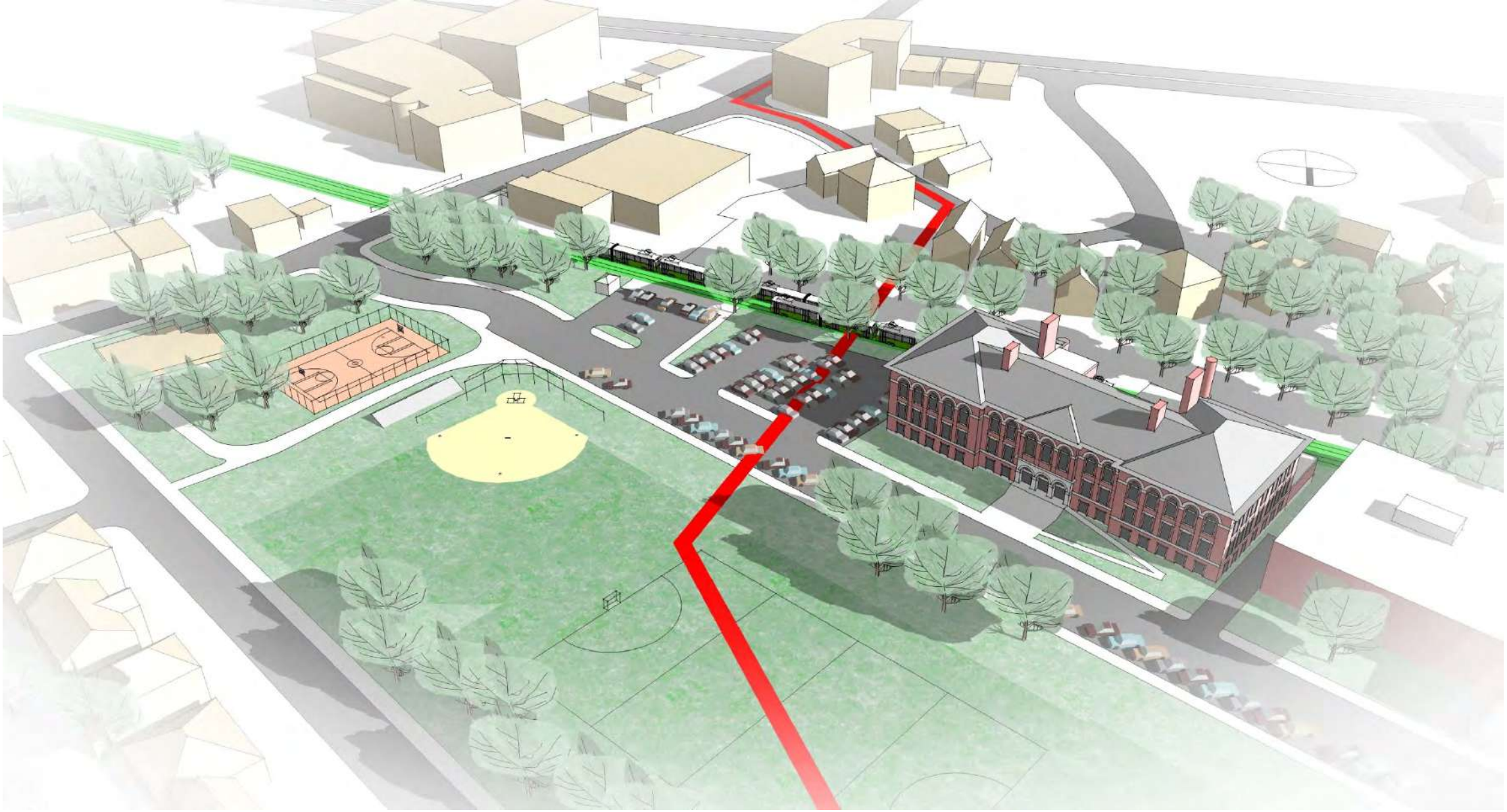

Existing Unified Arts Building

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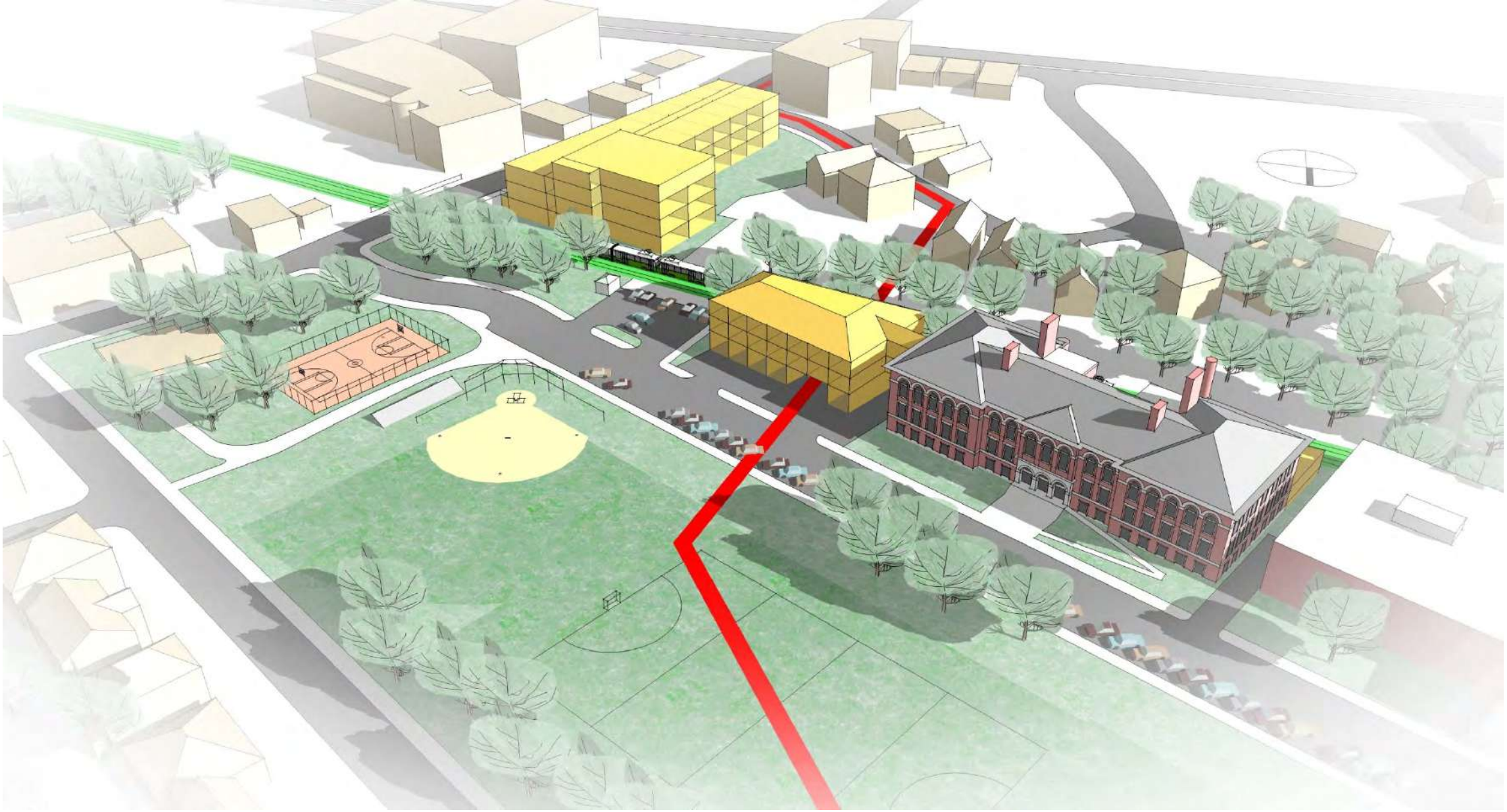

Potential UAB Build-Out

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One Campus – Larger Main Campus

PROS:

- Status Quo for student culture and community
- Opportunity to address all spaces
- Potential use of old Lincoln School in near future
- Potential acquisition(s) of nearby property
- Intended retention of programs not normally funded by MSBA
- Opportunity to right size all or most science rooms
- Opportunity to right size some academic classrooms

One Campus – Larger Main Campus

CONS:

- How Big is Too Big?
- If retained on one campus, could the community be faced with a similar problem in the future, 15 - 20 or more years from now?
- Likely loss (or move) of some programs:
  Community Education, Early Childhood (BEEP), others - TBD
- Very dense school community
- Increased parking requirement & traffic concerns
- Phasing and construction impacts TBD

Brookline High School

Second Campus Site Possibilities

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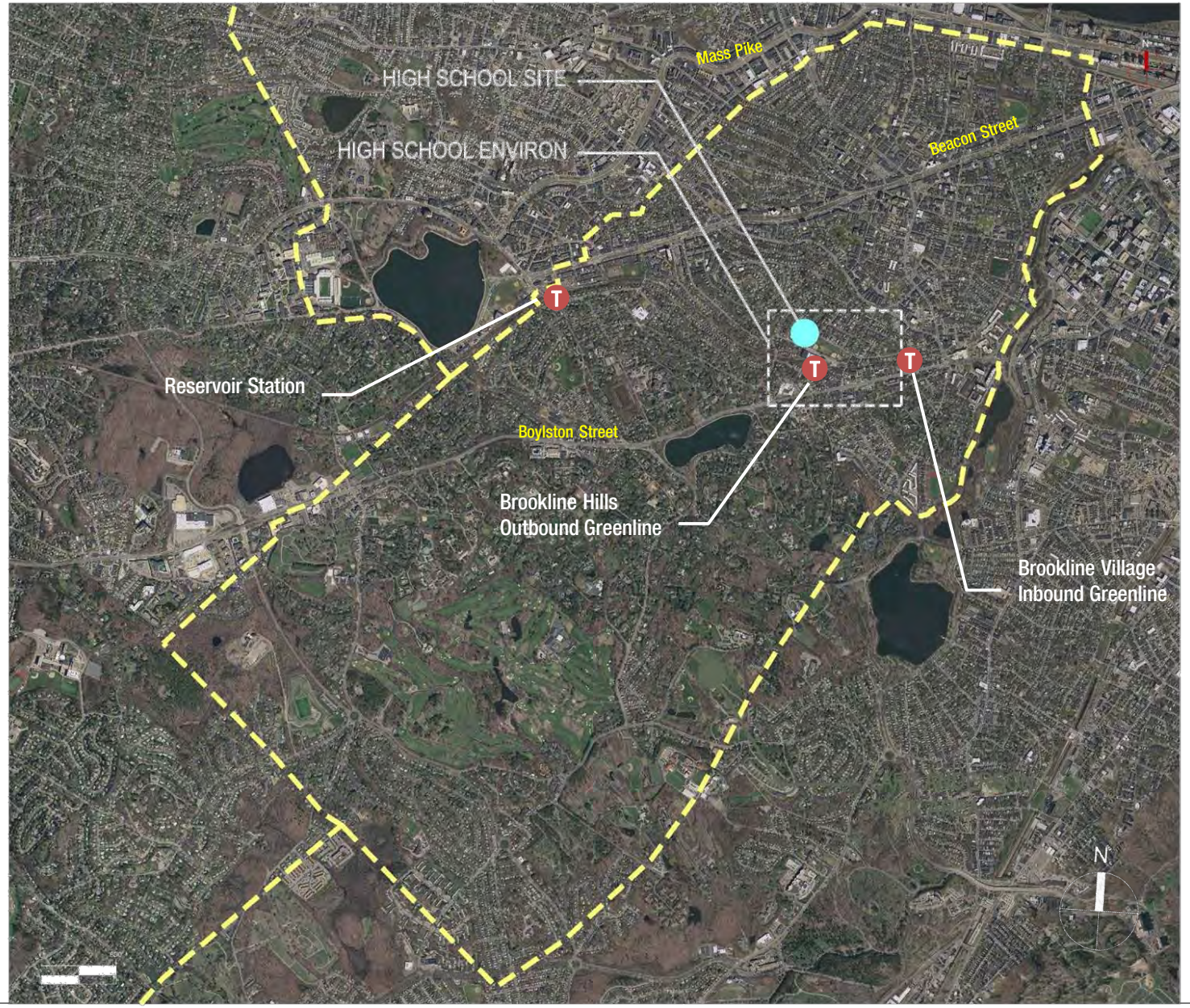
February 3, 2014

One Campus vs. Two

- Studied in depth as part of MSBA module 3 - Feasibility Study
- Impact on teaching and learning
- How many or which programs can be replicated on a second campus or which would be relocated?
- Impact on school culture
- Impact on long-term operational costs
- Are shortcomings of existing campus ignored?
- Unique programs

Unique Programs

- 80± Singletons – One section for an offering: unique curriculum offering; honors; AP; semester offering
- Career and Technical Education (CTE), which is included in requirements for graduation
- Opportunity for change
- School within a school (SWS)
- Special programs within special education
- Winthrop House (currently off campus)
- Large number of student clubs and activities
- Interscholastic and intramural sports


HIGH SCHOOL SITE
HIGH SCHOOL ENVIRON
Mass Pike
Beacon Street
Reservoir Station
Boylston Street
Brookline Hills
Outbound Greenline
Brookline Village
Inbound Greenline
N

Second Campus

Pros:

- Contemporary teaching and learning environments would be infused throughout the new building
- Potential special focus school; e.g. STEM, STEAM, academic academy, freshman academy, International Baccalaureate
- Smaller population (smaller learning community)

Second Campus

Cons:

- All curriculum offerings and programs would likely not be offered at both schools
- With potential MSBA participation in a new school, renovations at the main campus may not be funded and will require discussions with MSBA during feasibility study
- Busing likely required
- Politically challenging
- Larger staff and ongoing operational costs

Next Steps

- Select Approach
  (for planning/moving forward purpose)
- Traffic Study & Conceptual Estimate(s)
- Preparation of SOI (school dept.)

  Requires Signatures from:
  Superintendent,
  School Committee,
  Board of Selectman