Appendix

6.1 Visioning Components

Visioning Session 1

- Toward BHS 2020 and 21st Century Facilities, June 24, 2014 (PowerPoint)
- Framework for the 21st Century (Handout)
- 21st Century Design Patterns (Handout)

Visioning Session 2

- Blue Sky Ideas (Sketches by Participants)
- Public Schools of Brookline Further Study of Brookline High School, Vision Session #2, September 23, 2014 (PowerPoint)
- Toward BHS Guiding Principles for Design (PowerPoint)

Towards BHS 2020 and 21st Century Facilities

June 24, 2014

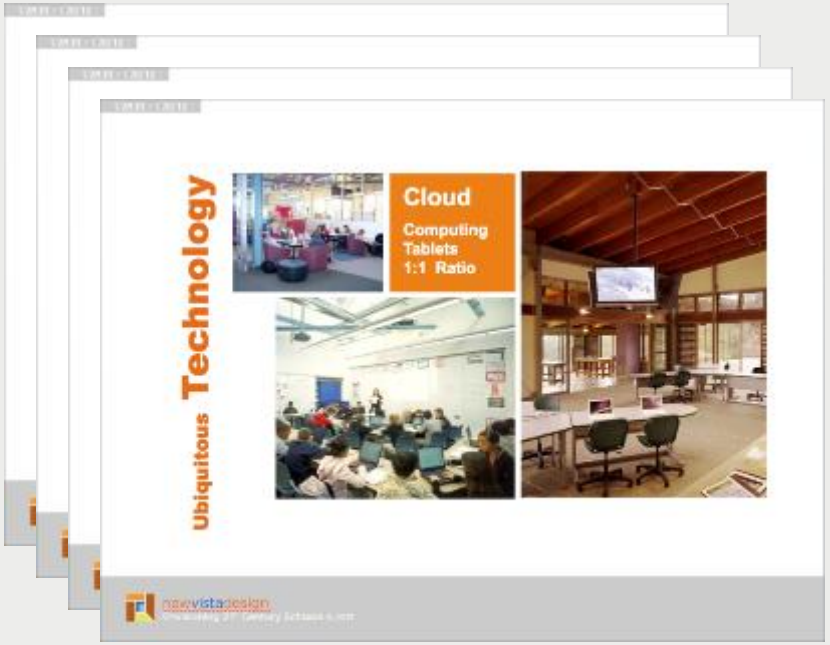
SMMA

newvistadesign
Envisioning 21st Century Schools

21st Century Design Patterns

Design Patterns

- Support teaching and learning – now and tomorrow
- Provide seamless technology integration
- View school as varied and evolving environment



- Greeting and Gatekeeping
- Safety
- Streetscapes
- Wayfinding
- Flexible Use
- High-Performance
- Ubiquitous Technology
- Varied Spaces
- Collaboration
- Gathering
- Multi-Use Classrooms
- Multi-Purpose Studios
- Teaming
- Hubs of Activity
- Transparency
- Display and Exhibition

Tewksbury High School /MMA

Quincy High School / SMMA

Quincy High School / SMMA

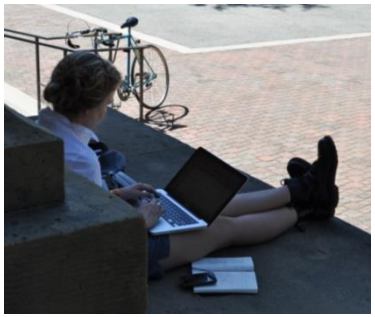
- Clusters of Learning
- Differentiated Instruction
- Distributed Resources
- Professional Workspaces
- Shared Use
- Flexible Furniture
- Sustainable Design
- Building as Teacher
- Branding and Identity
- Traditional Aesthetics
- Lifelong Fitness
- Community Connections
- Maker Spaces & Design Thinking
- Indoor/Outdoor Connections
- Building as Community Resource

Grafton High School / SMMA

Seamless Technology

Cloud

Computing
Tablets
1:1 Ratio



Grafton High School / SMMA

Flexible Spaces

Movable
Furniture
Walls
Technology

dSchool - Stanford

Flexible Furniture

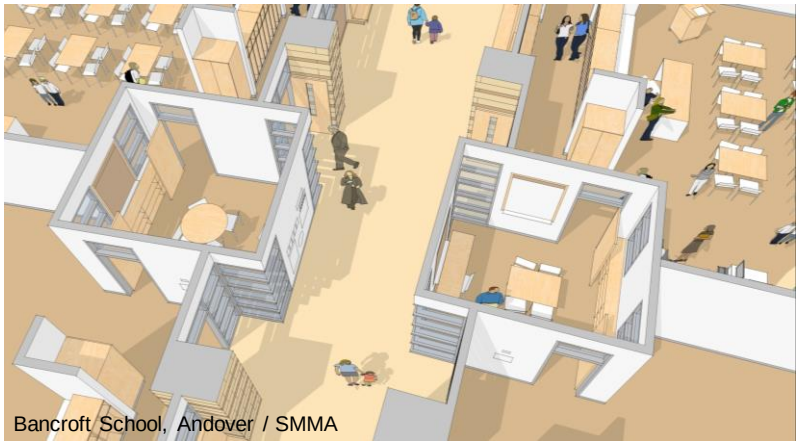
Movable
Nesting
Stackable
Ergonomic

Varied Spaces

Small
Medium
Large

Hudson High School / SMMA

Hudson High School / SMMA

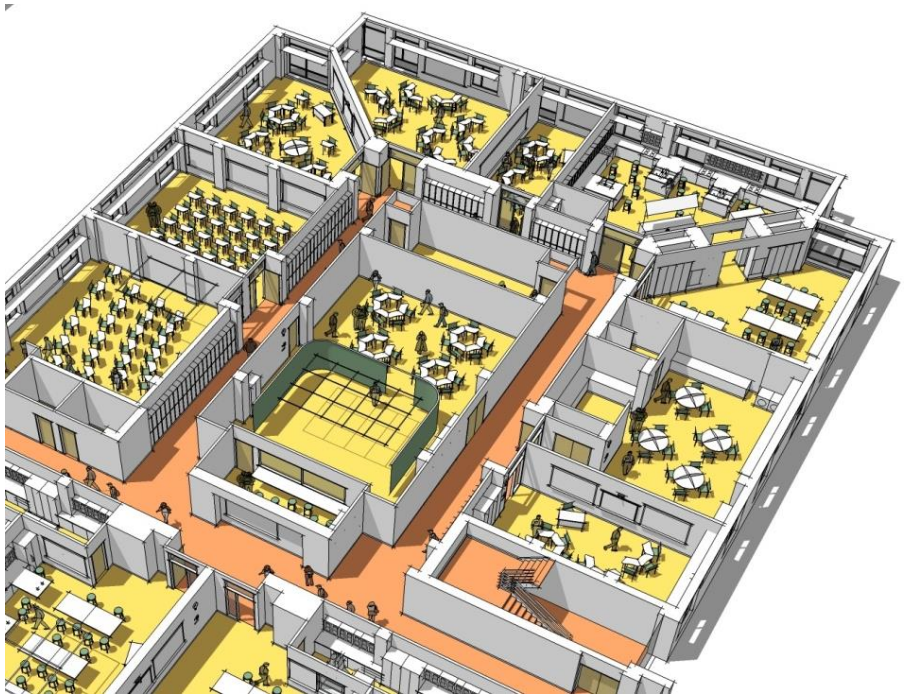


Bancroft School, Andover / SMMA

Ubiquitous Learning

Beyond Classroom Walls

Learning Studios



Multi-purpose

Adjacent to classrooms

Community Access

After Hours Resource

Learning Studios

Multi-purpose

Adjacent to classrooms

Collaborative Spaces

Planning
Knowing
Creating

dSchool - Stanford

Independent and Small Group Learning

Multi-modal Virtual Online

Greeting and Gatekeeping

Entry

Sequence
Sense of
Place

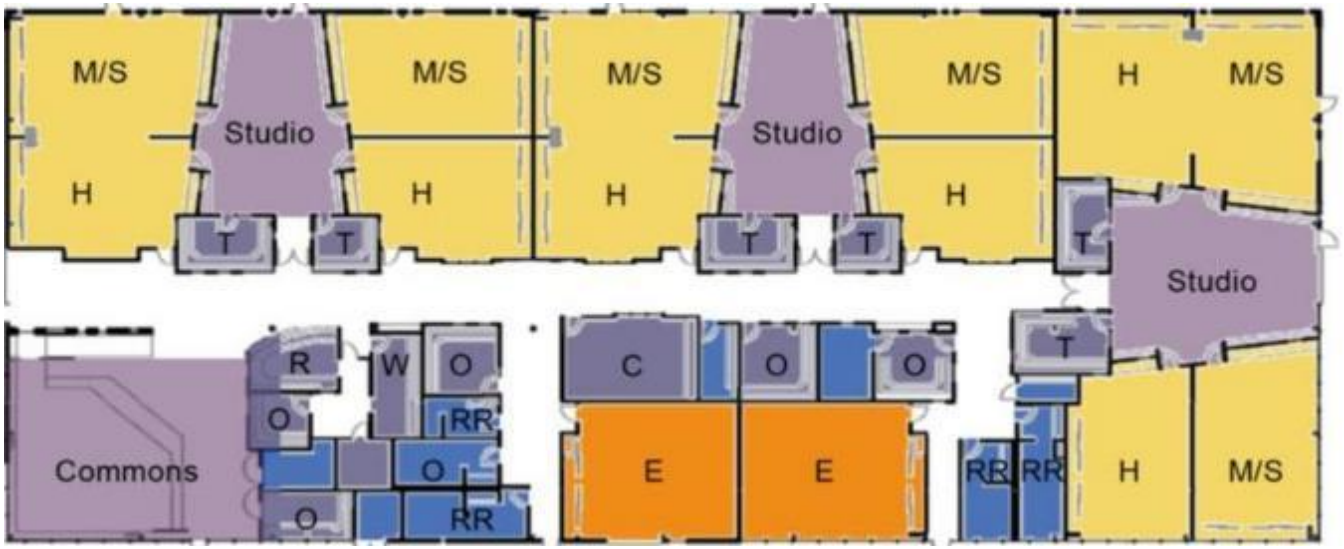
Tewksbury High School / SMMA

Creating Streetscapes

Surprise

Vistas
Display
Gathering
Wayfinding

Distributed Leadership



Adult

Presence
Distribution
Access

Gathering Spaces

Grafton High School / SMMA

Wellesley High School

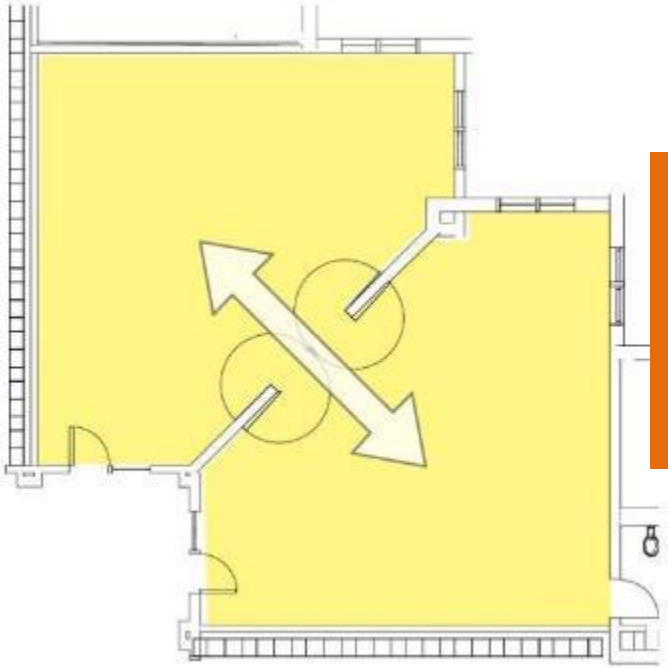
HUBS of Community Gathering Presentation

Learning Neighborhoods

Community

Accountability
Ease of access

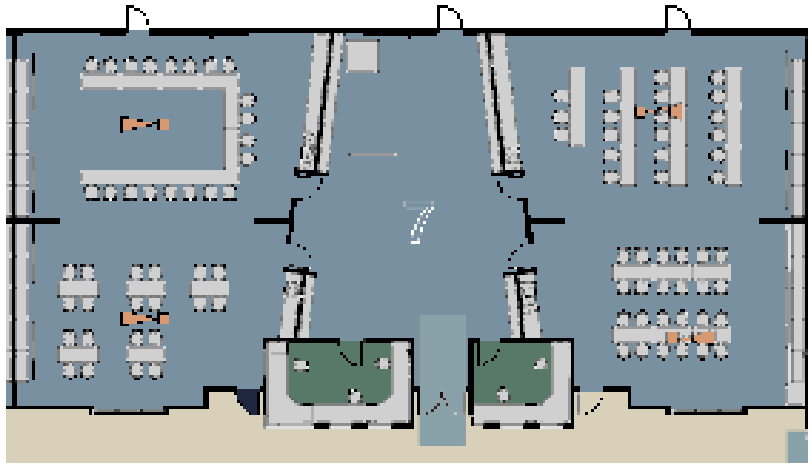
Teacher Teaming



Ipswich Middle High School

Teaching Teams

Integrated delivery



Professional Workspaces

Teaming

Teachers Collaboration Areas

Visible Learning

Trans-
parent
Accountable
Independent

Tewksbury High School / SMMA

Display and Exhibition

Display

Presentation
Transparency
Visibility

Quincy HS / SMMA

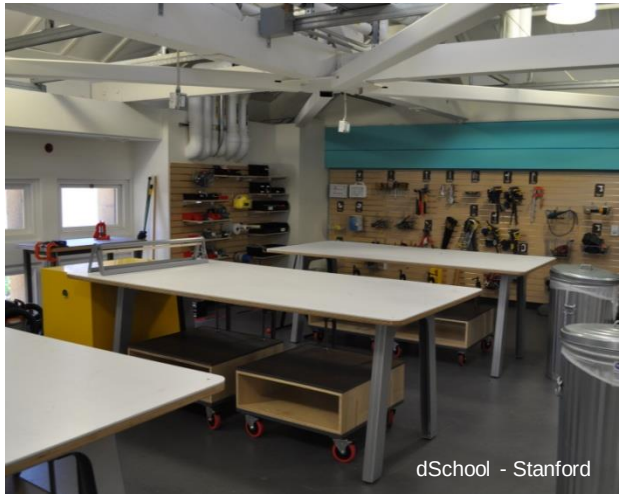
Indoor/Outdoor Connections

Grafton High School

Extended
Learning
Gathering
Variety

FAB Labs

Science
Technology
Engineering
Math



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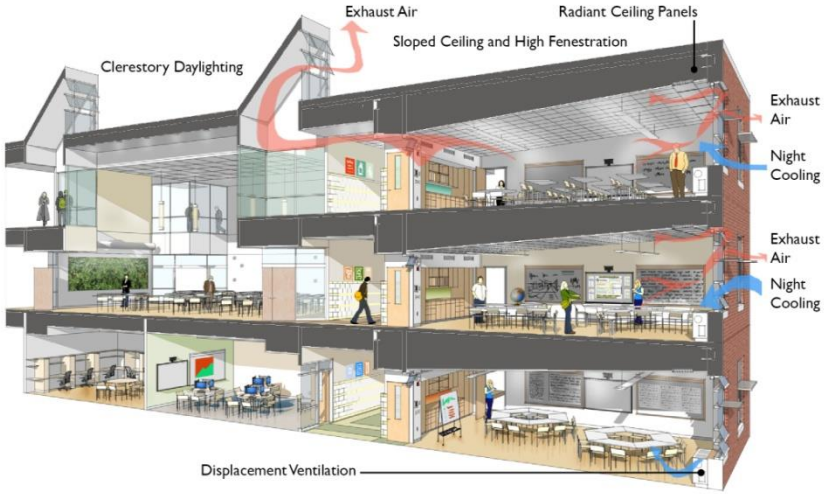
Quincy High School / SMMA

Tewksbury High School / SMMA

Sustainable Design

Responsible Design

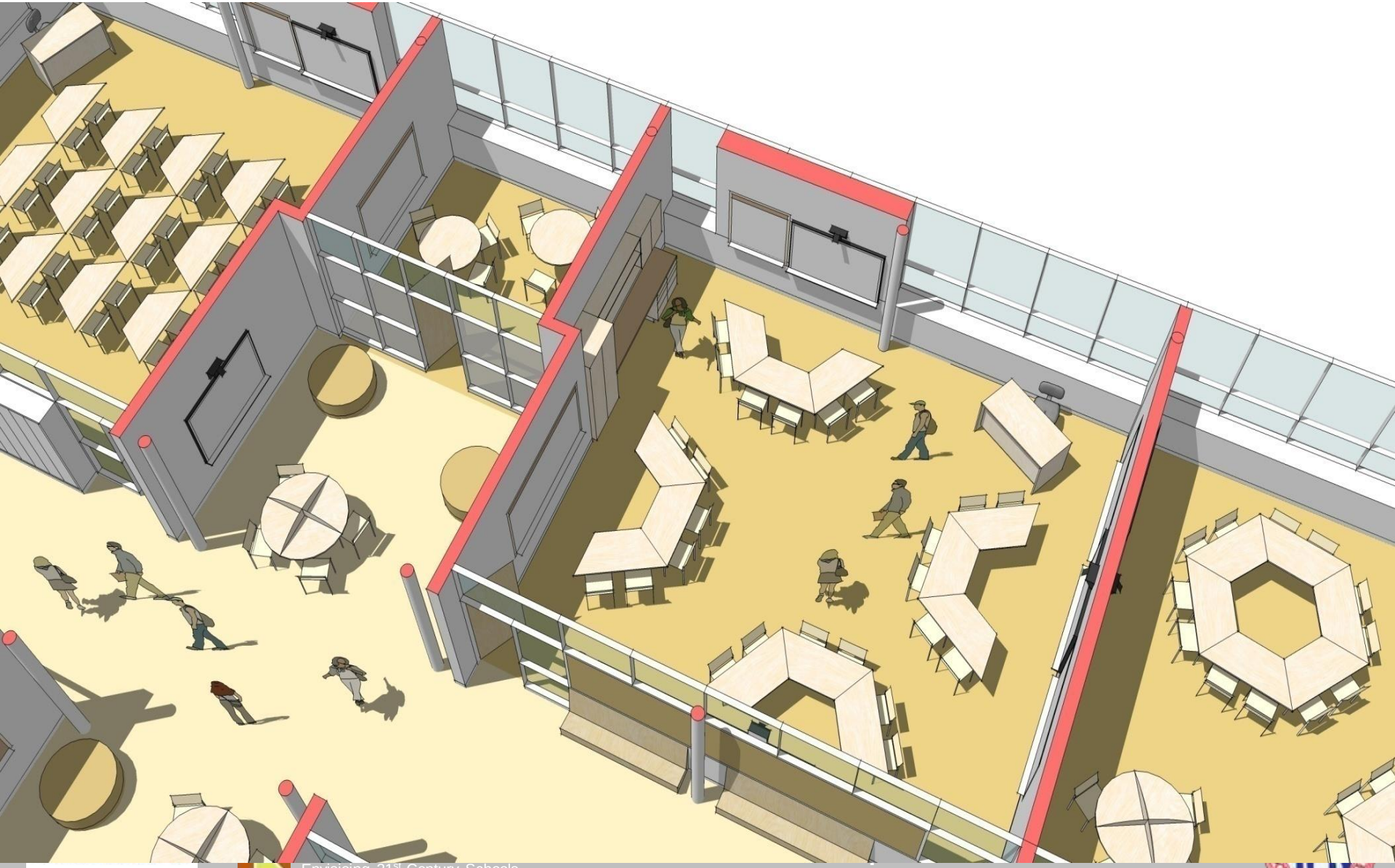
Building as Teacher



TFHS - GFMS/ SMMA

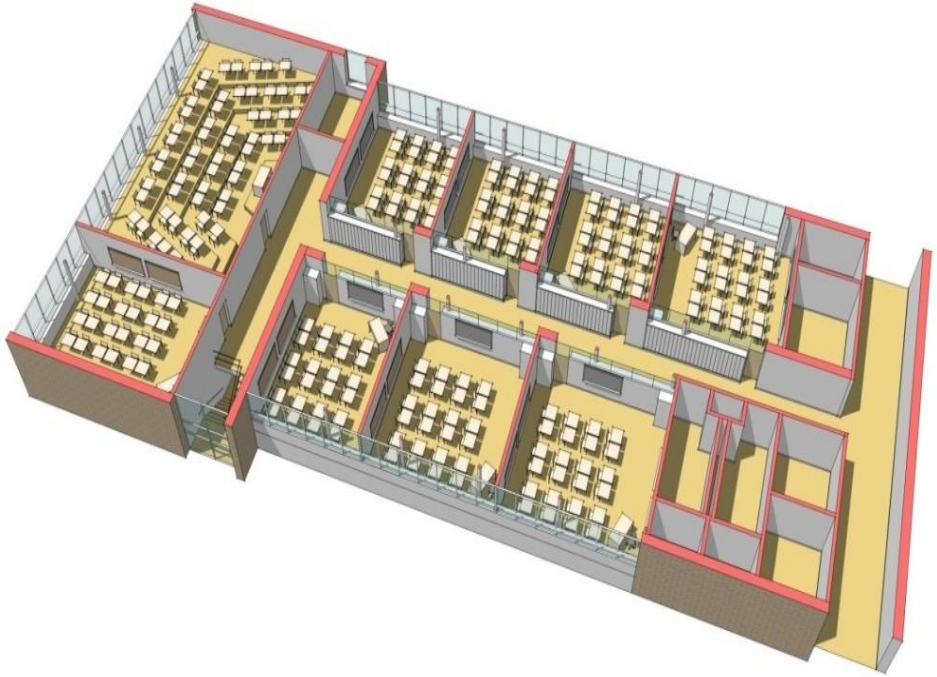
Branding and Identity

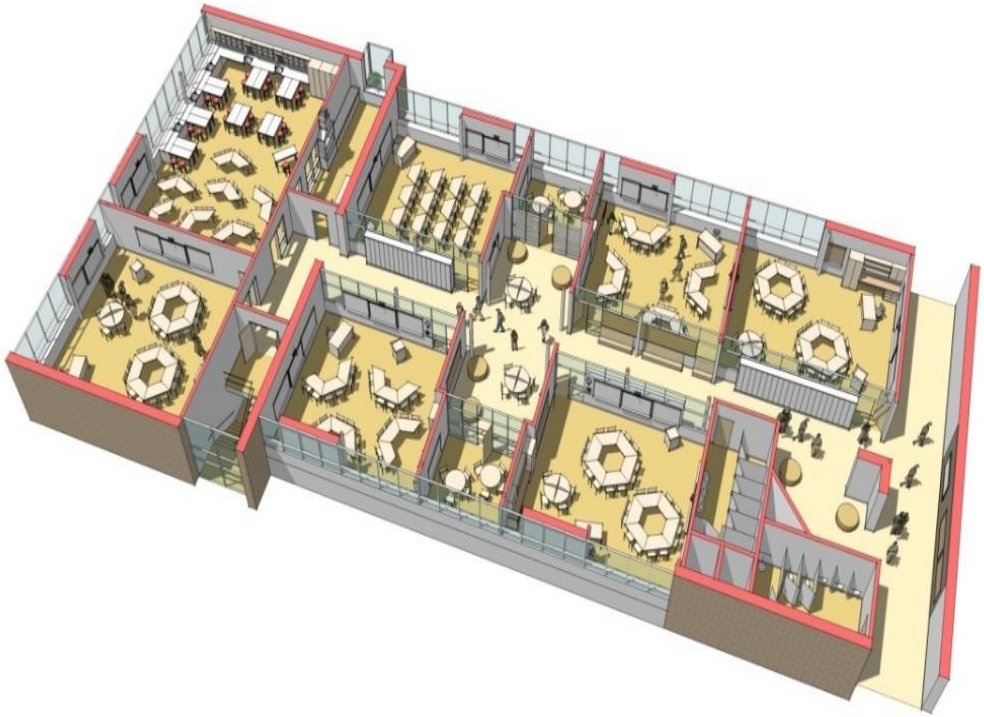
Differentiation
Public Art
Growth



EXISTING vs. RENOVATIONS / RECONFIGURATION

- Flexible Classrooms
- Multiple Teaching Walls
- Use of Corridors
- Interactive / Ergonomic Furniture
- Control of Environments
- Low-Cost 21st Century Changes
  - Changes without Renovations
  - Changes that can Relocate

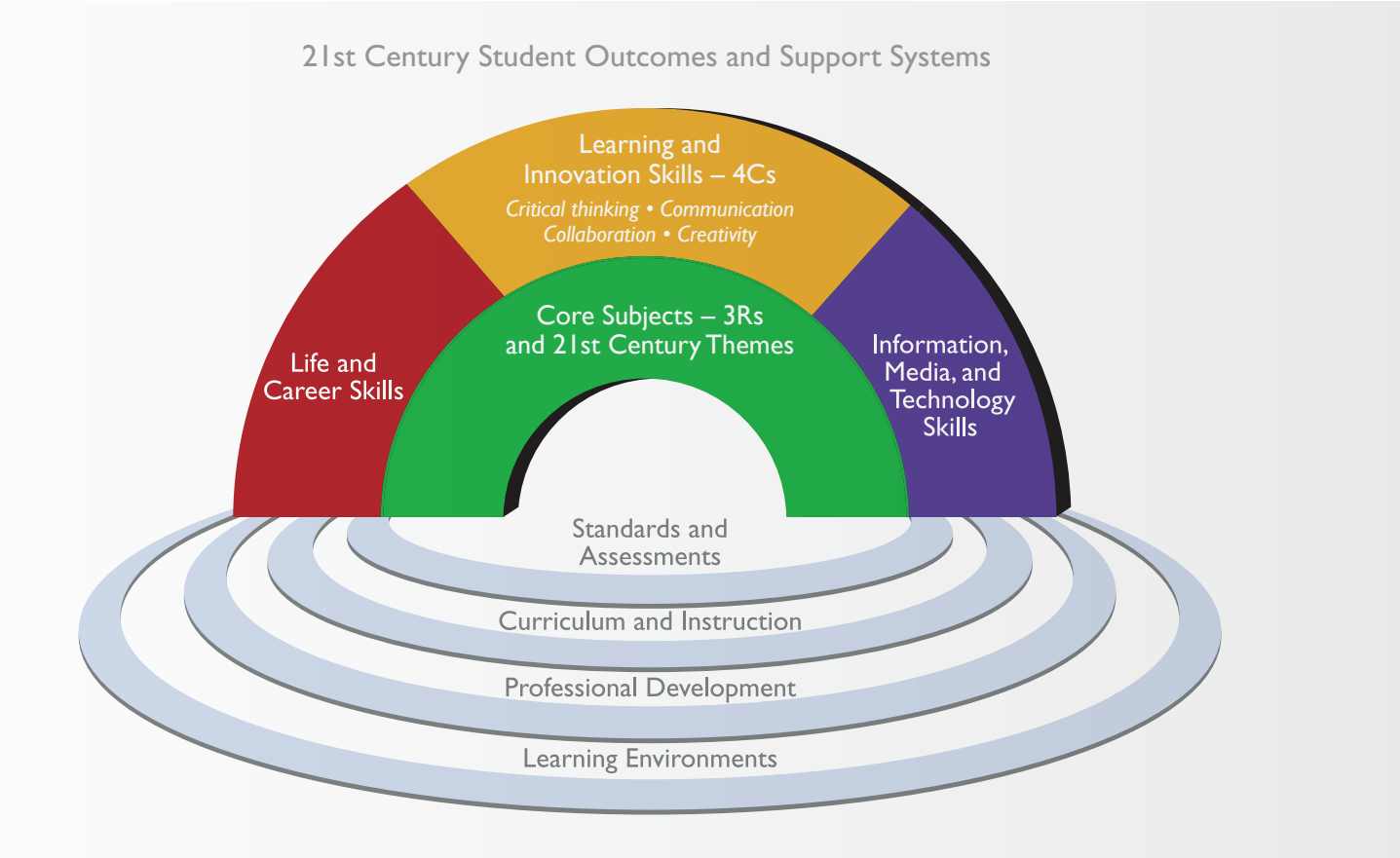




Partnership for 21st Century Skills

Framework for 21st Century Learning

The Partnership for 21st Century Skills has developed a vision for student success in the new global economy.



21ST CENTURY STUDENT OUTCOMES

To help practitioners integrate skills into the teaching of core academic subjects, the Partnership has developed a unified, collective vision for learning known as the Framework for 21st Century Learning. This Framework describes the skills, knowledge and expertise students must master to succeed in work and life; it is a blend of content knowledge, specific skills, expertise and literacies.

Every 21st century skills implementation requires the development of core academic subject knowledge and understanding among all students. Those who can think critically and communicate effectively must build on a base of core academic subject knowledge.

Within the context of core knowledge instruction, **students must also learn the essential skills for success in today's world, such as critical thinking, problem solving, communication and collaboration.**

When a school or district builds on this foundation, combining the entire Framework with the necessary support systems—standards, assessments, curriculum and instruction, professional development and learning environments—students are more engaged in the learning process and graduate better prepared to thrive in today's global economy.

Publication date: 03/11

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Core Subjects and 21st Century Themes

Mastery of **core subjects and 21st century themes** is essential to student success. Core subjects include English, reading or language arts, world languages, arts, mathematics, economics, science, geography, history, government and civics.

In addition, schools must promote an understanding of academic content at much higher levels by weaving **21st century interdisciplinary themes** into core subjects:

- **Global Awareness**
- **Financial, Economic, Business and Entrepreneurial Literacy**
- **Civic Literacy**
- **Health Literacy**
- **Environmental Literacy**

Learning and Innovation Skills

Learning and innovation skills are what separate students who are prepared for increasingly complex life and work environments in today's world and those who are not. They include:

- **Creativity and Innovation**
- **Critical Thinking and Problem Solving**
- **Communication and Collaboration**

Information, Media and Technology Skills

Today, we live in a technology and media-driven environment, marked by access to an abundance of information, rapid changes in technology tools and the ability to collaborate and make individual contributions on an unprecedented scale. Effective citizens and workers must be able to exhibit a range of functional and critical thinking skills, such as:

- **Information Literacy**
- **Media Literacy**
- **ICT (Information, Communications and Technology) Literacy**

Life and Career Skills

Today's life and work environments require far more than thinking skills and content knowledge. The ability to navigate the complex life and work environments in the globally competitive information age requires students to pay rigorous attention to developing adequate life and career skills, such as:

- **Flexibility and Adaptability**
- **Initiative and Self-Direction**
- **Social and Cross-Cultural Skills**
- **Productivity and Accountability**
- **Leadership and Responsibility**

21ST CENTURY SUPPORT SYSTEMS

Developing a comprehensive framework for 21st century learning requires more than identifying specific skills, content knowledge, expertise and literacies. An innovative support system must be created to help students master the multi-dimensional abilities that will be required of them. The Partnership has identified five critical support systems to ensure student mastery of 21st century skills:

- **21st Century Standards**
- **Assessments of 21st Century Skills**
- **21st Century Curriculum and Instruction**
- **21st Century Professional Development**
- **21st Century Learning Environments**

For more information, visit the Partnership's website at www.P21.org.

PARTNERSHIP FOR 21ST CENTURY SKILLS

Member Organizations

- American Association of School Librarians
- Adobe Systems Incorporated
- Apple Inc.
- Blackboard
- Cable in the Classroom
- Cengage Learning
- Cisco Systems
- Crayola
- Dell
- Education Networks of America
- ETS
- EF Education
- GlobalScholar
- Houghton Mifflin Harcourt
- Hewlett Packard
- Intel® Corporation
- JA Worldwide
- KnowledgeWorks Foundation
- Learning Point Associates
- LEGO Group
- McGraw-Hill
- Measured Progress
- MHz Networks
- Microsoft Corporation
- National Academy Foundation
- National Education Association
- netTrekker
- Oracle Education Foundation
- Pearson
- PMI Educational Foundation
- Verizon
- Walt Disney Company

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Visit www.bie.org

To review this interactive map

REVIEW OF 21ST CENTURY SKILLS FRAMEWORKS

BIE Interactive Table of 21st Century Skills

(scroll over text to view sub-links)

Skill Domain	Skill Sub-Components	General 21st Century Digital Age Literacy			Workforce Readiness	Ed Tech	College Readiness	Adult Literacy	Cognitive Science
Focus / Framework		Framework for 21st Century Learning (P21)	EnGauge 21st Century Skills (NCREL / Metiri Group)	The Seven C's (WestED / Trilling & Hood)	SCANS Framework (U.S. Department of Labor)	National Educational Technology Standards (ISTE)	Comprehensive Definition of College Readiness (EPIC)	EIF Content Standards for Adult Literacy (Equipped for the Future)	16 Habits of Mind (Costa & Kallick)
ICT Literacy	Information Media Literacy	2	2		4	1	3	3	
	Technological Literacy	1	2	1	3	1		1	
Cognitive Skills	Critical Thinking Problem-Solving Skills	1	2	1	3	1	3	2	2
	Creative Thinking Skills	1	1	1	1	1			2
Inter-Personal Skills	Communication Skills	1	1	1	3	1	1	3	1
	Collaboration Skills	1	1	1	3	1		1	1
	Cross-Cultural Skills	2	2	1	1		1		
	Leadership Skills	1			1			2	
	Social Skills		1		1			1	
Self- & Task Management Skills	Self-Monitoring Self-Direction Skills	1	1	1	1		2	2	3
	Project Management Skills		2		4			1	
Personal Characteristics	Ethics Civic Responsibility	1	2		1	1			
	Accountability (for High Standards)	1			1		1		1
Other	Sub-Components Not Represented Above*	3	5		7		2		5

Exploring Learning Goals for the 21st Century

The following learning goals listings represent the attempts of a variety of thoughtful and successful schools, school networks, educational organizations, and educational policy makers to identify the learning goals and skills that they think are most important for preparing students for success in life, work and post-secondary study. As you look through them, think about which you find most compelling, what may be missing, and which you find most meaningful for your school and why.

Bloom's Taxonomy

- Knowledge
- Comprehension
- Application
- Analysis
- Synthesis Skills
- Evaluation

Deeper Learning Network/ EL Schools

- Mastery of Core Academic Content
- Critical Thinking and Problem Solving
- Collaboration
- Effective Communication
- Self-Directed Learning
- An "Academic Mindset"

Pink: Skills for Whole Brain Thinking

- Design
- Story
- Symphony
- Empathy
- Play

Partnership for 21st Century Skills

- Critical Thinking
- Communication
- Collaboration
- Creativity

Wagner: Seven 21st Century Skills

- Critical Thinking and Problem Solving
- Collaboration and Leadership
- Agility and Adaptability
- Intiative and Entrepreneurship
- Effective Written and Oral Communication
- Assessing and Analyzing Information
- Curiosity and Imagination

The MET Technical School

- Communication
- Empirical Reasoning
- Quantitative Reasoning
- Personal Qualities
- Social Reasoning

NCREL - North Central Regional Education Laboratory

Digital Age Literacy

- Basic, scientific, economic and technological literacy
- Visual literacy and information literacy
- Multicultural literacy and global awareness

Inventive Thinking

- Adaptability and managing complexity
- Self-direction
- Curiosity, creativity, and risk taking
- Higher-order thinking and sound reasoning

Effective Communication

- Teaming, collaboration and interpersonal skills
- Self-direction
- Personal, social, and civic responsibility
- Interactive communication

High Productivity

- Prioritizing, planning and managing for results
- Effective use of real world tools
- Ability to produce relevant, high-quality products

National Association for Independent Schools

- Analytical and Creative Thinking and Problem Solving
- Complex Communication - Oral and Written
- Leadership and Teamwork
- Digital and Quantitative Literacy
- Global Perspective
- Adaptability, Initiative and Risk-Taking
- Integrity and Ethical Decision Making

New Tech Network

- Technology Literacy
- Citizenship and Ethics
- Critical Thinking
- Career Preparation
- Collaboration
- Written Communication
- Oral Communication
- Curricular Literacy

Coalition of Essential Schools - Habits of Mind

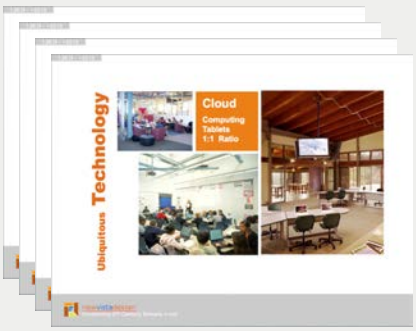
- Perspective
- Analysis
- Imagination
- Empathy
- Communication
- Commitment
- Humility
- Joy

21st Century Design Patterns

6/24/14

Design Patterns

- Support teaching and learning – now and tomorrow
- Provide seamless technology integration
- View school as varied and evolving environment



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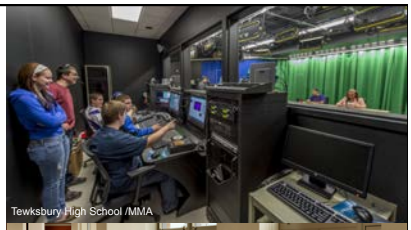
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Quincy High School / SMMA

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Grafton High School / SMMA

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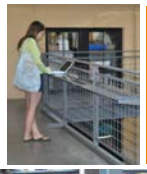
Seamless Technology



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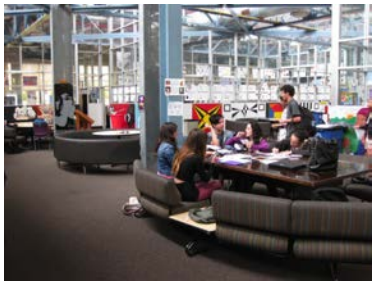

Grafton High School / SMMA

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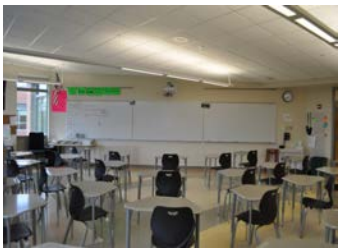
Flexible Spaces



Movable

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dSchool - Stanford

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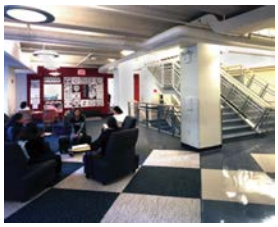

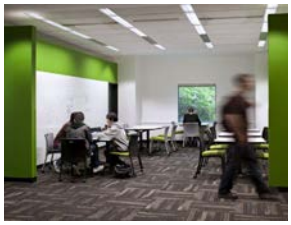

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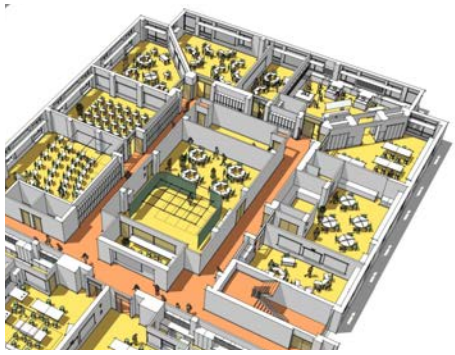
Learning Studios



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dSchool - Stanford

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Independent and Small Group Learning

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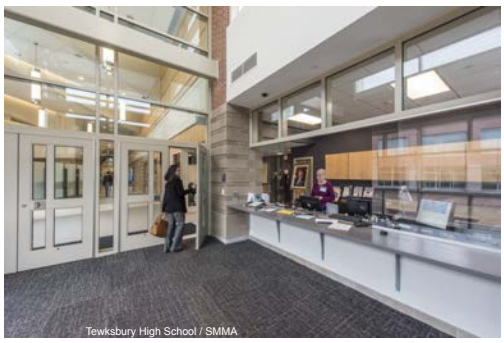

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6.24.14

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SMMA newvistadesign Envisioing 21st Century Schools

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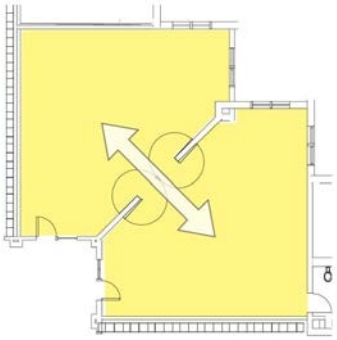
Teacher Teaming



Ipswich Middle High School

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Professional Workspaces

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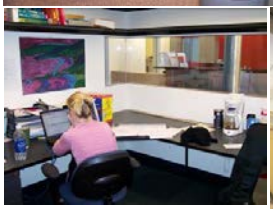
Teachers
Collaboration
Areas



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Sustainable Design

Responsible Design

Building as Teacher

TFHS - GFMS/ SMMA

SMMA

newvistadesign
Envisioing 21st Century Schools

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Adaptive Reuse

Sustainable
Flexible
Varied

SMMA

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Envisioing 21st Century Schools

6.24.14

Branding and Identity

Differentiation
Finishes
Public Art

SMMA

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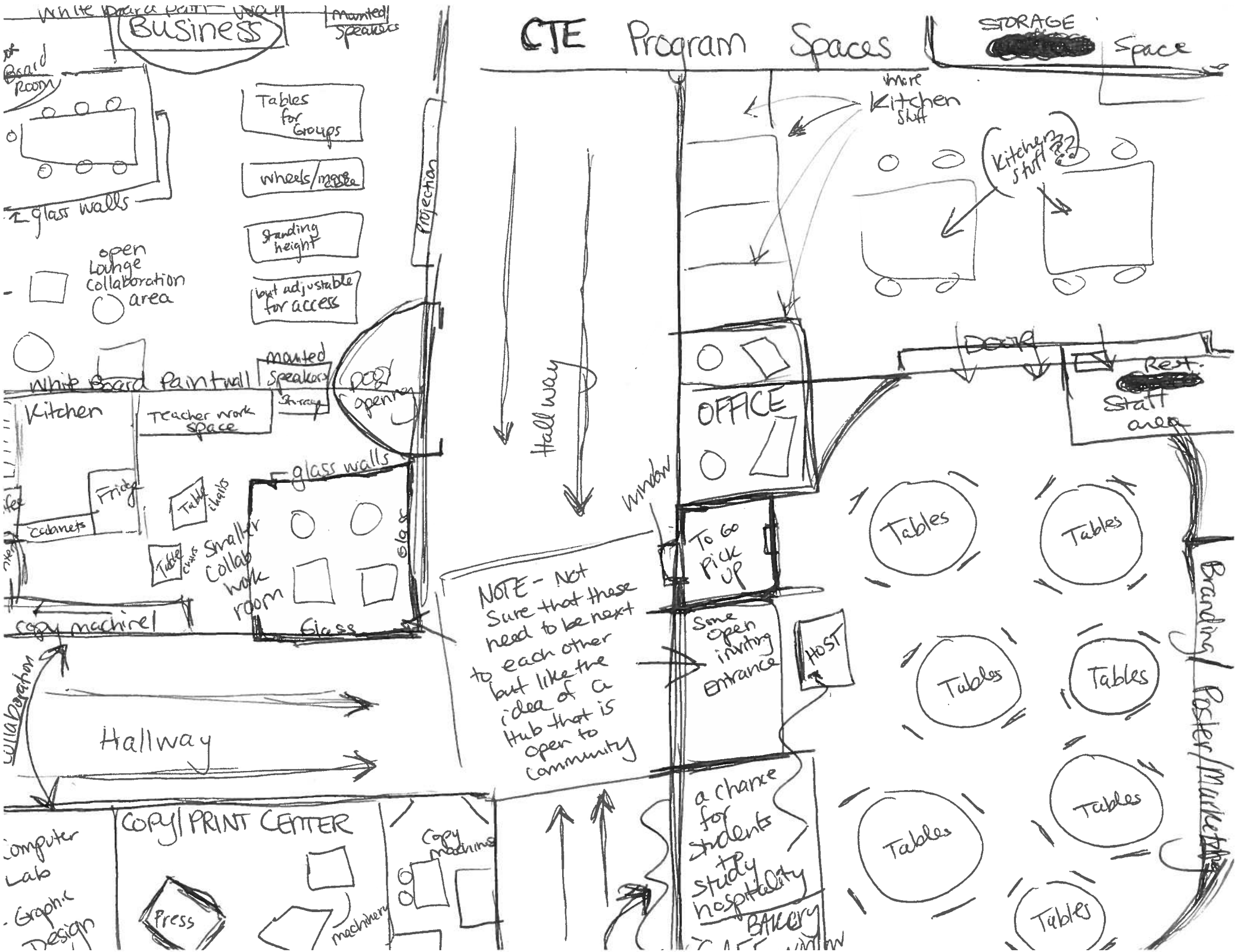
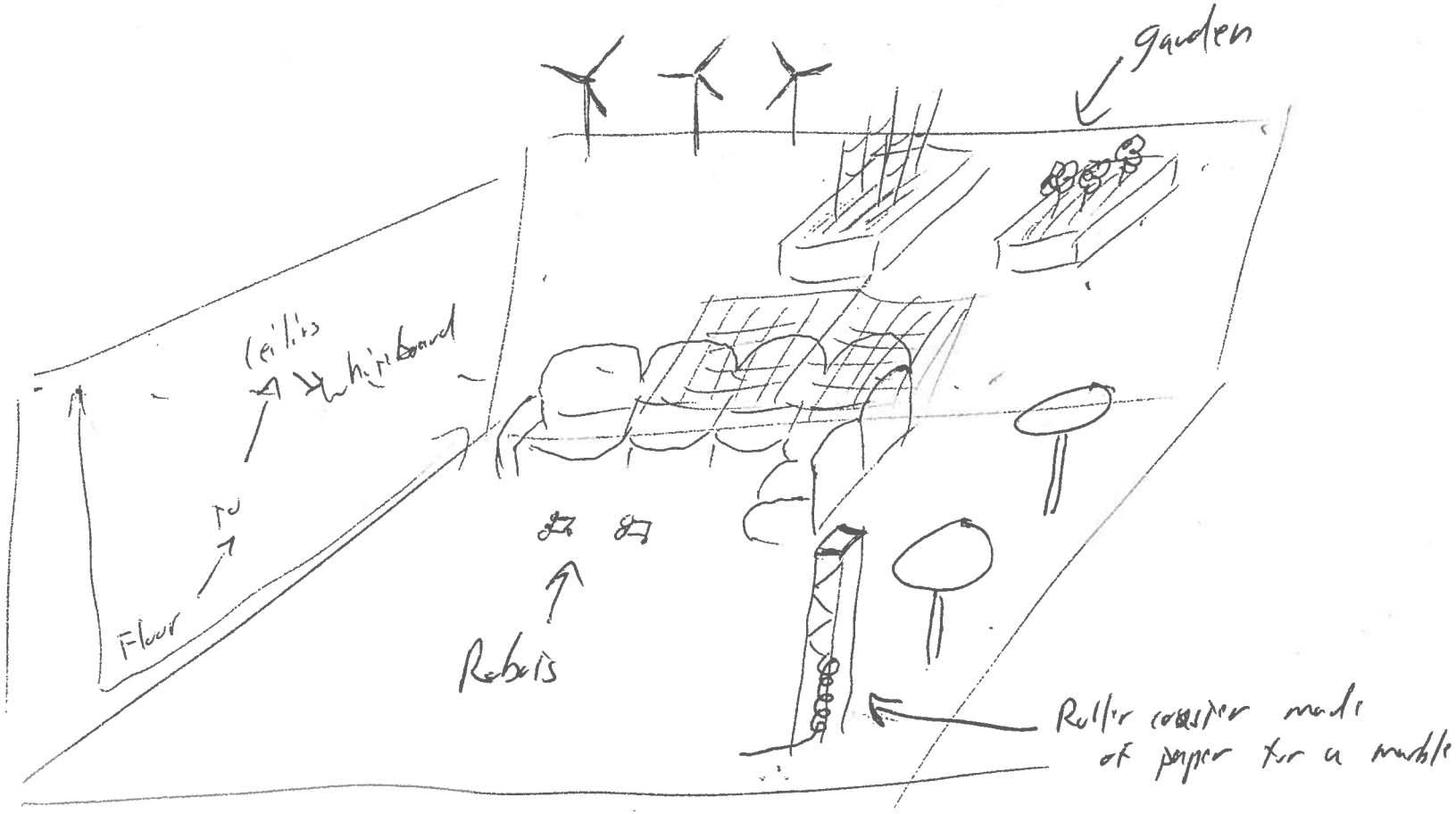
Which 21st Century

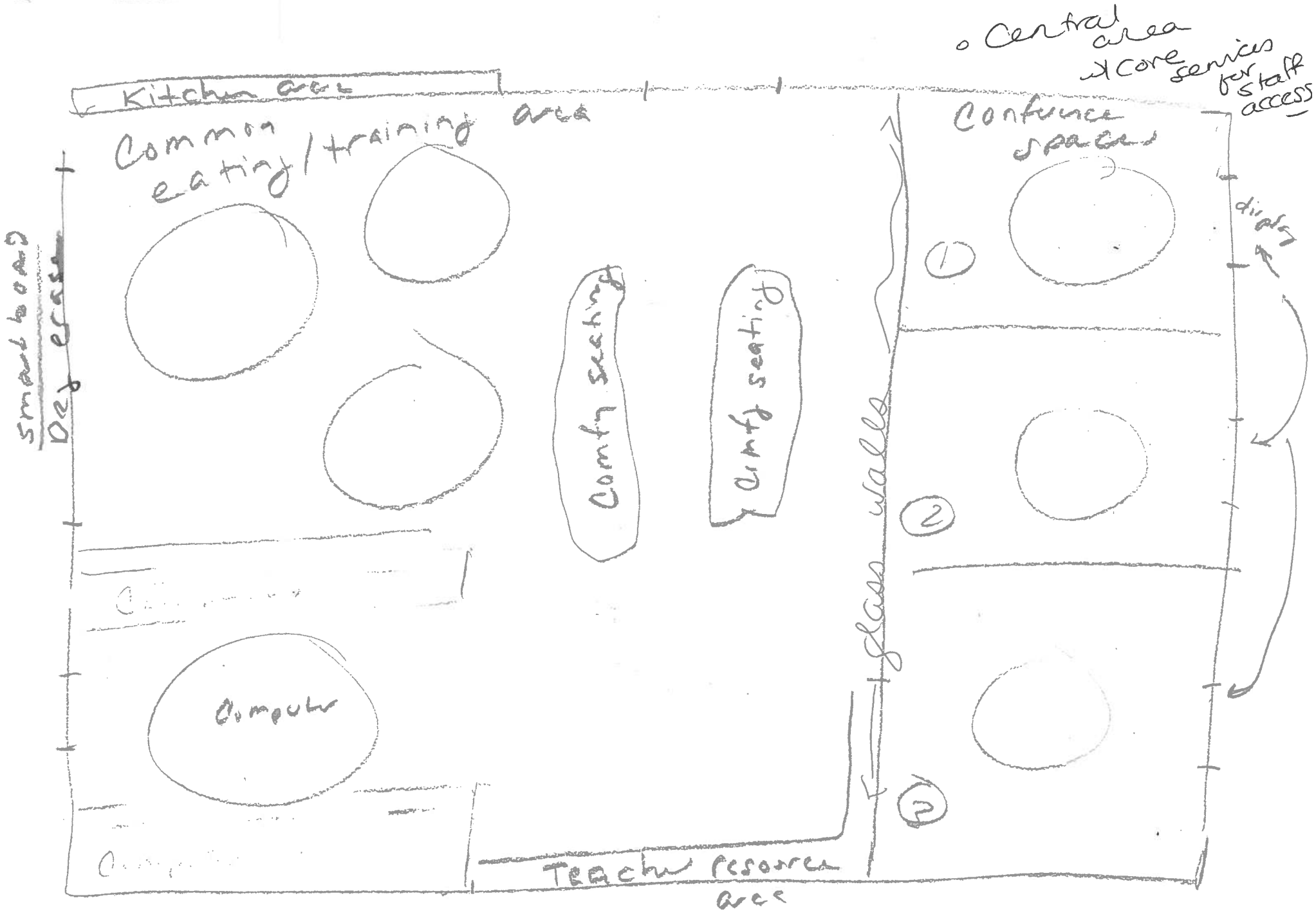
Design Patterns should be priorities for BHS?

CTE Program Spaces



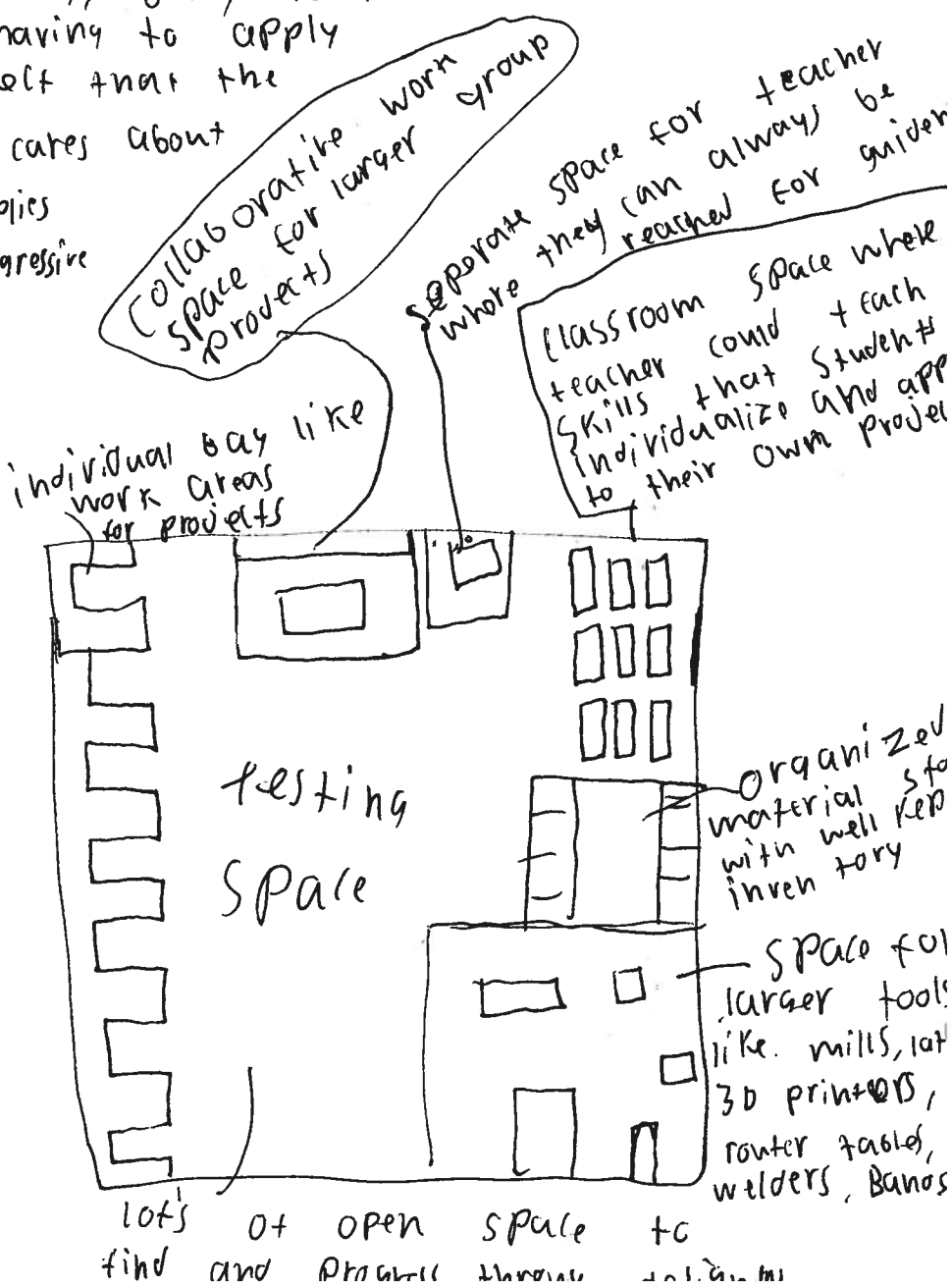

garden
ceiling
whiteboard
TV
Floor
Robots
Roller coaster made of paper for a marble

Special Education Teacher / Staff work area



my ideal space

- large, lots of open space where many people can work
- smaller individual areas, work tables with specific tools that you need as well as wateror you are working on
- within the same space full design ↔ production capabilities
- space for individual and team/group projects
- a space for arts and sciences
  - drawers could be working next to engineers
- individualized project learning, being taught something in a classroom like setting then having to apply it to a individualized project that the particular student actually cares about
- availibility of both supplies and guidence to promote progressive mistakes that create further learning



Student Gathering Space

- Open space with comfortable non-linear furnishings
- Walls include chalk board and Cork Board
- Open on one side to the main corridor.
- Can accomodate 10-12 bodies
- Good quality natural light
- Adjacent to classrooms
- Wi-fi accessible
- Handicap accessible
- Wall mounted clock (no bell
- Some hard surface for writing / project work. (May be counter design not table design)

Dean's Suite - Admin Office

- Secretary's station open to public
- Plentiful seating intended to attract students
- Sufficient private offices for administrators/guidance counselors to have private meetings
- Larger meeting space for meetings of admin. staff and meetings w/ larger groups.
- Suites positioned in school to spread out adult presence & to greet adults/public coming from different directions.
- Electronic notice boards for communicating info to kids.
- work spaces for kids who need/want small work space
- Attempt to create welcoming feel for the public and home-y feel for kids.
- ~~Test~~ Info. Central
- Social workers included
- Promote openness / open door policy.

Meditative/
Creative
Space

Let's outlet

Big Roll of paper on
Blackboard
in the
Parking lot

Bubble to fill up
Customer Journey
Map

Power
(No is an option
it's up to
students)

Pumpkin
carving
Stage

Pumpkin
carving
Stage

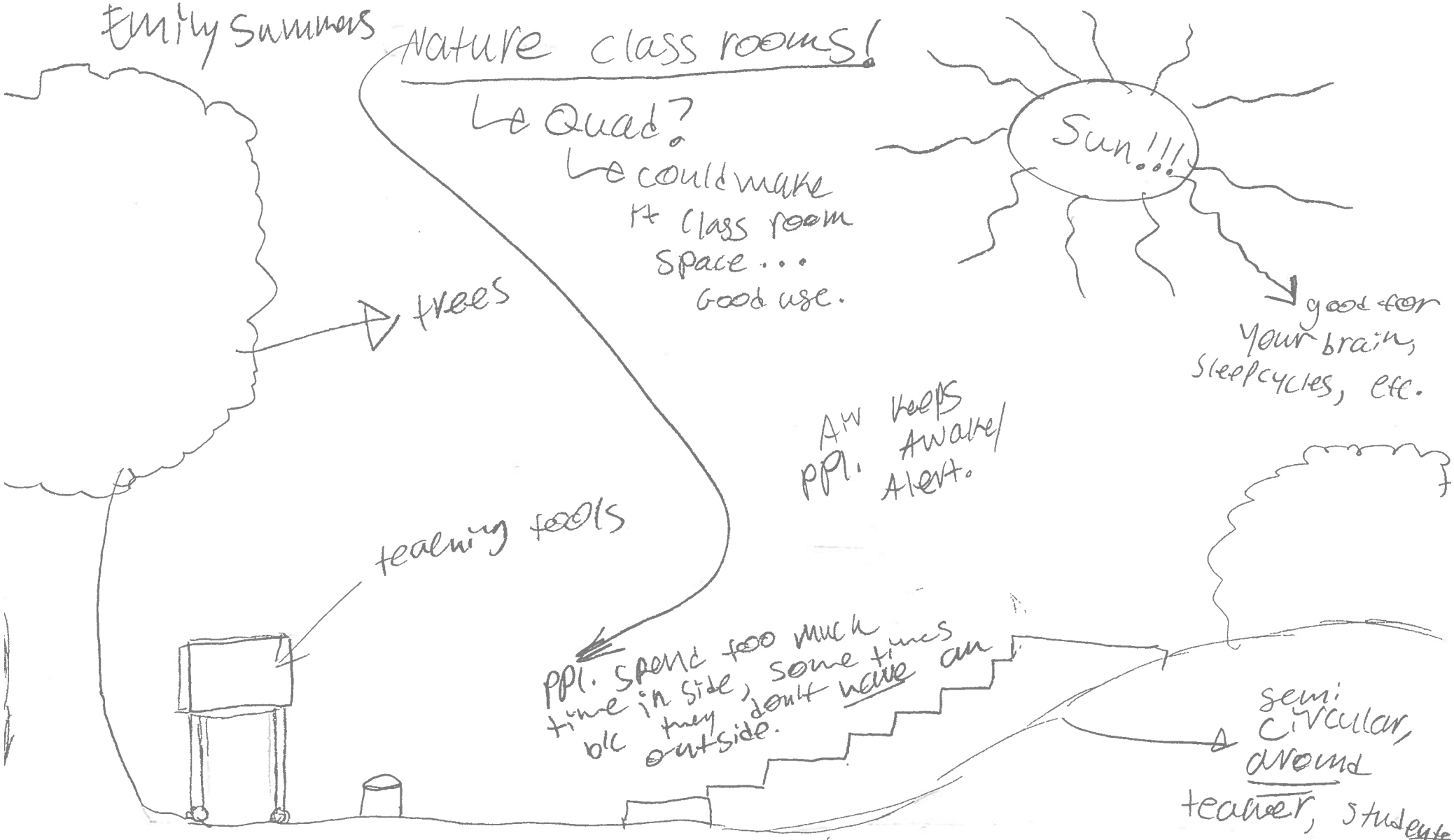
Pumpkin
carving
Stage

Guest on Wood

Plans
Plug for Leader
PLANS
Plug for Leader avenue for parent

Emily Summers

Nature class rooms!



can also be zen/sculpture garden, get kids in sunshine.

Great for English, history, Science → bio, AP Enviro, body-mind

Anthony Meyer

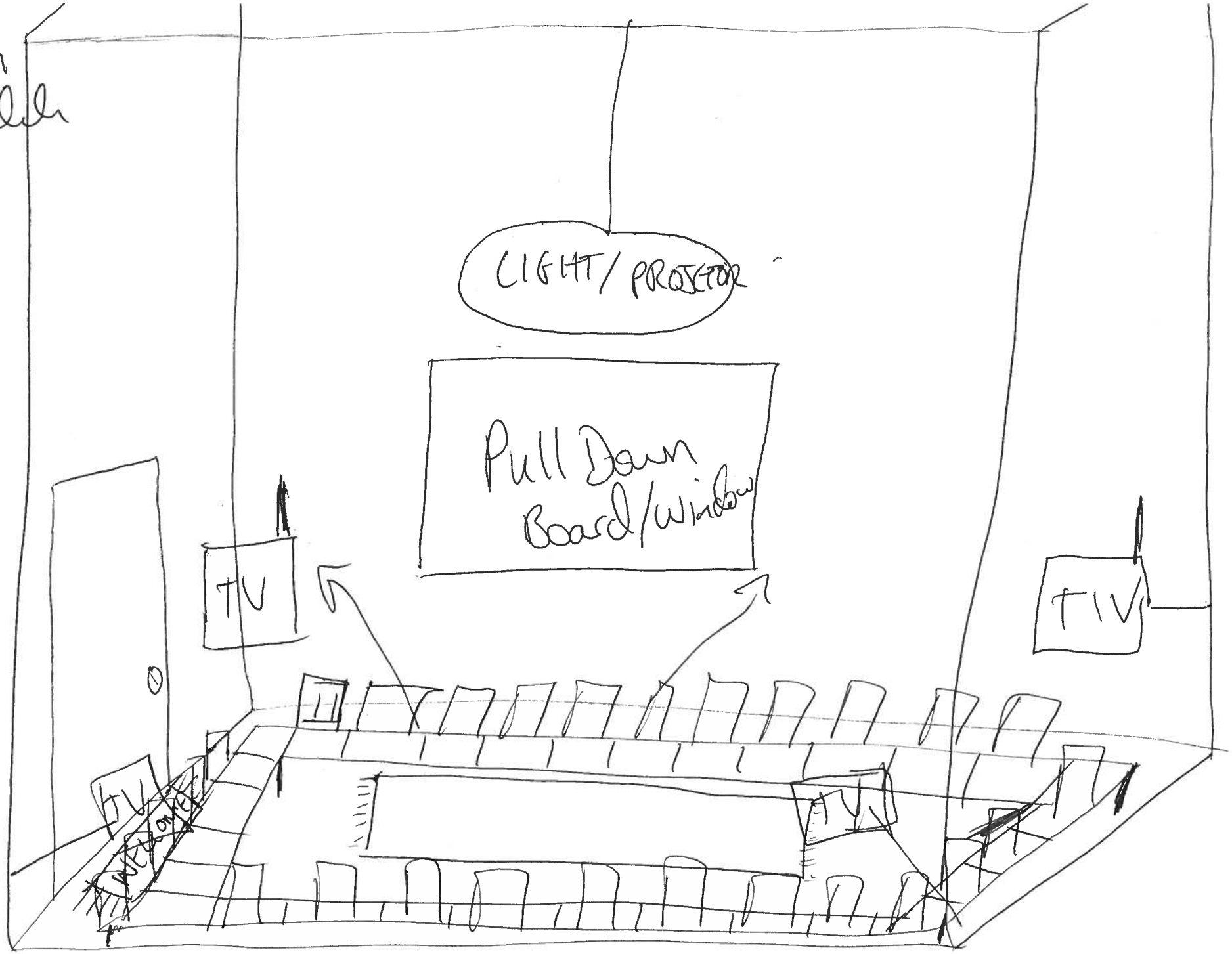
I'd like to build on Emily's idea that we have a real lack of spaces for students within which to work, gather, hang out, etc.

Focus space: Cafeteria.

Our cafeteria is probably the most underutilized space at BHS. What I'd like to see:

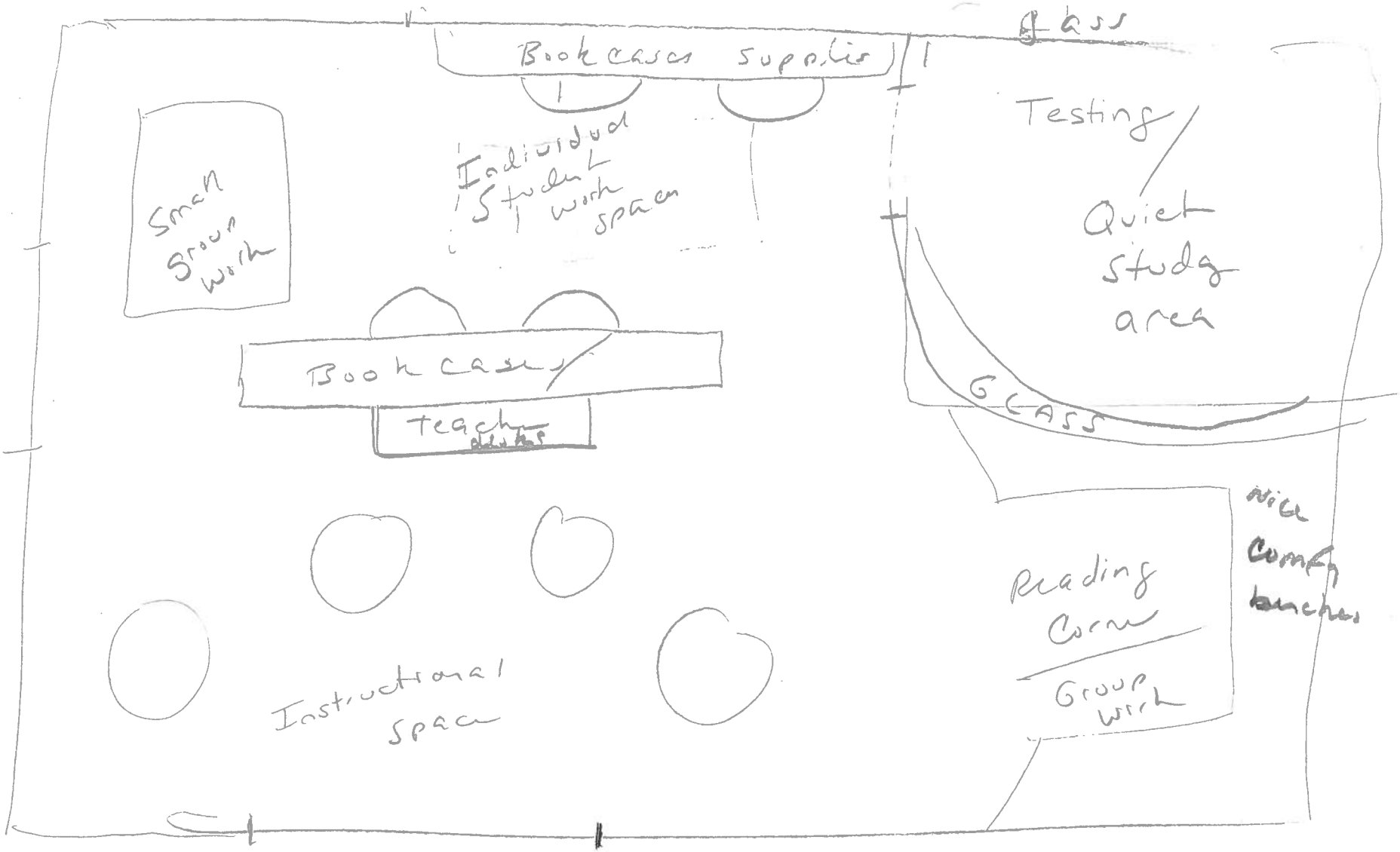
- more light (it's a basement-like space)
- better acoustics (while large, the cafeteria is a poor space for events due to the muffled sound that pervades
- better flow between outside (quad), ~~and~~ overflow spaces, and the cafeteria itself.
  - Do we waste too much space on the corridor that sets the overflow + cafeteria?
- less institutional furniture (it is very backroom-esque)
- consider dispersed/distributed food service + eating spaces
- less institutional colors + materials would be great

Eoin Walsh


LIGHT/ PROJECTOR
Pull Down Board/Window
TV
TV
TV
TV
TV
Workout

Eoin Wach

Learning Center (Special Education)



- lots of natural light
- centrally located
- [illegible]

3) Special Education Office and Dept. Space

This space needs to accommodate 3 administrators, 4 team chairs, 3 psychologists and 2 clerks. It needs a large conference room and a ~~to~~ file room that locks - also a general purpose work and gathering space for a large department of 50 plus people (not including paraprofessionals) or 100 people incl. [illegible]

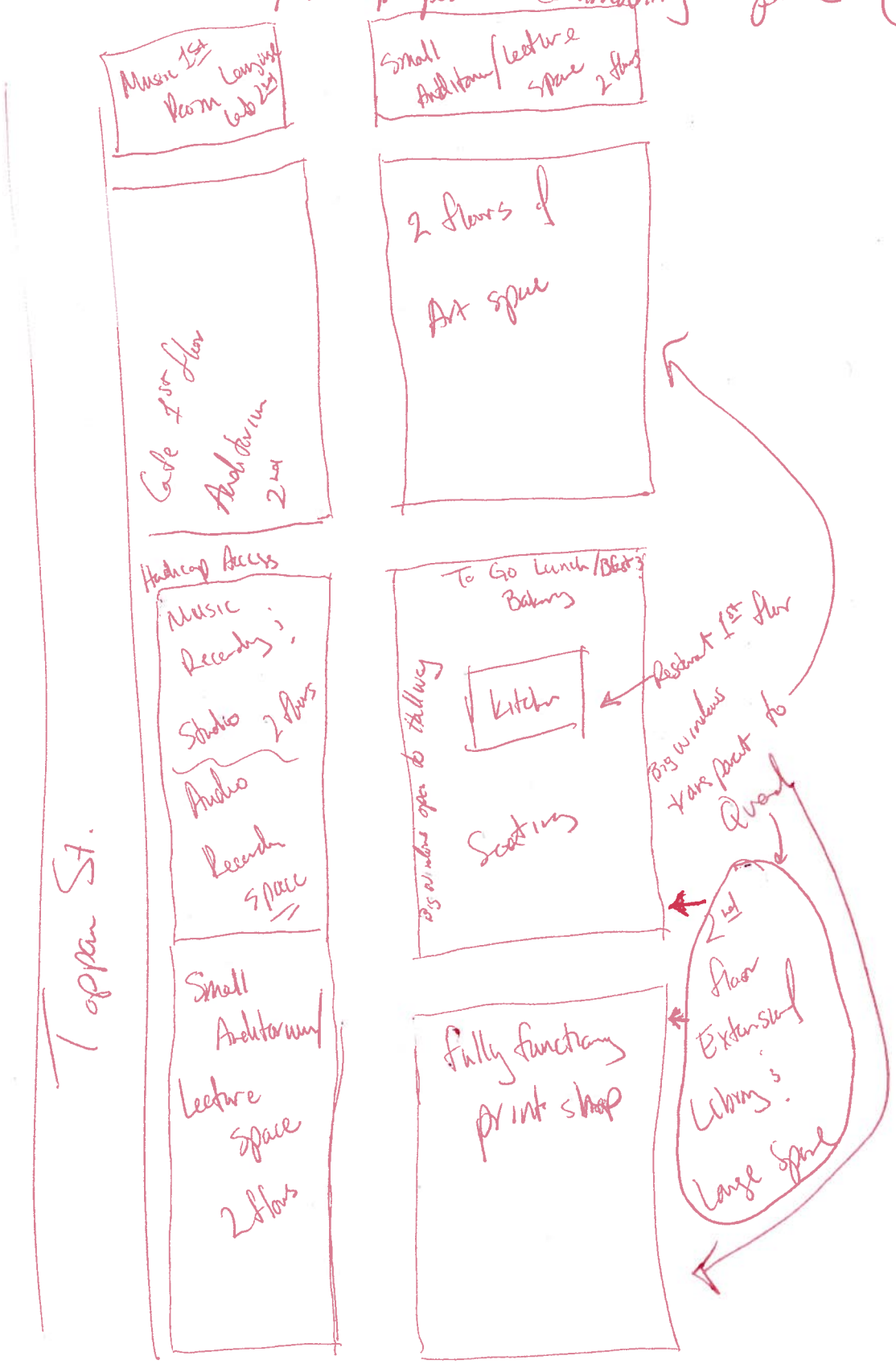
② BRIDGE/Transitions

This space supports our 18-22 year old students and needs to be quite separate from the main H.S. It should function a a practice space for real life with Kitchen, lounge, dining area, W/D and ~~a~~ separate office - Adjacent should be a ~~[illegible]~~ career voc. skills development space

① Winthrop House

This needs to be a separate building to house 50 students, 2 blocks from the H.S., so H.S. is still ~~[illegible]~~ accessible for electives and cafeteria, also nurse. This space needs to have several classrooms, a community space - a Kitchen, a handful of offices -

Multipurpose Community Space (2 levels)



Library [redacted]

multi-floors (ideally 3 floors) staffing in part by CTE/students/other
Decorated with student artwork

1st floor: 1) cafe (run by CTE students) comfy furniture

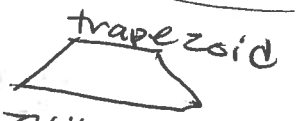
Noisy + social

function: fairly noisy collaboration/hanging out/fun-work continuum
gaming, etc.

DISPLAYS: MAGAZINES + NEW BOOKS

2) computer/tech "Help" desk staffed by students for CTE credit

2nd floor: collaboration + teaching *
flexible tables + chairs



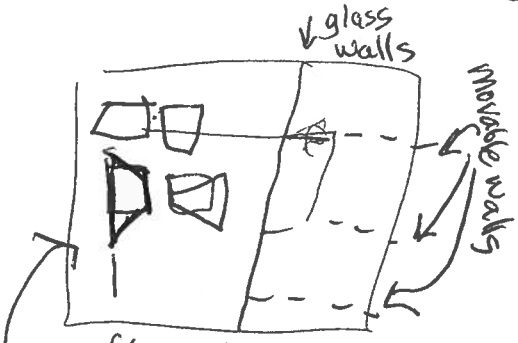
like in most of the slides

circulation desk
- circulate books, technology, etc.

Less noisy but still collaborative

STACKS: FICTION

around the outside:
soundproof glass rooms that can be configured as small/medium collaboration spaces OR as classroom for library classes or other classes events.



floor plan for 2nd + 3rd Floor

On main floor:
movable trapezoid tables for quiet but audible collaboration.

carrels + comfy seating *

Quiet + independent staffed

3rd floor: silent study/teaching as on second floor. row of multi-purpose rooms/classrooms

on main? Reference desk. silent study tables

1. class

like walking into a business

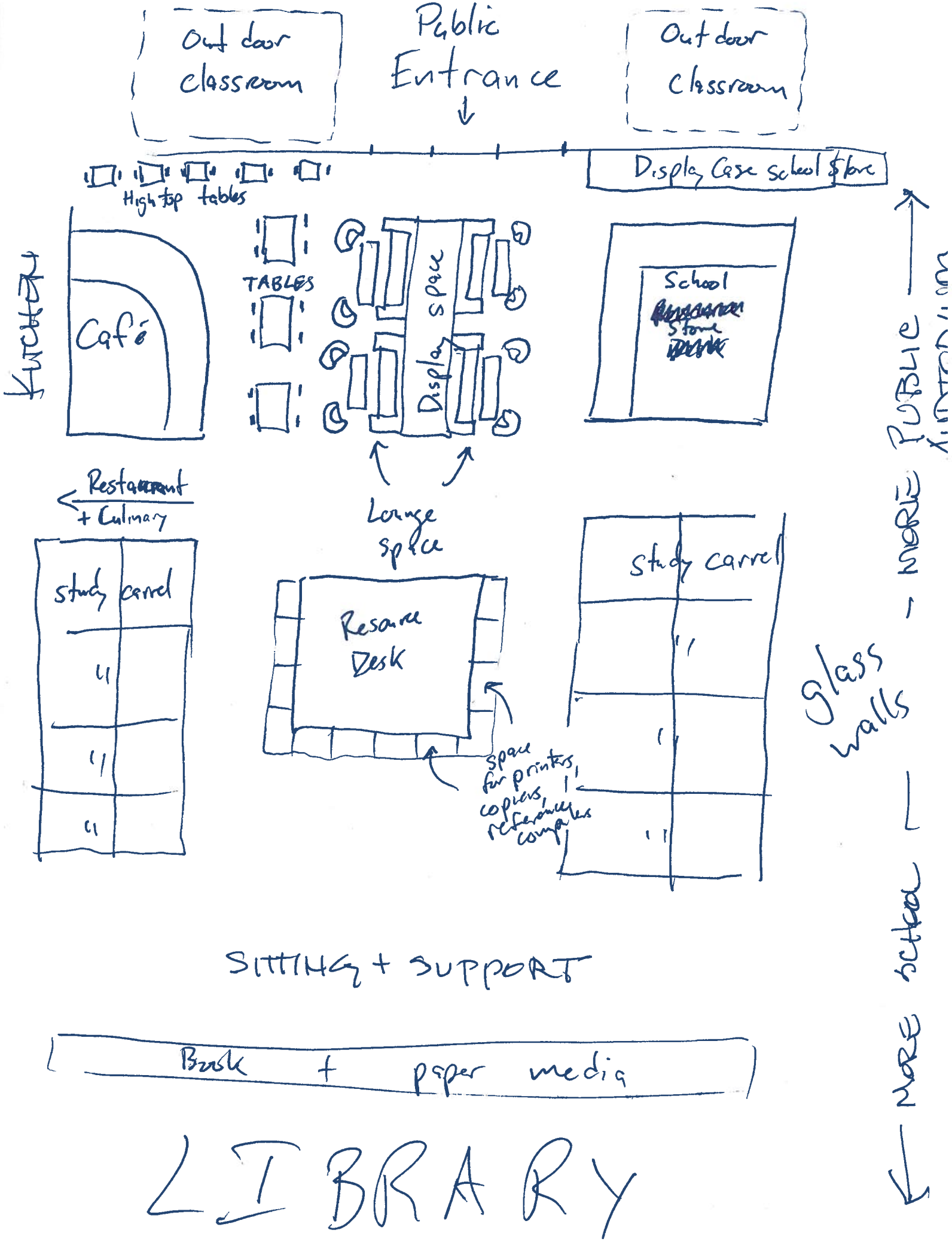
2. shared ownership

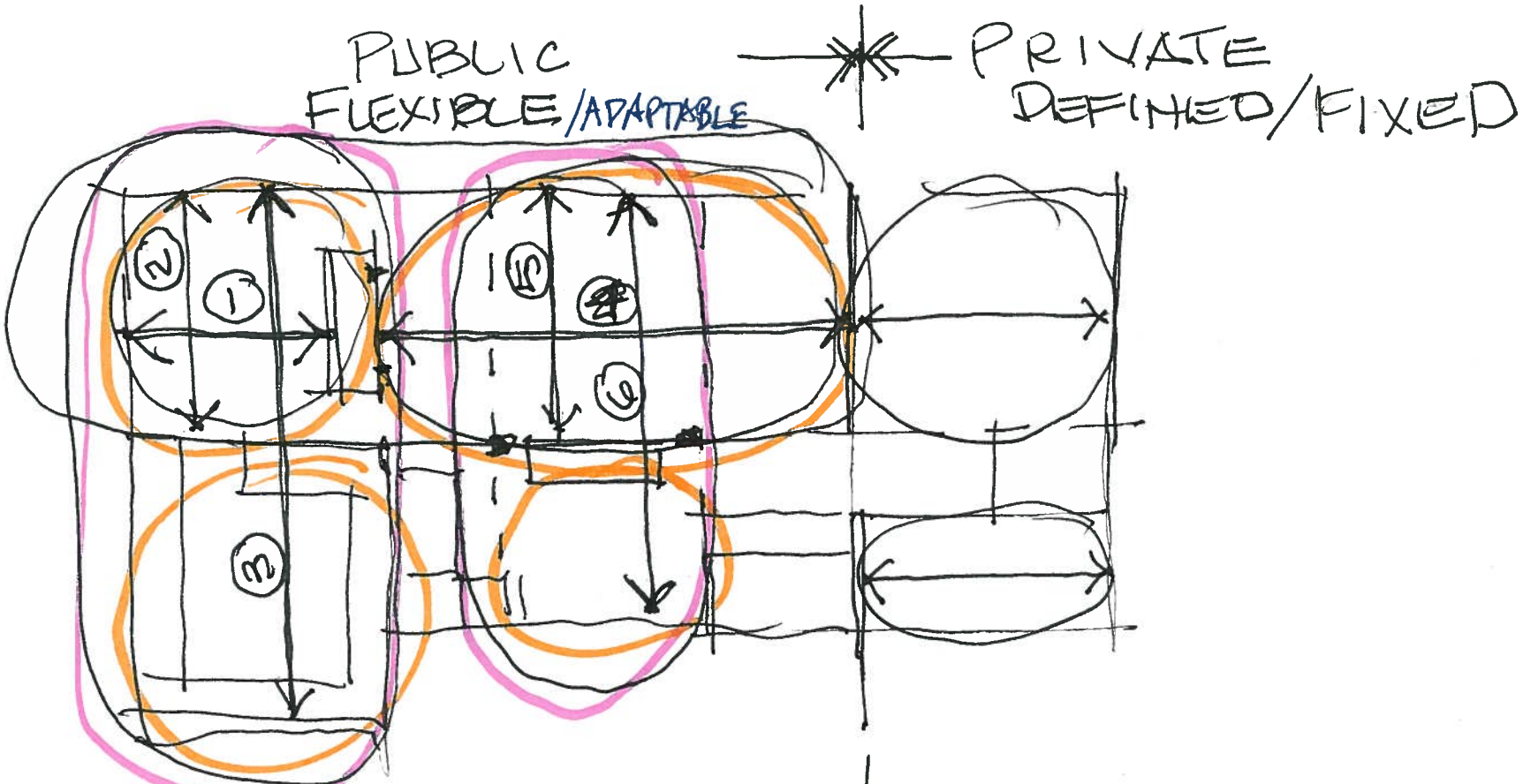
3. company retail

3. public restaurant

hospitality/restaurant

marketing across all CFE


Out door classroom
Public Entrance
Out door Classroom
Display Case school $tore
High top tables
KITCHEN
Café
TABLES
Display space
School Store
Restaurant + Culinary
Lounge space
study carrel
Resource Desk
space for printers, copiers, reference computers
study carrel
glass walls
SITTING + SUPPORT
Book + paper media
LIBRARY
MORE PUBLIC
MORE school



CONCEPT: DESIGN THOUGHT

- OVERLAPPING SPACES THAT FUNCTION IN DIFFERENT WAYS AT DIFFERENT TIMES.
- LIKE SHARED PARKING (DAY/NIGHT) UTILIZES ALL CLASSROOMS ALL (AS MUCH) OF THE TIME.

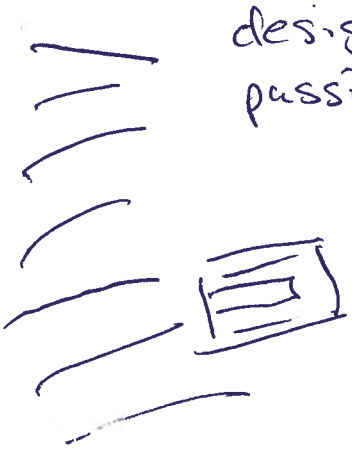
I was horrified by the photo of the kids in the 1-1 classroom because they were all staring at their screens. The space I have in mind has light, high ceilings, and reasons for the students + teachers to be looking at a common object or looking at each other. Maybe that last is pedagogy, but the space should encourage it.

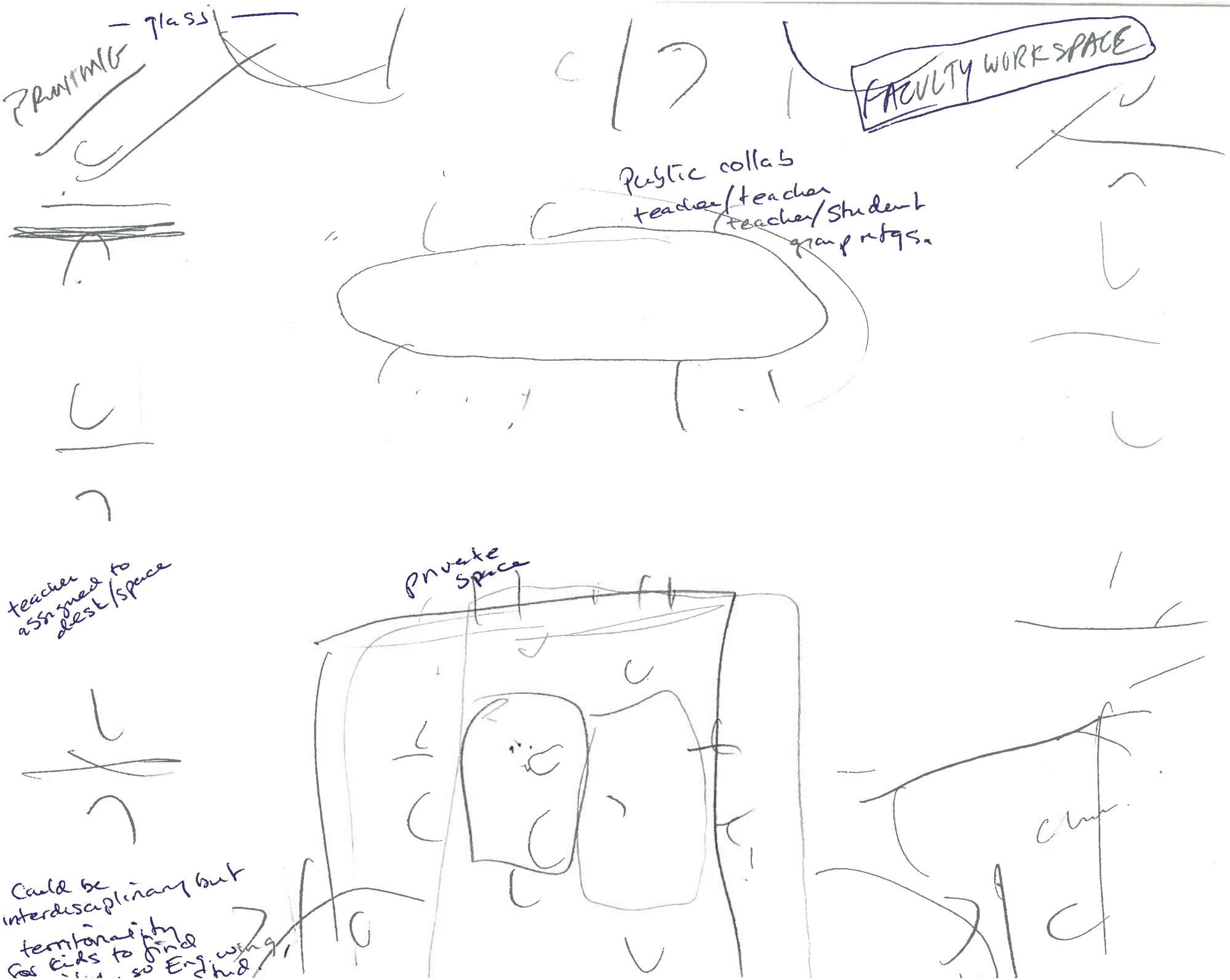
So: the split "cafeterias" with round tables, or maybe a mix of seating (1s, 2s, 3s, 6s) that morph from caf to lounge to study groups to teacher/student chats really appeal. Light, room, high ceilings, flex use

We have long winters: lots of beautiful outdoor spaces that can only be enjoyed from the outside will not work. My space brings the outside in so that it is a 9-month space, not a 2-month diversion of resources.

Colocation that minimizes long trips between classes is so important. ~~The~~

I also am thinking about the tables + benches built into the stairwells at the original Kennedy School at Harvard. It invited students and faculty to sit together in ~~spat~~ small groups + converse. I can't draw! But this is one of my favorite designs for building community interaction into passing space.




PRINTING
Class
FACULTY WORKSPACE
Public collab
teacher/teacher
teacher/student
group mtgs.
teacher assigned to desk/space
private space
Could be interdisciplinary but
territoriality
for kids to find
so Engineering

I can envision a plan to expand BHS to accomodate enrollment growth which involves re-purposing the Shluntz Gym and the Auditorium into two-floors of class-rooms and common spaces. Brookline needs a modern performing arts venue and I wonder whether this could be built new in a location in close proximity to the High School (perhaps in the parking area next to the UA Building). Would the re-use of the gym and auditorium (perhaps with another small addition) accomodate enrollment growth?

1) Create Atrium space in Quad by putting a glass Roof similar to JFK Library or Hyatt Hotel

- New space would be usable year round.
- It becomes new central Hub of BHS
- Roof opens ~~to let in~~ in warm weather.
- multi-level access to all Floors.
- preserves natural light + green space. but

2 Replace Tappan Gym/pool with 4-5 story. multi disciplinary complex - Housing more creative spaces with Athletics

3 Turf Cypress Field in front of BHS to Host Soccer/Football/Lacrosse games.

STEWART SILESTRI
BHS PTO

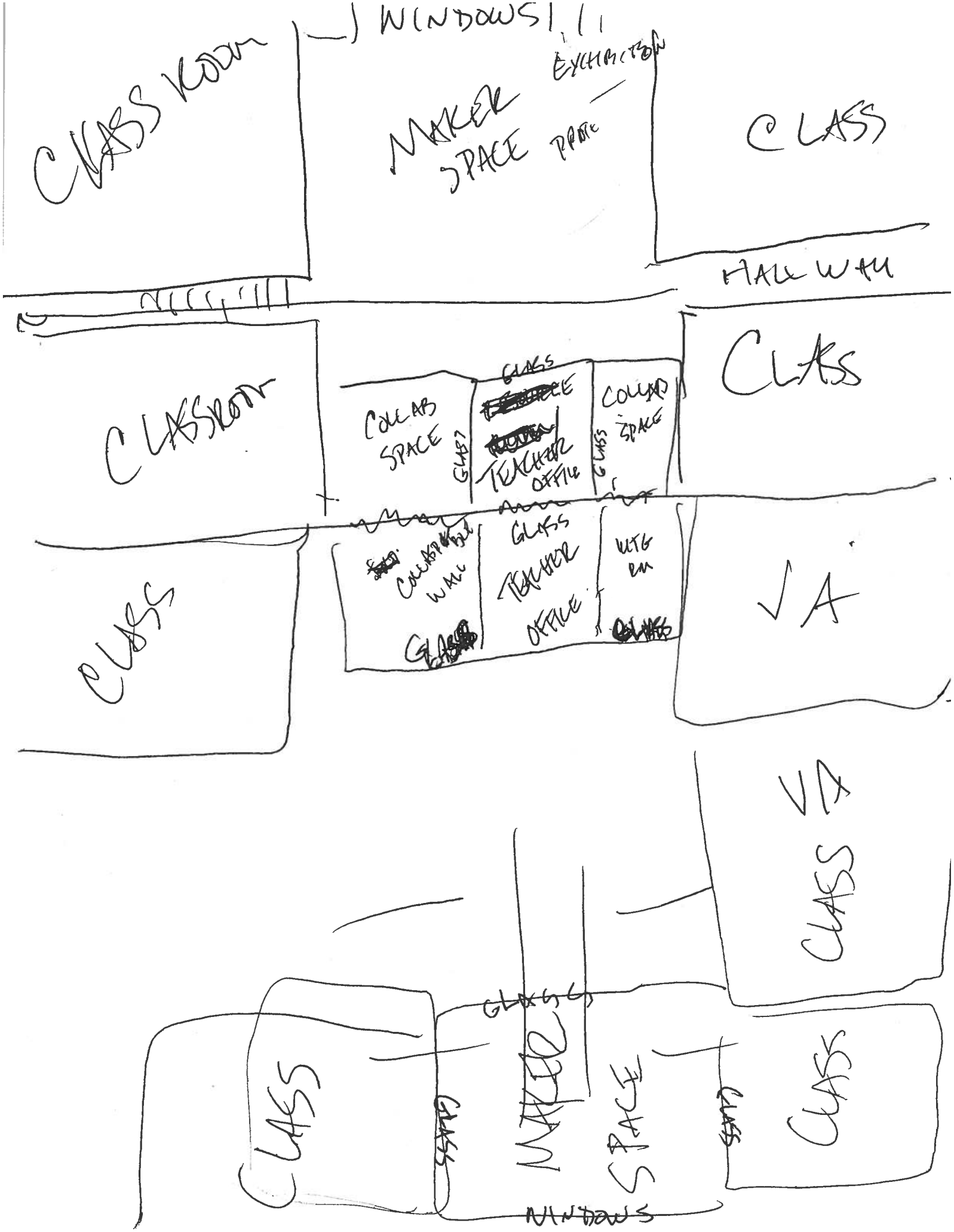
ON OWNERSHIP

IN A LARGE TRANSITORY COMMUNITY HOW CAN ARCHITECTURE SUPPORT CONNECTION, OWNERSHIP IN PLACE? MY CHILDHOOD BEDROOM DOOR WAS ONE OF EIGHT - TWO PER SIDE - GIVING OFF A SMALL SQUARE NON-DESCRIPT HALL, TO MY GREAT DELIGHT ONE DAY I DISCOVERED A SECRET ROOM, NEVER KNOWN OR EXPERIENCED, BY CLOSING ALL EIGHT DOORS AT ONCE FROM THE INSIDE. BY MANIPULATING MY ENVIRONMENT I TOOK POSESSION OF IT. AND JUST AS EASILY I MAGIC'D THE ROOM AWAY WHEN I WAS DONE WITH IT THE CHALLENGE AND OPPORTUNITY IS TO EXTEND THE MANIPULATIVES OF

FLEXIBLE FURNITURE INTO FLEXIBLE ARCHITECTURE THAT INVITES STUDENTS AND TEACHERS TO TAKE POSESSION. EXAMPLE INCLUDE HERTZBERGER'S PLYWOOD SITTING BLOCKS THAT FILL A CORRIDOR PIT AND HOLL'S FUKUOKA HOUSING "HINGED SPACE/ VOID SPACE" (OR STOREFRONT F.A.A.A) FUNABLE PARTITIONS.

EXCITEMENT & ENGAGEMENT!

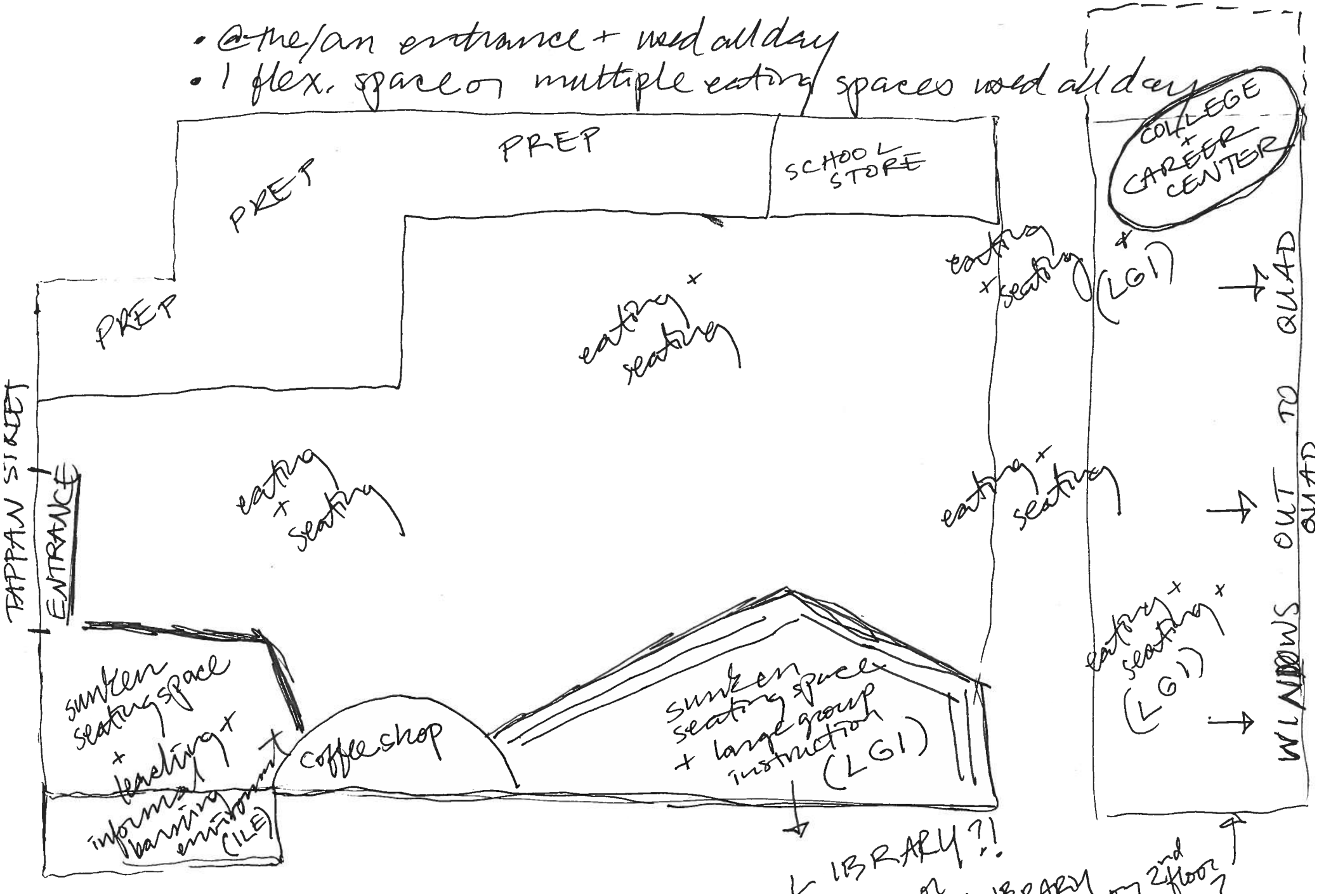
THESE ARE SMALL/INTIMATE MEETING, TUTORING, STUDYING, EATING, ETC SPACES. THEY ARE EVERYWHERE!


WINDOWS
CLASS ROOM
MAKER SPACE
EXHIBITION
PROJ
CLASS
HALLWAY
CLASSROOM
COLLAB SPACE
GLASS
TEACHER OFFICE
COLLAB SPACE
CLASS
CLASS
COLLABORATIVE WALL
GLASS
TEACHER OFFICE
ULTG BM
VA
VA
CLASS
GLASS
CLASS
GLASS
MAKER SPACE
GLASS
CLASS
WINDOWS

CAFE
NEW OUTSIDE GLASS CAFE
CURRENT BACK
PRESENTATION
OPEN W/ OUTDOOR ACCESS
COLLAB SPACE
SEATING
COLLAPSIBLE WALL
KITCHEN SERVING
SERVING
PREP
SERVING
SAME
LARGE ROOM DINING
CLASSROOM
KITCHEN SERVING AREA
SAME
SNACK BAR IN HALL
HALL

CAFE a la Grafton HS (3 lunches)

- one/an entrance + used all day
- 1 flex. space or multiple eating spaces used all day



Describe space

- used for
- how big
- how + when
- feel like (furn / fixtures colors / finishes)
- "blue sky" idea

Full Access Fitness / Health + Wellness Facility

- space for group fitness
  - ↳ compliment PE + H + W curriculum
- space for sm / 1:1 therapy / workouts
- fitness rooms w/ machines + free weights
- small break out rooms for
  - ↳ nutrition classes
  - ↳ cooking classes
  - ↳ demo / info / intro workshops
- accessible to all community members of all abilities + ages - year round
- compliment existing town resources on campus such as
  - ↳ pool
  - ↳ B.I.G.
  - ↳ fields
- adjacent to gymnasiums / dance studios that can be multi-use w/ size and function
- fully equipped w/ access to wi-fi / TV / etc for classes
- small cafe for sales / support healthy

- available during x-blocks
- always available "preresered" for special interest groups
- ↳ classes on safety (ie: concussion trainings)
- true / full access n days / 6a-10pm
- Bright
- Windows
- locker rooms w/ amenities
- gatekeeper

The Whitebox → designed by Juliette Snoemaker (Junior at BHS)

→ used for drama classes

→ NOT used for performances → can be used as "green" room.
- off stage changes
- props.

performance area / small stage

desks, on wheels / easily moved around.

→ small # of desks, not much sitting

closet / connected room used for props / collaboration space

→ natural light / warm colors (opposite of black box)

→ sound-proof / we won't disturb other classes w/ loud noises / skits.

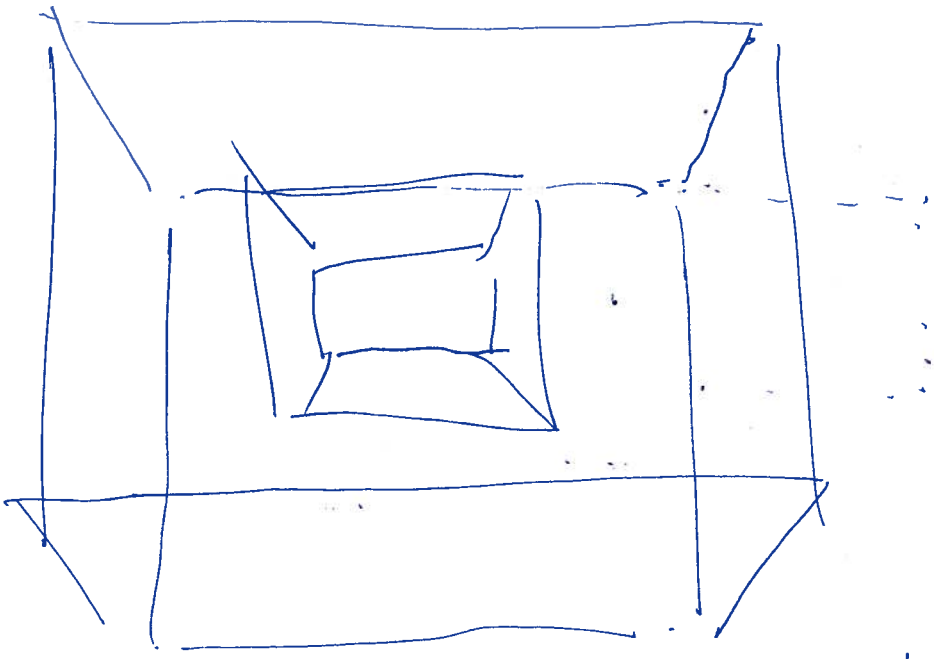
→ floor that is clean / easy to clean
↳ lots of physical activity in drama classes → creates an environment where physical risks are encouraged.

→ lots of small tables available for work w/ writing / scripts.

→ lots of windows

→ bookshelves for scripts and writing to be easily accessible.

- alot storage
- no performances
- maintain practice

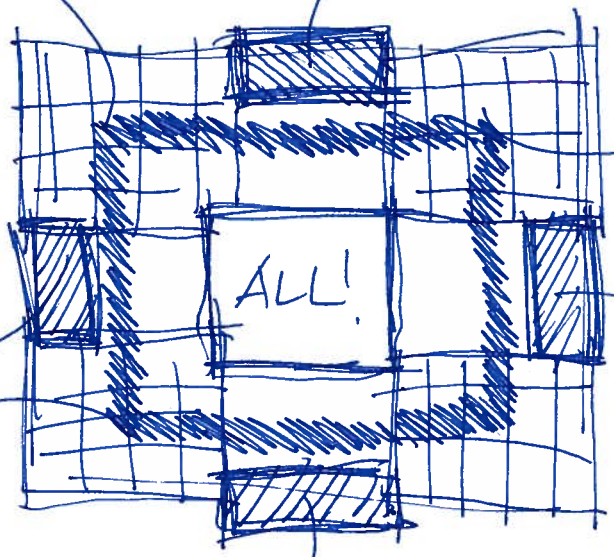


POD - CLUSTER

SCIENCE, MATH
ENG., SS, WL
+ ART/ENGR.

STUDENT/TEACHER SPACE FOR LOUD

SPACE FOR QUIET!



MAKER SPACE

TACTILE

ACADEMIC

COMMUNITY

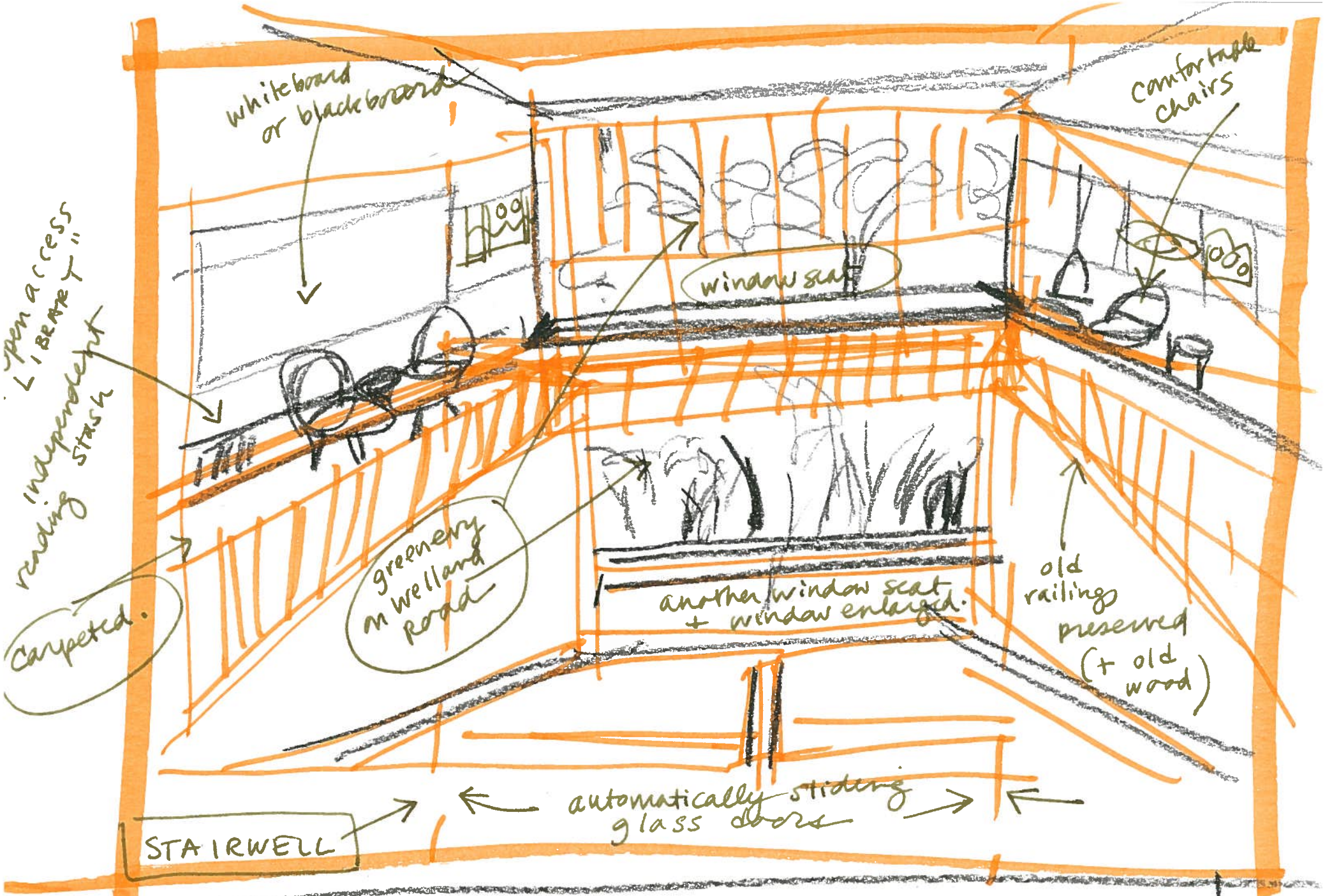
I don't see the need for bigger — more need for flexibility. Let the teacher decide on configurations & give the furniture that allows changes to be made quickly & effectively.

Some of our classrooms — that may feel too small — would feel right-sized were the desks more friendly.

More writing surfaces, more stack space, more free floating chairs, better technology.

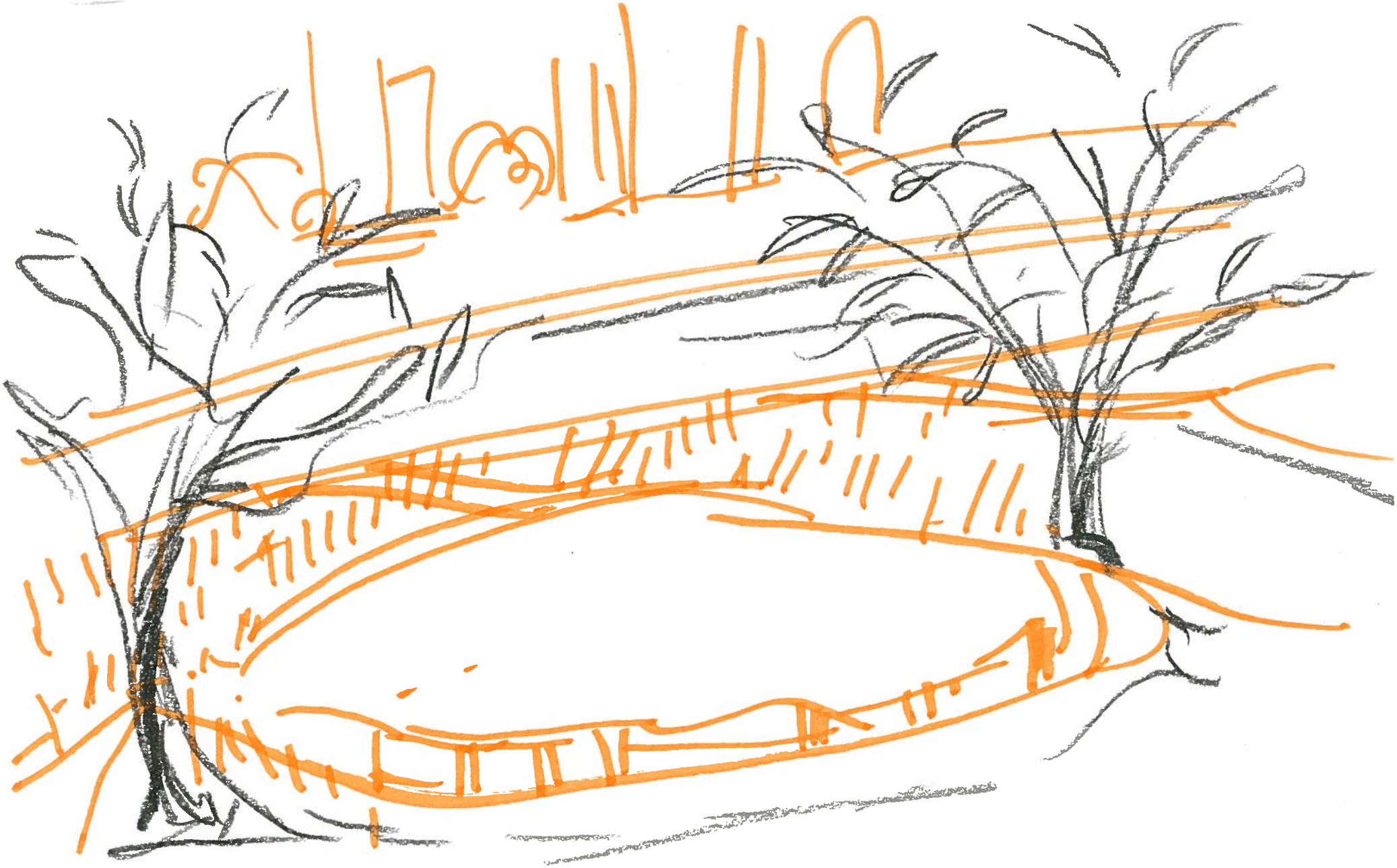
Keep the cars away. The best feature of Pitts is that there is no student parking. This fundamentally directs what happens at the end of the day with kids staying in place in front of the school rather than shuttling off in cars/busses ~~etc~~ etc...

Any scheme that brings student cars in will harm the feel of the campus.



View from 3rd floor corridor nr. 332

NEAR English classrooms, Music office, Drama + Music classrooms.



* near English, Science, Math...
* ~~pressup~~ pre-supposed a IC in classrooms adjacent

TERRACED OUTDOOR CLASSROOM PLATFORMS - Welland Road.

Public Schools of Brookline

Further Study of Brookline High School

Visioning Session #2

September 23, 2014

SMMA

SYMMES MAINI & McKEE ASSOCIATES

STUDY TEAM

- Philip Poinelli, FAIA, CEFP
  - Symmes Maini & McKee Associates SMMA
  - Principal in Charge / Educational Planner
- David Stephen, M.Ed., Architect
  - New Vista Design newvistadesign
  - Architect / Educator / Educational Planner

ISSUES RELATED TO GROWTH

Anticipated enrollment growth of 800 – 900 students = 45% – 50% increase

- Teaching and learning pedagogy / educational delivery
- Curriculum / Program
- Administrative structure
- School Culture

POPULATION PROJECTIONS

Years Out	School Year (FY)	9	10	11	12	Total Enrollement	School Year		Cumulative Increase
	2014	466	444	475	417	**1802**	2014	28	
	2014 - 2015	492	466	444	475	**1877**	2015	75	103
1	2016	536	492	466	444	**1938**	2016	61	164
2	2017	519	536	492	466	**2013**	2017	75	239
3	2018	564	519	536	492	**2111**	2018	98	337
4	2019	656	574	519	536	**2285**	2019	174	511
5	2020	539	656	574	519	**2288**	2020	3	514
6	2021	618	539	656	574	**2387**	2021	99	613
7	2022	676	618	539	656	**2489**	2022	102	715
8	2023	630	676	618	539	**2463**	2023	-26	689
9	2024	645	630	676	618	**2569**	2024	106	795
10	2025					**2600**	assume	31	826

ACTIVITIES SINCE JUNE

- Curriculum - Space Worksheets for varying size populations:

  1,800; 2,100; 2,300 and 2,600 students
- Current Use Plans
- BHS Undersized Spaces (red plans)

CURRICULUM SPACE WORKSHEETS

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	ENGLISH		1.44							
EN1020	Points of View	130	187	18	11	4	44	28	1.57	
EN1030	Respond'g to Literature	318	458	23	20	4	80	28	2.86	
EN2020 EN2022	World Lit: Living The Questions	47	68	18	4	4	16.0	28	0.57	
EN2030	World Literature Honors, Identity, Culture and Meaning	118	170	23	8	4	32.0	28	1.14	
EN2120 EN2130	Future World Literature + Honors	146	210	18	12	4	48.0	28	1.71	
EN2220 EN2230	Real World Literature + Honors	85	122	23	5	4	20.0	28	0.71	
EN3020 EN3022	American Literature	110	158	23	7	4	28.0	28	1.00	
EN3030	American Literature Honors	243	350	23	15	4	60.0	28	2.14	
EN4020	Stranger in Literature (Land)	17	24	23	1	4	4.0	28	0.14	
EN4030	Stranger in Literature Honors	50	72	23	4	4	16.0	28	0.57	
EN4220 EN4222	Biography and Autobiography	40	58	23	3	4	12.0	28	0.43	
EN4430	English Literature Honors (British?)	50	72	23	3	4	12.0	28	0.43	
EN4530	European Literature	14	20	23	1	4	4.0	28	0.14	
EN4600	Craft of Writing	65	94	23	4	4	16.0	28	0.57	
EN4700	Public Speaking	66	95	23	4	4	16.0	28	0.57	
EN4800	Fiction and Film	46	66	23	3	4	12.0	28	0.43	
EN4900	Communication for Entrepreneurs	30	43	30	2	4	8.0	28	0.29	
IDO100	Journalism I	28	40	23	2	4	8.0	28	0.29	
IDO 130	Journalism Honors	26	37	23	2	4	8.0	28	0.29	
	ENGLISH SUBTOTAL	1629	2,346						15.86	
							15.86	**/ .85 =**	**18.7**	**Say 19 English Classrooms**
									ASSUME 19 ENGLISH CLASSROOMS	
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

BHS CORE CURRICULUM CLASSROOM NEED

		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)	Total Support Space SF	Comments
Core Academic											
EN	English	14	14	16	18	19	9805	17100		1260	
WL	World Languages	15	15	17	18	20	10865	18000		1175	
WL	Language Lab	1	1	1	1	1	1275	1275			
SO	Social Studies	11	11	12	14	15	7600	13500		800	
MA	Math	13	15	17	19	21	9125	18900		1490	
HF	Wellness	0	1	2	2	2	0	1800			needs review
	Classroom total	**54**	**57**	**65**	**72**	**78**	**38670**	**70575**	**31905**		
			+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**	18775	33120	**14345**		
	STEM?										

CAMPUS AERIAL VIEW

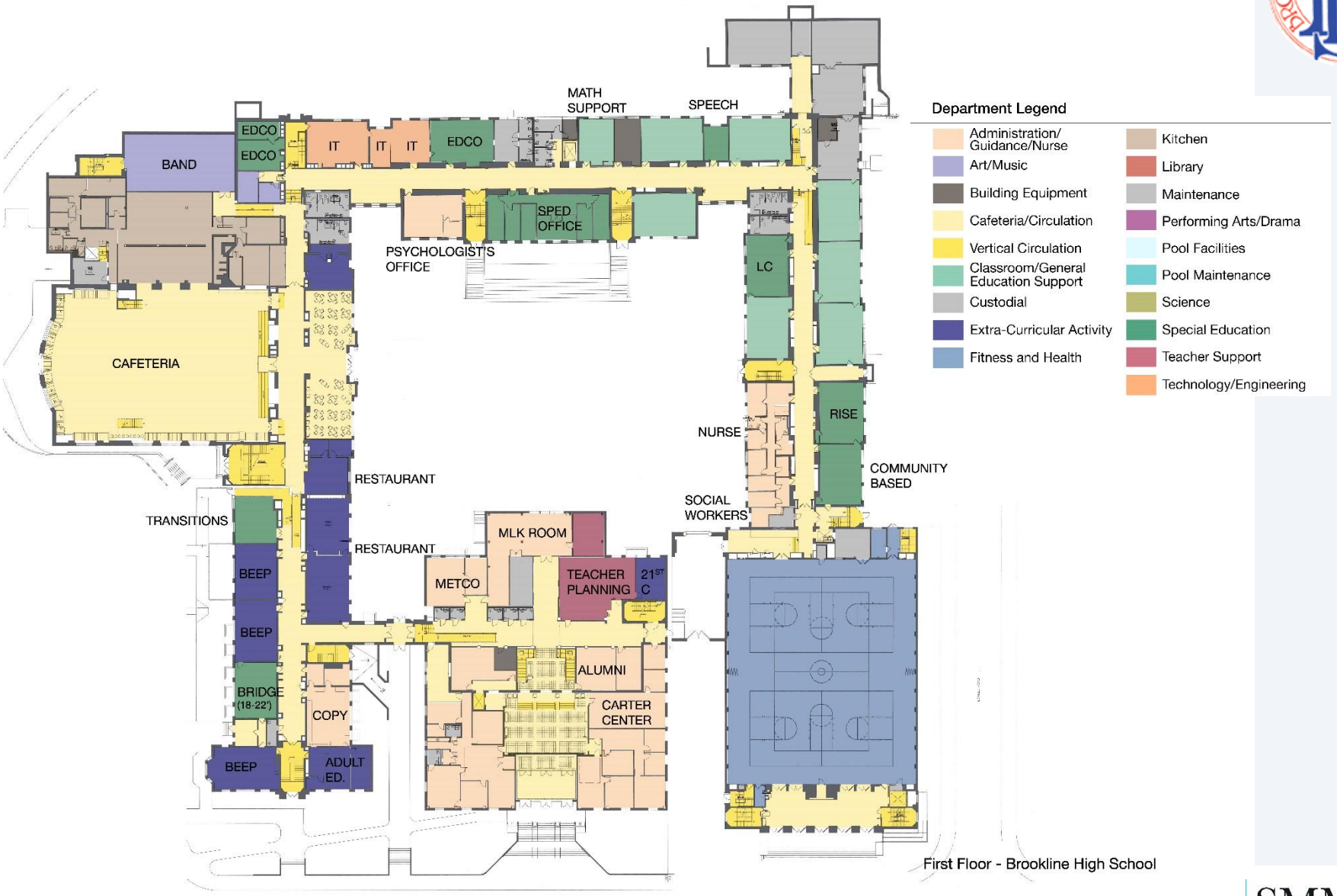
Aerial of the Brookline High School Campus

From HMFH Concept Study Report

Brookline High School

SMMA

BHS CURRENT USE PLAN



SMMA

BHS CURRENT USE PLAN

Second Floor - Brookline High School

SMMA
SYMES MAINI & McKEE ASSOCIATES

BHS CURRENT USE PLAN

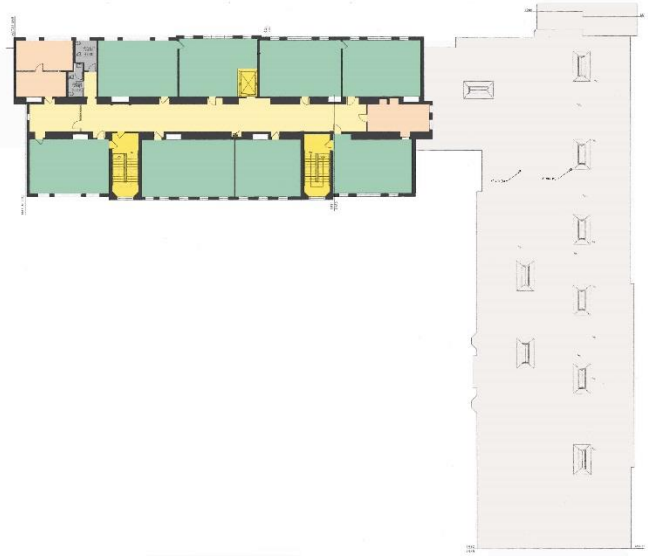
Department Legend

- 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
- Technology/Engineering

Third Floor - Brookline High School

SMMA
SYMES MAINI & McKEE ASSOCIATES

BHS CURRENT USE PLAN



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- Pool Facilities
- Pool Maintenance
- Science
- Special Education
- Teacher Support
- Technology/Engineering

Fourth Floor - Brookline High School

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SYMES MARONI & McKEE ASSOCIATES

BHS UNDERSIZED SPACES – 1ST FLOOR

First Floor - Brookline High School

10% or Greater < MSBA space summary based on current enrollment

SMMA

BHS UNDERSIZED SPACES – 2ND FLOOR

Second Floor - Brookline High School

10% or Greater < MSBA space summary based on current enrollment

SMMA

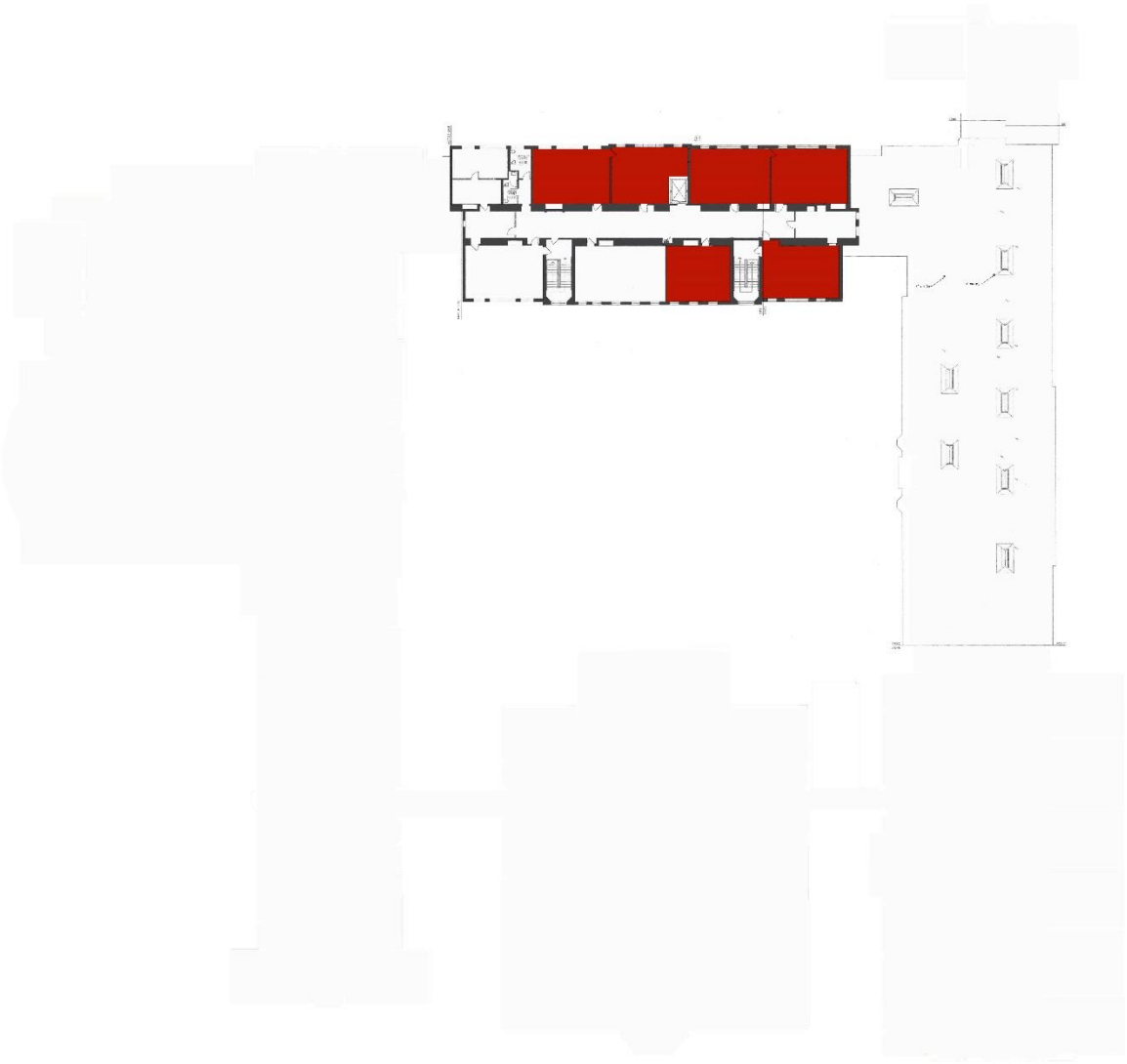
BHS UNDERSIZED SPACES – 3RD FLOOR

Third Floor - Brookline High School

10% or Greater < MSBA space summary based on current enrollment

SMMA

BHS UNDERSIZED SPACES – 4TH FLOOR



Fourth Floor - Brookline High School
10% or Greater < MSBA space summary based on current enrollment

SMMA
SYMES MAINI & McKEE ASSOCIATES

SCHEDULE

- Planning Committee Meetings
- 2020 Committee / Department Heads
- Visioning (Session 1) Tuesday 6/24
- Summer Meeting w/ Committee
- In-house analysis
- 2020 Committee / Department Heads - Early Fall
- Visioning (Session 2) Early Fall
- Development of Options
- Review with Planning Committee & Community
- Final Report by end of 2014

Questions / Discussion

Toward BHS Guiding Principles for Design

September 23, 2014

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Guiding Principles

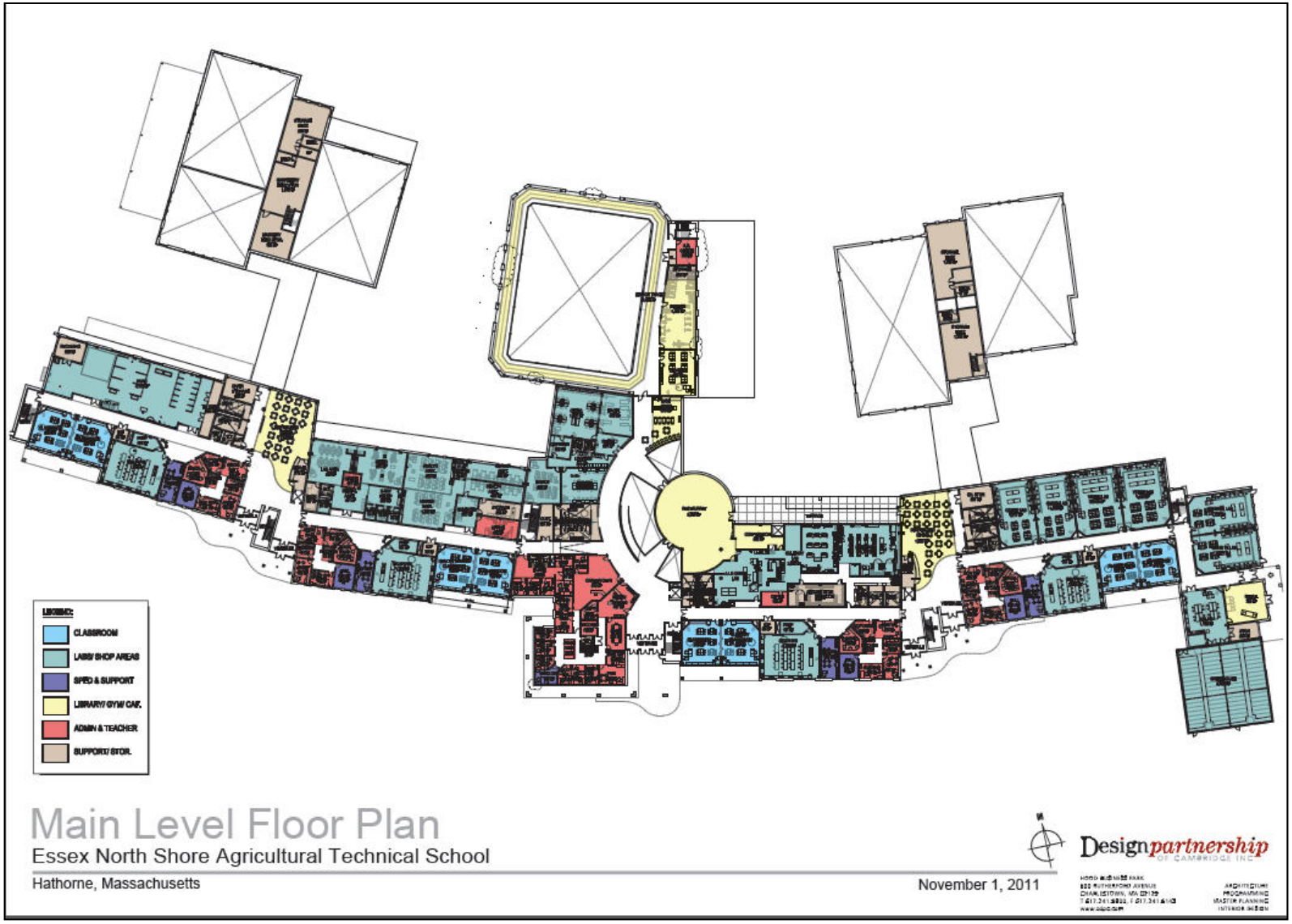
For Design

Guiding Principles set design priorities, and offer an invaluable framework for making decisions and choices as the design process unfolds…

Essex Tech

Technical and Agricultural High School

1. Learning by Thinking and Doing
2. Real Connections to 21st Century Skills
4. Small School Academies, Large School Pride
5. Relationship Building
6. Adaptability and Flexibility


LEGEND:
CLASSROOM
LABS/ SHOP AREAS
SPED & SUPPORT
LIBRARY/ GYM/ CAF.
ADMIN & TEACHER
SUPPORT/ STOR.
Main Level Floor Plan
Essex North Shore Agricultural Technical School
Hathorne, Massachusetts
November 1, 2011
Designpartnership
OF CAMBRIDGE INC.

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Design Partnership of Cambridge - With New Vista Design

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City Neighbors

Charter High School

1. Inquiry-Based Learning
2. Arts Integration
3. Reggio Emilia Inspired
4. Cooperative, NOT Competitive
5. Small School Model
6. Community Outreach

21st Century Classrooms

Advisory Pods

Transparency and Wayfinding

Professional / Non-Institutional

Seating and Display

Multiple Venues For Learning

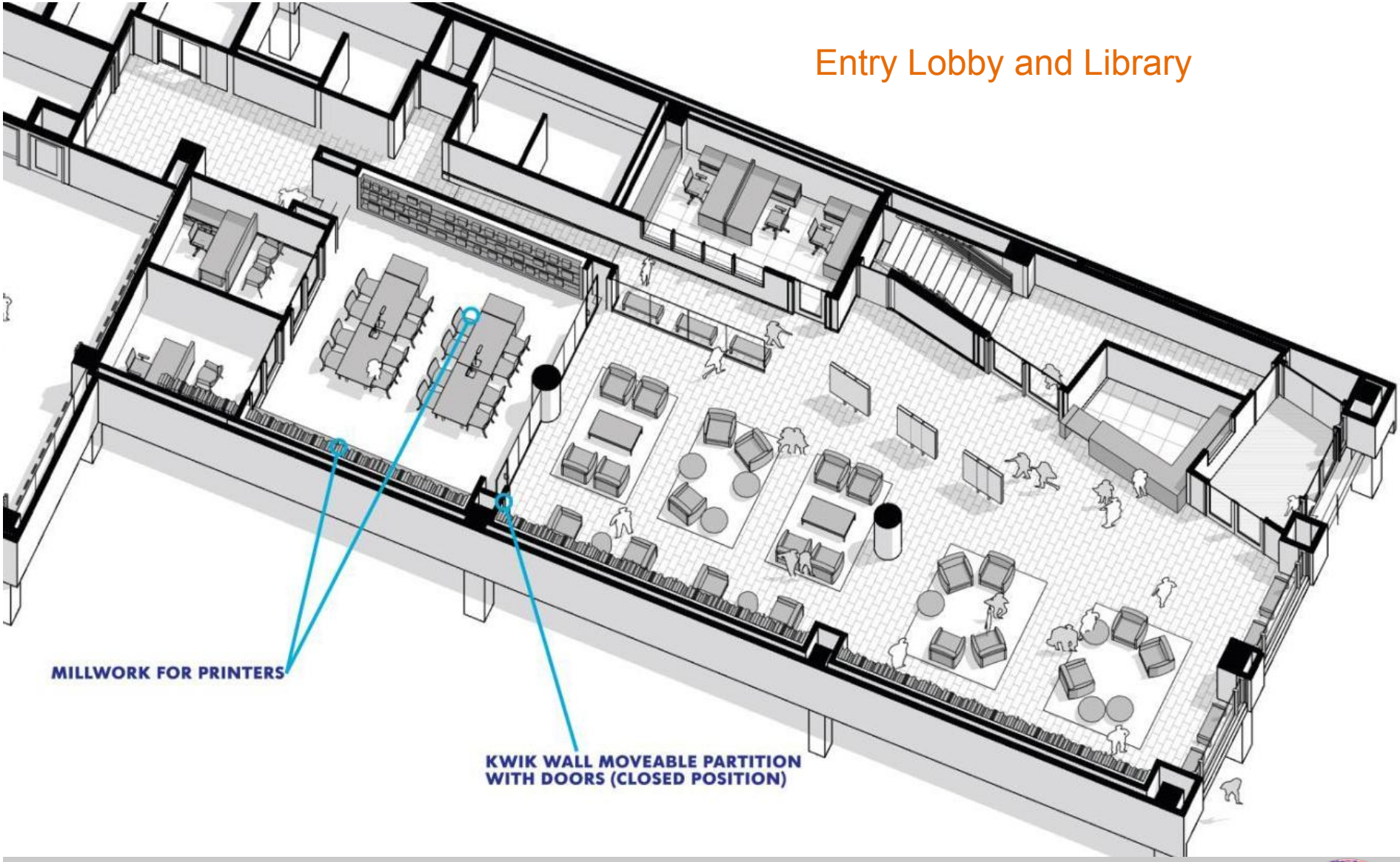
Media Café

Harlem Village
Academy

125th Street Elevation Cooper Roberson Partners Architects

- Timeless and classical program elements
- High expectations & accountability
- Community excitement and visibility
- Front and back door identities
- Learning complex

Entry Lobby and Library



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Studios Architects with New Vista Design

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Studios Architects with New Vista Design

125th Street Gallery

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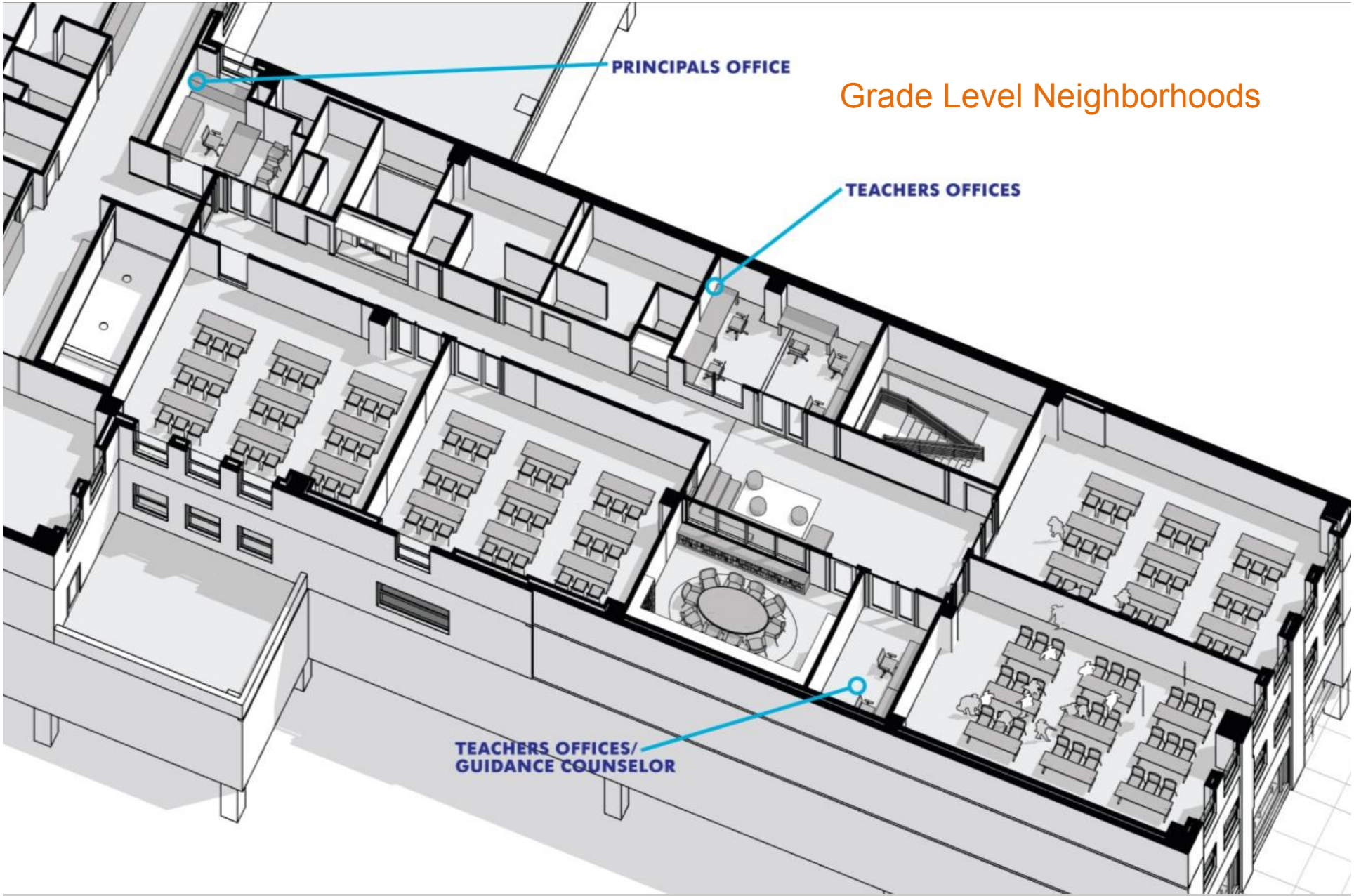
Studios Architects with New Vista Design

Grade Level Neighborhoods



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Grade Level Commons

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Studios Architects with New Vista Design

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Studios Architects with New Vista Design

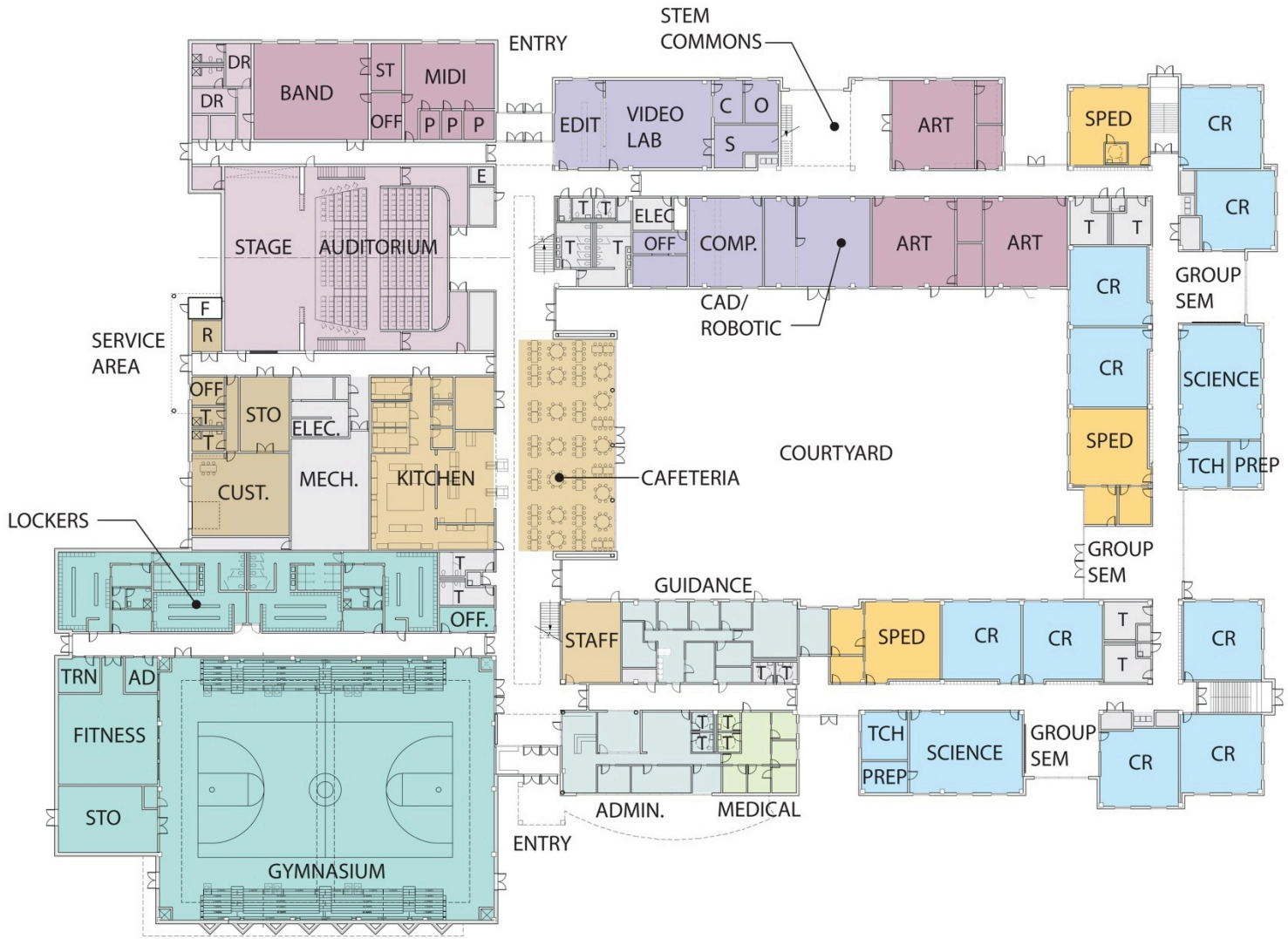
Grade Level Harkness

West Bridgewater

Middle High School

West Bridgewater Guiding Principles

1. School as Community Resource
2. STEM/Art Integration (STEAM)
3. Personalization, Connection and Ownership
4. Adaptability and Evolution
5. Visible Learning
6. Outdoor Connections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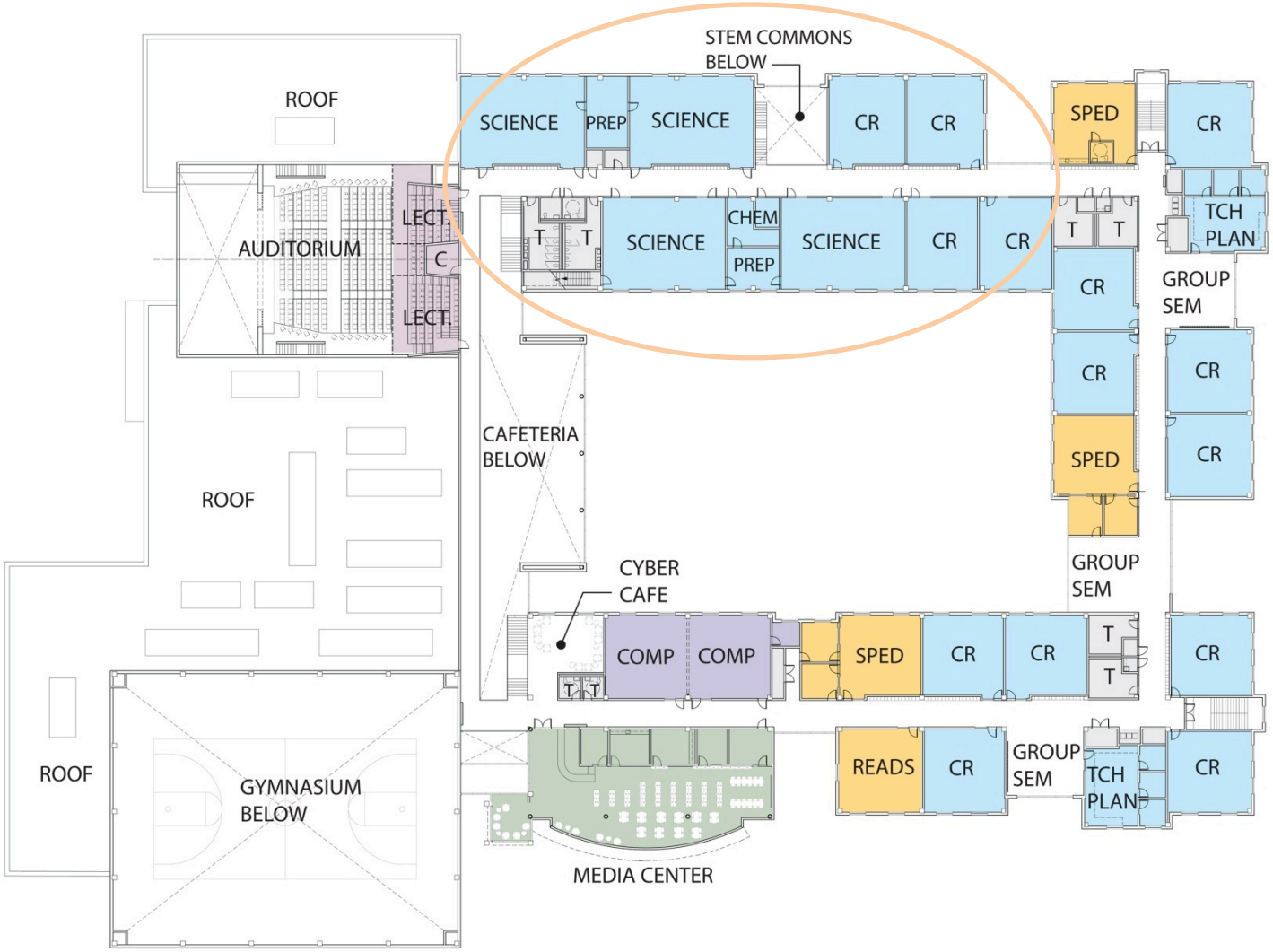
STEM COMMONS BELOW
ROOF
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READS
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GROUP SEM
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CR
MEDIA CENTER

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Envisioning 21st Century Schools © 2014

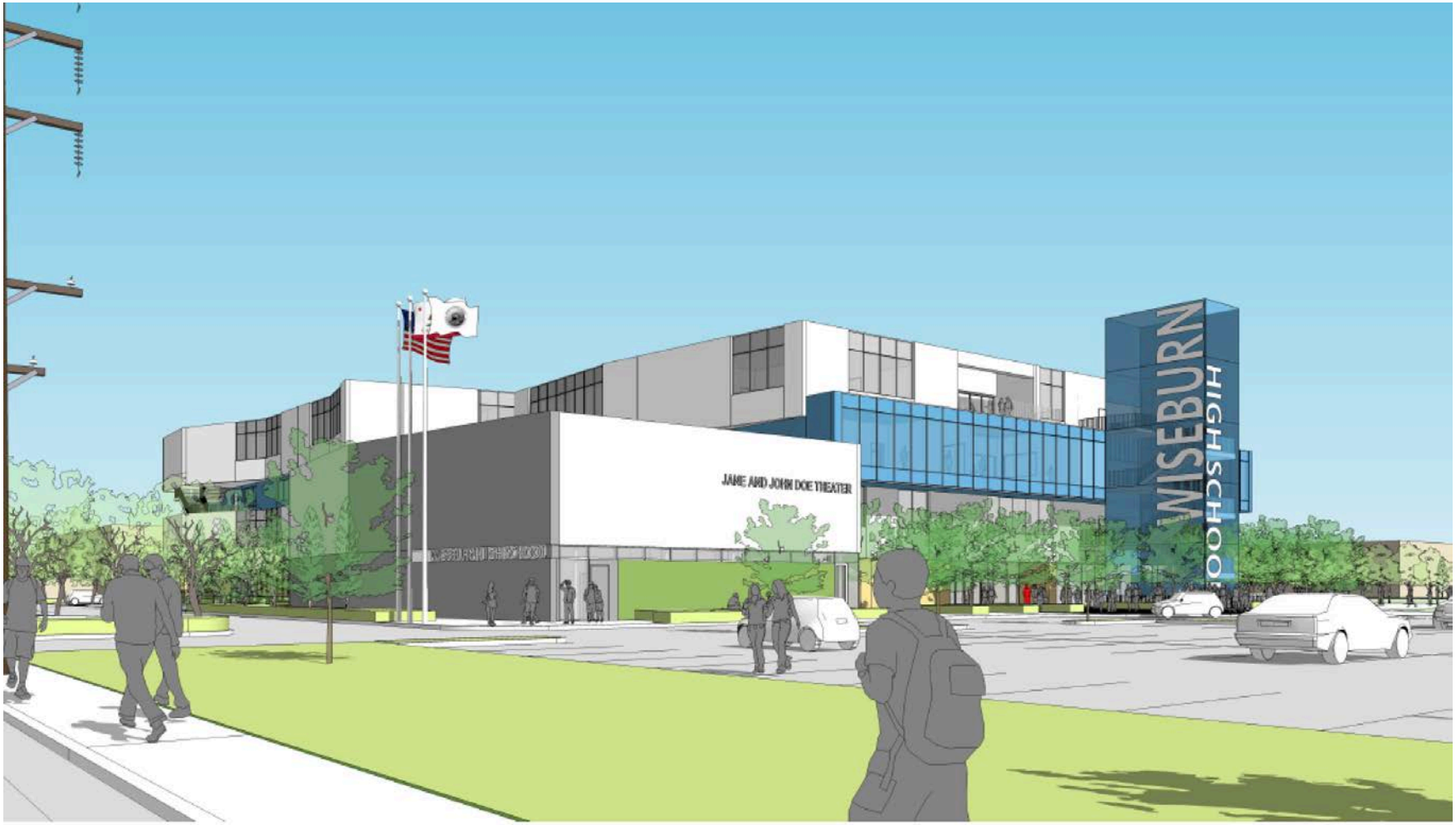
Flansburgh Architects

Da Vinci Schools

Wiseburn Campus

DA VINCI SCHOOLS

1. Personalization
2. Autonomy, Community and Synergy
3. Learning Community
4. Palpable Learning
5. Unification



WISEBURN HIGH SCHOOL
Gensler

SCHEMATIC DESIGN PACKAGE VIEW FROM SIDEWALK ALONG DOUGLAS STREET

WISEBURN HIGH SCHOOL
Gensler

INTERIOR SECTIONAL PERSPECTIVE

Wiseburn Unified School District Office

DA VINCI SCIENCE

Da Vinci CMO Home Office

DA VINCI communications

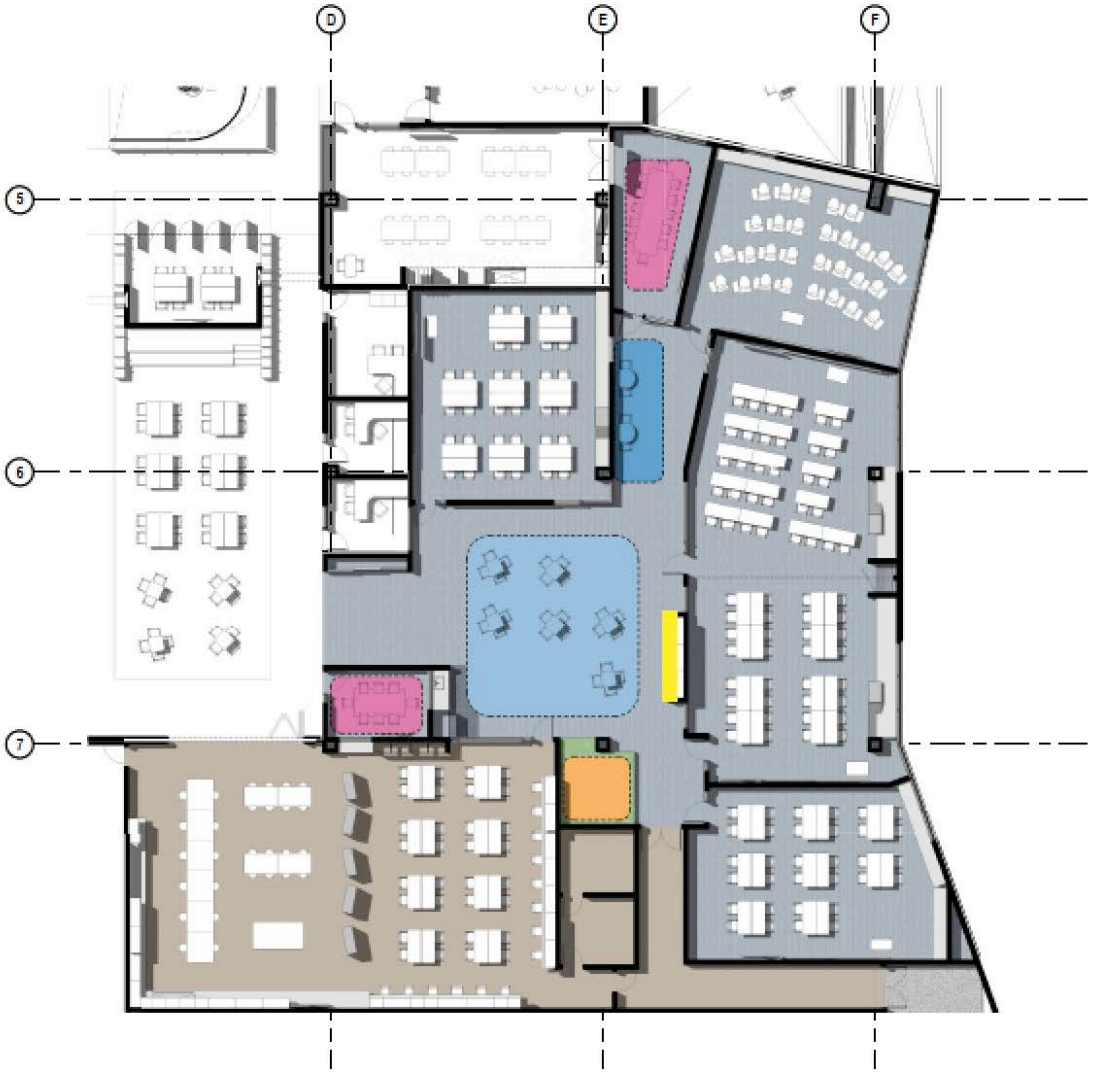
DA VINCI design

WISEBURN HIGH SCHOOL
Gensler

COLOR PALETTES

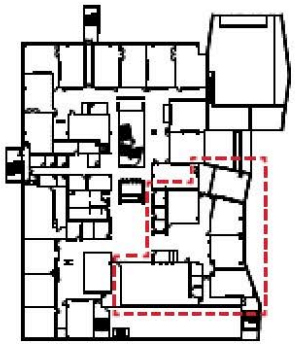
N

08.30.2013



Hub Activity Zones

- LARGE GROUP
- SMALL GROUP
- NOOK
- SEMINAR ROOM
- TEACHING WALL



key plan

WISEBURN HIGH SCHOOL
Gensler

DA VINCI SCIENCE - SOUTHEAST HUB

WISEBURN HIGH SCHOOL
Gensler

DA VINCI SCIENCE - NORTHEAST HUB

Metro

High School

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Metro School – Fielding Nair International

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Metro School – Fielding Nair International

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Metro School – Fielding Nair International

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Envisioing 21st Century Schools

Metro School – Fielding Nair International

Christian Brothers

High School

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Envisioing 21st Century Schools

Christian Brothers HS– DLR Architects

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Envisioing 21st Century Schools

Christian Brothers HS– DLR Architects

SMMA

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Envisioing 21st Century Schools

Christian Brothers HS– DLR Architects

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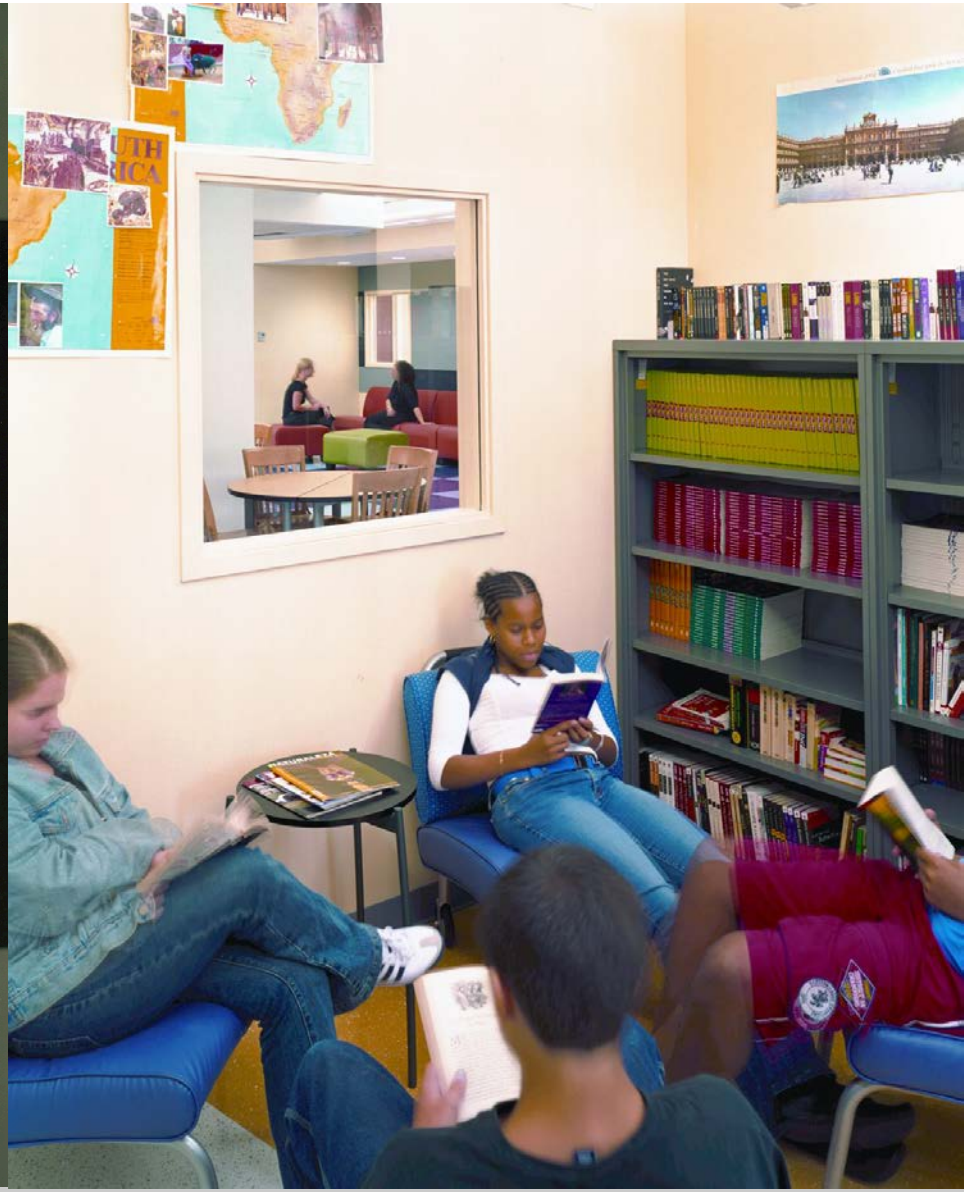
Envisioing 21st Century Schools

Christian Brothers HS– DLR Architects

Millennium

High School

EXIT
EXIT



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Millennium HS– JCJ Architects

SMMA

newvistadesign
Envisioing 21st Century Schools

Millennium HS– JCJ Architects

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VMDO Architects

SMMA

newvistadesign
Envisioing 21st Century Schools

VMDO Architects

SMMA

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Envisioing 21st Century Schools

VMDO Architects

SMMA

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Envisioing 21st Century Schools

VMDO Architects

What Should BHS's Guiding Principles Be?

Appendix

6.2 Presentations to the Staff, Community and Visioning

Note: Not All PowerPoint Presentations Are Included in This Appendix

- Public Schools of Brookline Further Study of Brookline High School, June 18, 2014
- Public Schools of Brookline Further Study of Brookline High School, Capital Sub-Committee, December 18, 2014
- Public Schools of Brookline Further Study of Brookline High School, BHS Options Refinement Presentation, February 26, 2015
- Public Schools of Brookline Further Study of Brookline High School, School Committee Presentation and Discussion, March 26, 2015

Public Schools of Brookline

Further Study of Brookline High School

June 18, 2014

SMMA

SYMMES MAINI & McKEE ASSOCIATES

STUDY TEAM

- Philip Poinelli, FAIA, CEFP
  - Symmes Maini & McKee Associates SMMA
  - Principal in Charge / Educational Planner
- David Stephen, M.Ed., Architect
  - New Vista Design newvistadesign
  - Architect / Educator / Educational Planner

SMMA

Significant Master Plan Experience

Comprehensive K-12 Portfolio

Extensive High School Experience

Leadership in Sustainable Design

Fully Integrated Design Approach

In-House Team of Experts

Personal Commitment

EXPERIENCE IN MASTER PLANS

Sandwich Schools
Marblehead Schools
Swampscott Schools
Grafton Schools
Tewksbury Schools
Bridgewater-Raynham Schools
Medway Schools
Wellesley K-5

East Greenwich Schools
Bristol Warren Schools
Barrington Schools
Pawtucket Schools
East Providence Schools
North Kingstown Schools
Stow K-8
Stoneham K-5

RECENT SMMA STUDIES / MASTER PLANS

Lexington Public Schools Master Plan (current):
Significant recent population increase; mixed infrastructure

Wellesley School District (ongoing):
Increasing population, mixed infrastructure

Waltham School District (ongoing):
Significant recent population increase; more increases anticipated; new infrastructure for K-8; declining HS infrastructure

Hamilton-Wenham Regional School District (recently completed):
Significantly declining population; mixed infrastructure

Sharon High School (completed 2014):
Stable population; declining infrastructure

East Longmeadow School District (completed 2013):
Stable population; declining infrastructure

Winchester High School (comprehensive renovation in design)
25% population increase, poor infrastructure

ISSUES RELATED TO GROWTH

Anticipated enrollment growth of 800 – 900 students = 45% – 50% increase

- Teaching and learning pedagogy / educational delivery
- Curriculum / Program
- Administrative structure
- School Culture

PROCESS

- Community Engagement – Visioning
- Academic Assessment of Building
  - Size & number of Science
  - Size & number of classrooms / labs / studios
  - Academic and cultural support: library, café, gyms, etc
- Development of Educational Program based on curriculum and future thinking
  - New programs
  - New delivery models
- Development of Options
- Review with Planning Committee & Community

SCHEDULE

- Planning Committee Meetings
- 2020 Committee / Department Heads
- Visioning (Session 1) Tuesday 6/24
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- In-house analysis
- 2020 Committee / Department Heads - Early Fall
- Visioning (Session 2) Early Fall
- Development of Options
- Review with Planning Committee & Community
- Final Report by end of 2014

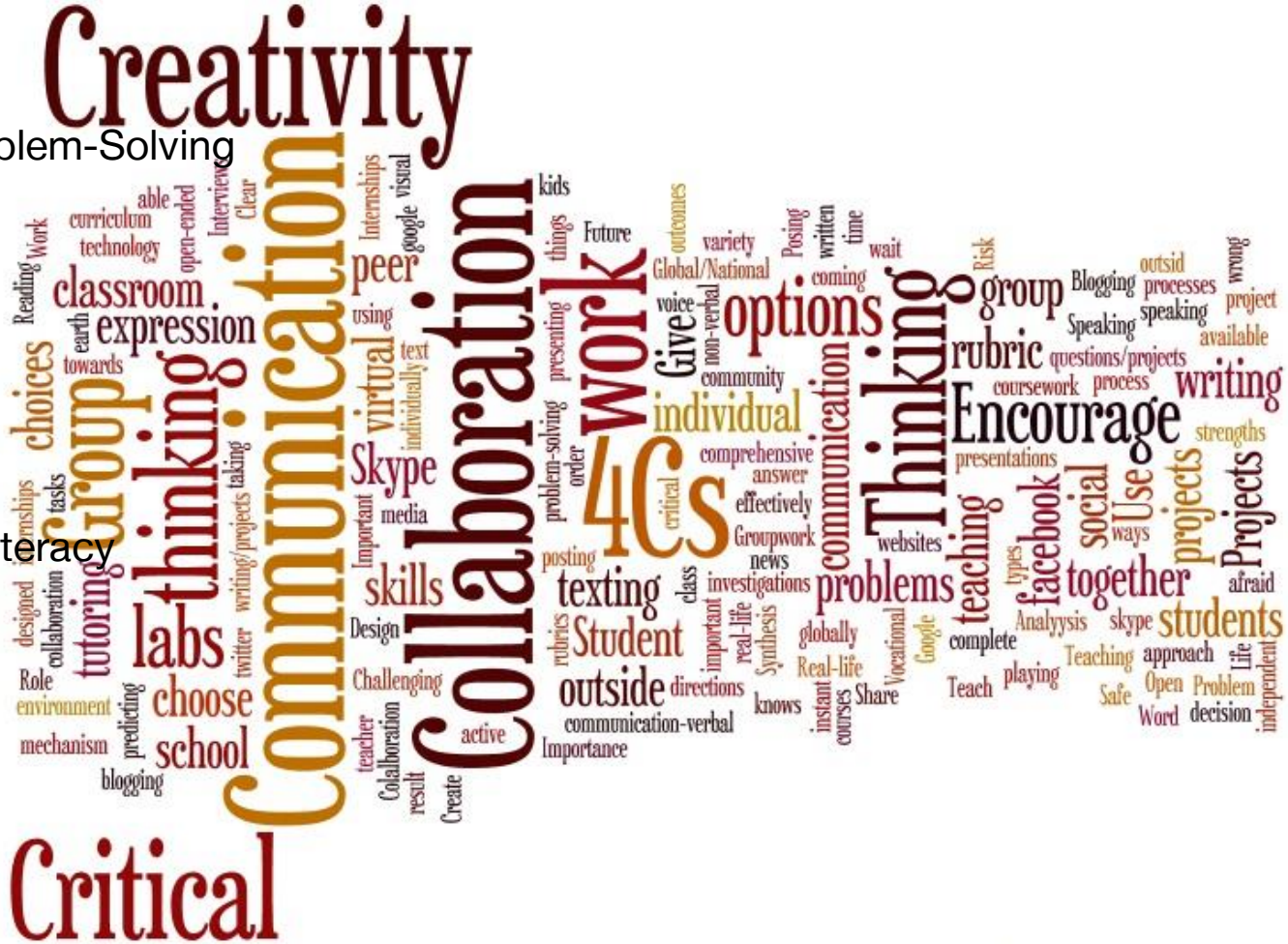
STATUS QUO OR FUTURE THINKING?

Or

SMMA

21ST CENTURY SKILLS

- Critical Thinking and Problem-Solving
- Creativity and Innovation
- Collaboration
- Communication
- Information and Media Literacy
- Global Awareness
- Self-Directed Learning


Creativity
Communication
Collaboration
Critical
4Cs
Thinking
work
options
Encourage
group
classroom
expression
thinking
labs
choices
tutoring
peer
Skype
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Projects
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knows
directions
communication-verbal
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Challenging
Design
Important
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posting
problem-solving
order
critical
presenting
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individually
using
Colaboration
result
Create
teacher
twitter
writing/projects
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collaboration
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mechanism
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news
Groupwork
effectively
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critical
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individually
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news

NEW EDUCATIONAL MODALITIES

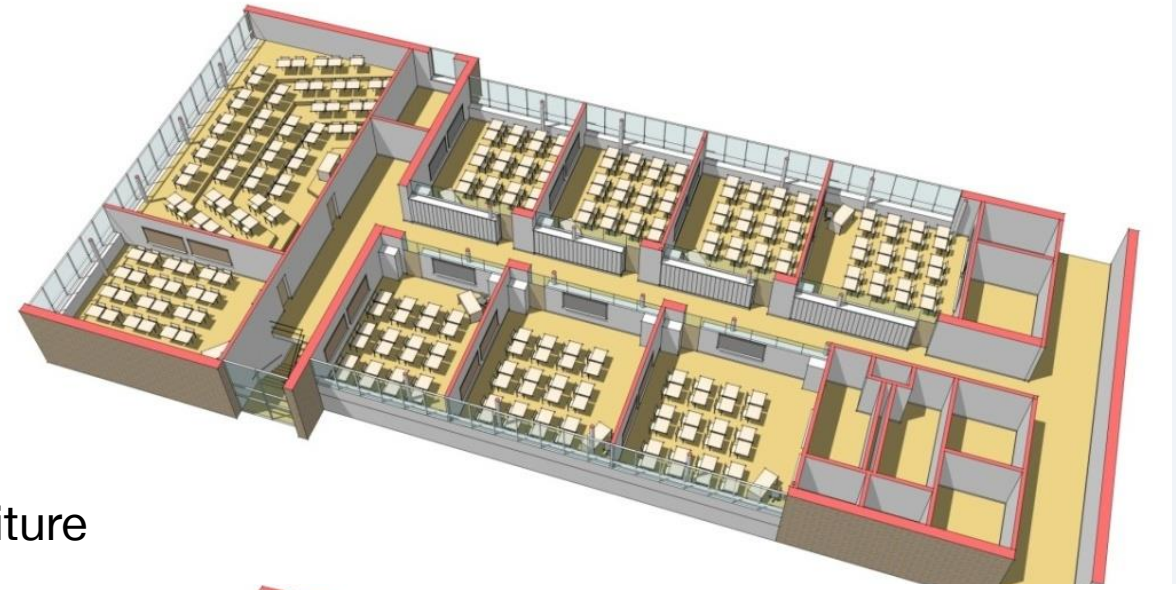
SMMA

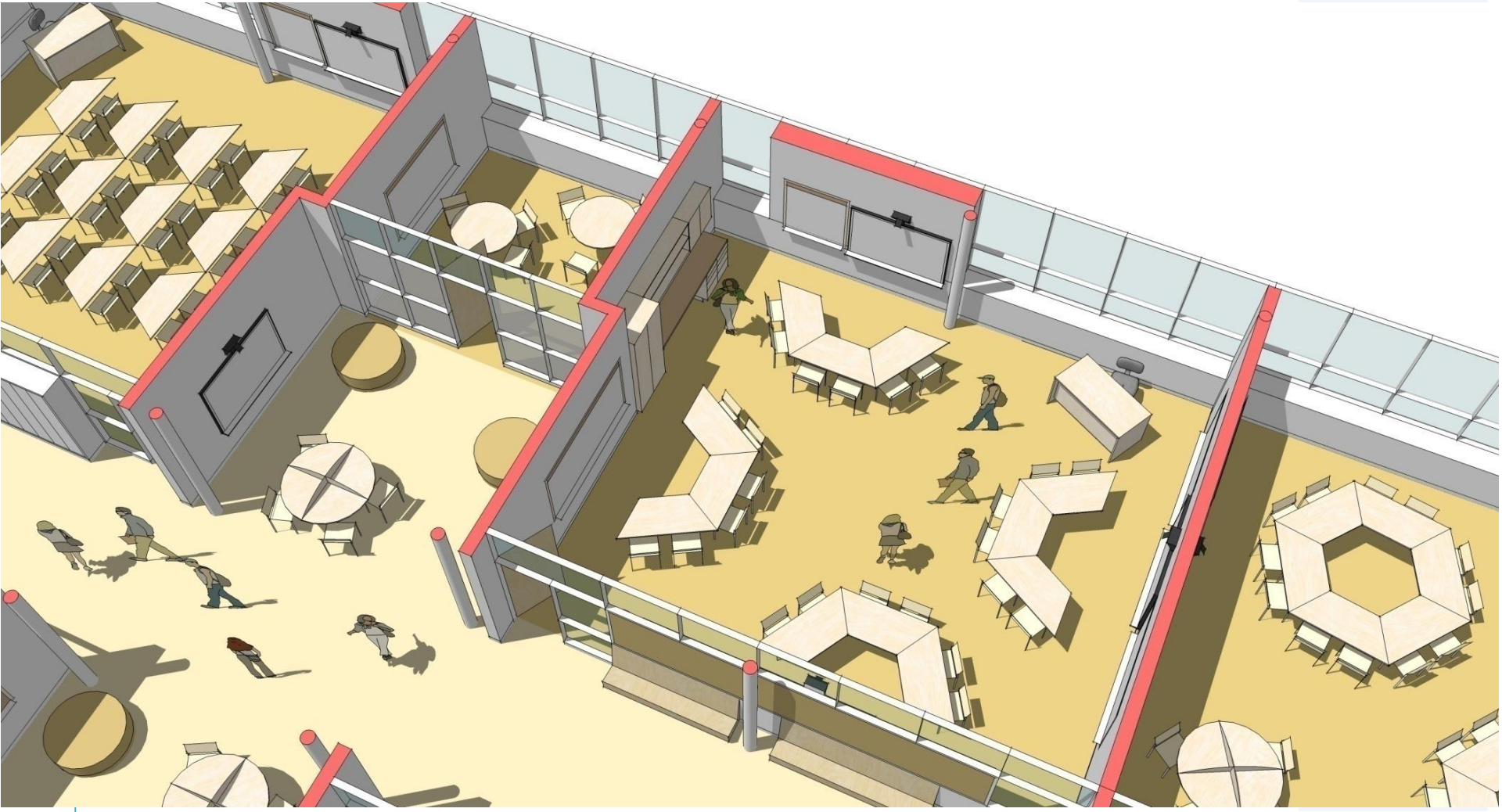
RE-EXAMINE / RETHINK EDUCATIONAL DELIVERY

Past / Present		Goals
Teacher Centric	→	Student Centric
Passive Learning	→	Active Learning
Classrooms	→	Flexible Learning Environments
Conventional Technology	→	1:1 Technology Environments
Individual	→	Collaborative
Subject-Based	→	Project-Based

EXISTING vs. RENOVATIONS / RECONFIGURATION

- Flexible Classrooms
- Multiple Teaching Walls
- Use of Corridors
- Interactive / Ergonomic Furniture
- Control of Environments
- Low-Cost 21st Century Changes





Brookline High School

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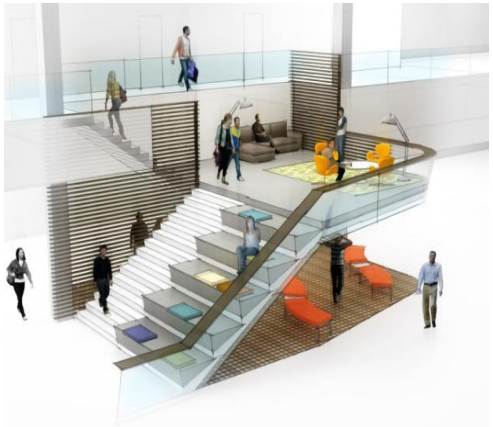
SPACES FOR 21ST CENTURY LEARNING



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Questions / Discussion

Brookline High School Further Study

Capital Sub-Committee Meeting

SMMA | SYMMES MAINI & McKEE ASSOCIATES

December 18, 2014

AGENDA

- History / Process
- Anticipated Growth
- Educational Space Requirements
- Visioning Reflected
- One Campus vs. Two, Pros and Cons
- Existing Building Characteristics
- One Campus Options
- Next Steps and the MSBA

HISTORY / PROCESS

- Build on HMFH concept study
- Program Analysis – Space / 21st C Needs
- Visioning Sessions 1& 2
  - The intent of the Visioning process was to engage a representation of the Brookline community to understand and contribute to the high school 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
- Options Development – One or Two Sites

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!

GROWTH IMPACT ON SPACE

- 24 Additional General Education Classrooms needed (Core Curriculum)
- 23 Science Lecture Labs needed (appropriately sized)
- Additional Special Education Rooms and Support Space
- Larger Cafeteria, (increase by 46%)
- Larger Library/Media Center, (increase by 100%)
- Few Increases to Number of Specialty Rooms, but Increase Sizes
- Additional Support Areas:
  - Offices: Administration, Guidance, Deans

CLASSROOM REQUIREMENTS

		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?								

VISIONING REFLECTED 6/24/2014 & 9/23/2014

- Key Spaces and Adjacencies that Align with Changing Needs
  - Flexible Media Commons vs. Library, All Day (dining) Commons
- Self Directed Learning
  - SWS, Idea Available to Other
- Hand's-on and Experiential Learning
  - Maker Space(s)
- Conversational Classrooms
  - Flexible Furniture, Right Sized Classrooms
- Flexible Technology
  - 1:1 Campus Environment
- Big School, Small Feel
  - Small Learning Communities

VISIONING REFLECTED 6/24/2014 & 9/23/2014

- Integration Between Disciplines / Departments
  - STEM, STE**A**M
- Green / Sustainability
  - School as a Teaching Tool
- Collaborative Spaces for Students and Faculty (Jointly)
  - Small Group Instruction, Maker Spaces, Informal Learning Spaces
- Learn by Doing
  - CTE, expand Project Based Learning

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

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

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

- 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
- Special programs within Special Education
- Winthrop House (currently off campus)
- Large number of student clubs and activities
- Interscholastic and intramural sports

SOUTH BROOKLINE CAMPUS

SOUTH BROOKLINE CAMPUS

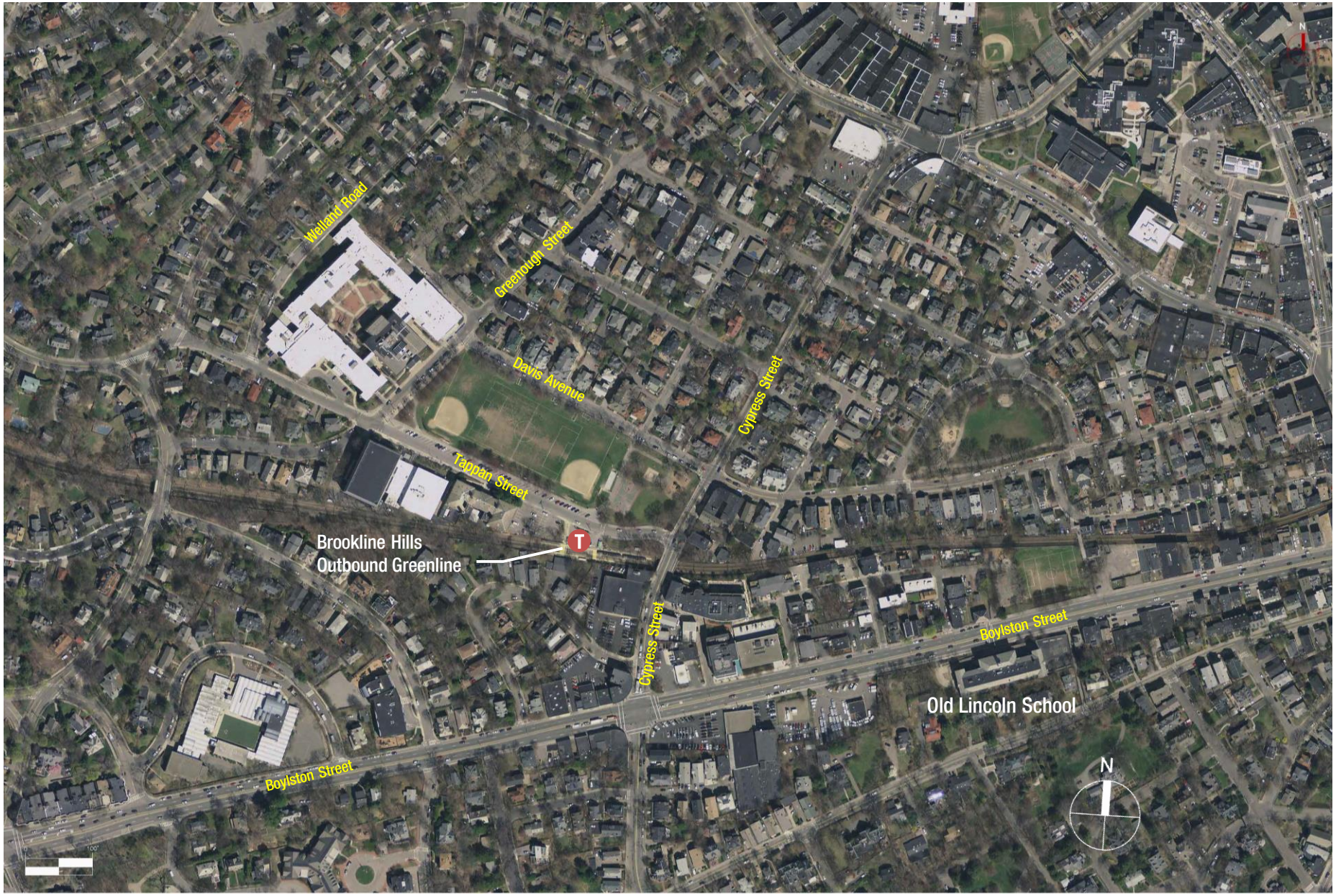
Pros:

- 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)

SOUTH BROOKLINE 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
- 2.8 miles from Reservoir Station (Riverside Green Line)
- Bussing likely required
- Challenging topography
- Politically challenging
- Larger staff and ongoing operational costs



High School Environs

Public Schools of Brookline

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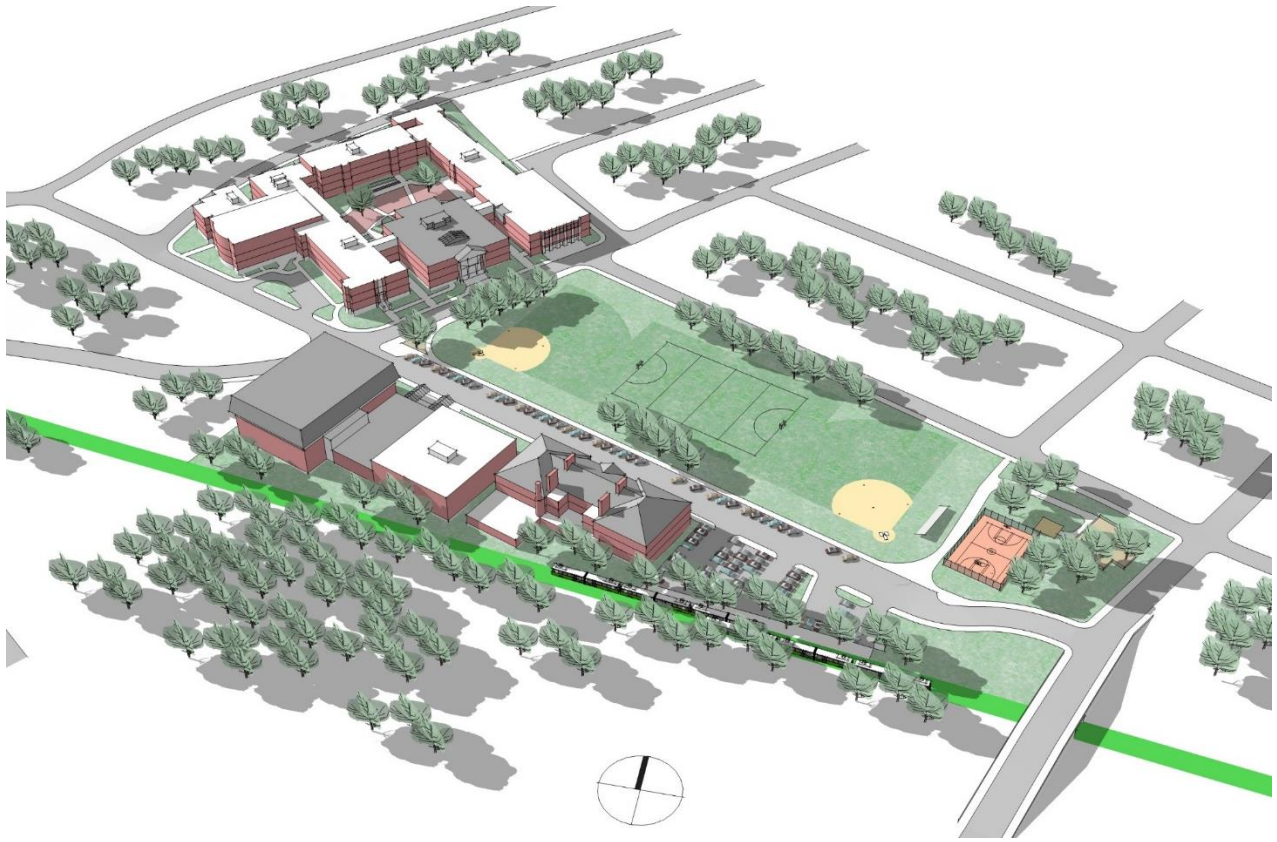
CURRENT CAMPUS

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



ONE CAMPUS – LARGER MAIN CAMPUS GOALS

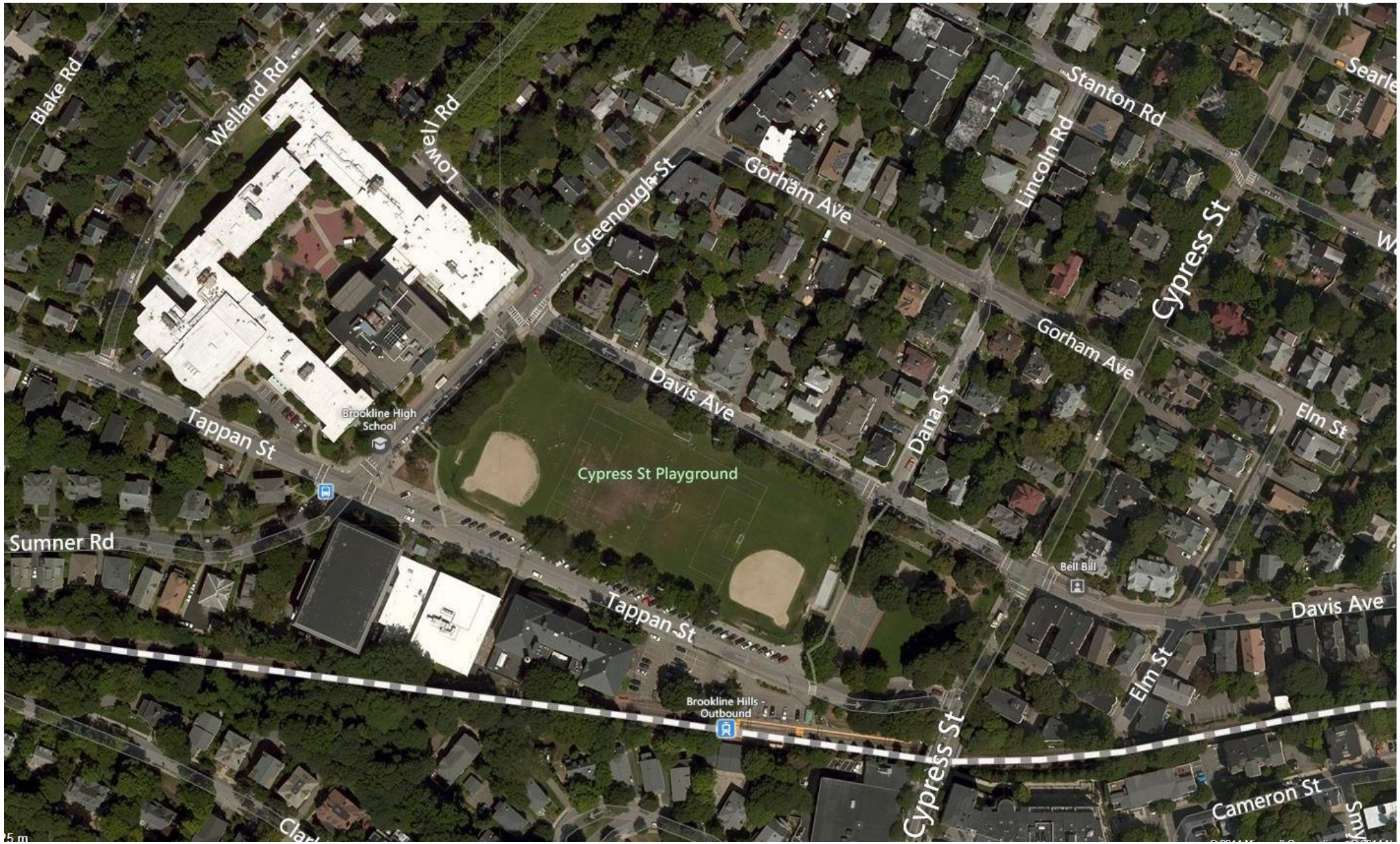
PROS:

- Status Quo for student culture and community
- Opportunity to address all spaces
- Potential use of old Lincoln School
- Potential acquisition of Route 9 real estate
- Potential retention of some programs not normally funded
- 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 of some programs: Community Education; early childhood (BEEP); others
- Very dense school community
- Increased parking requirement



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Existing Campus Aerial

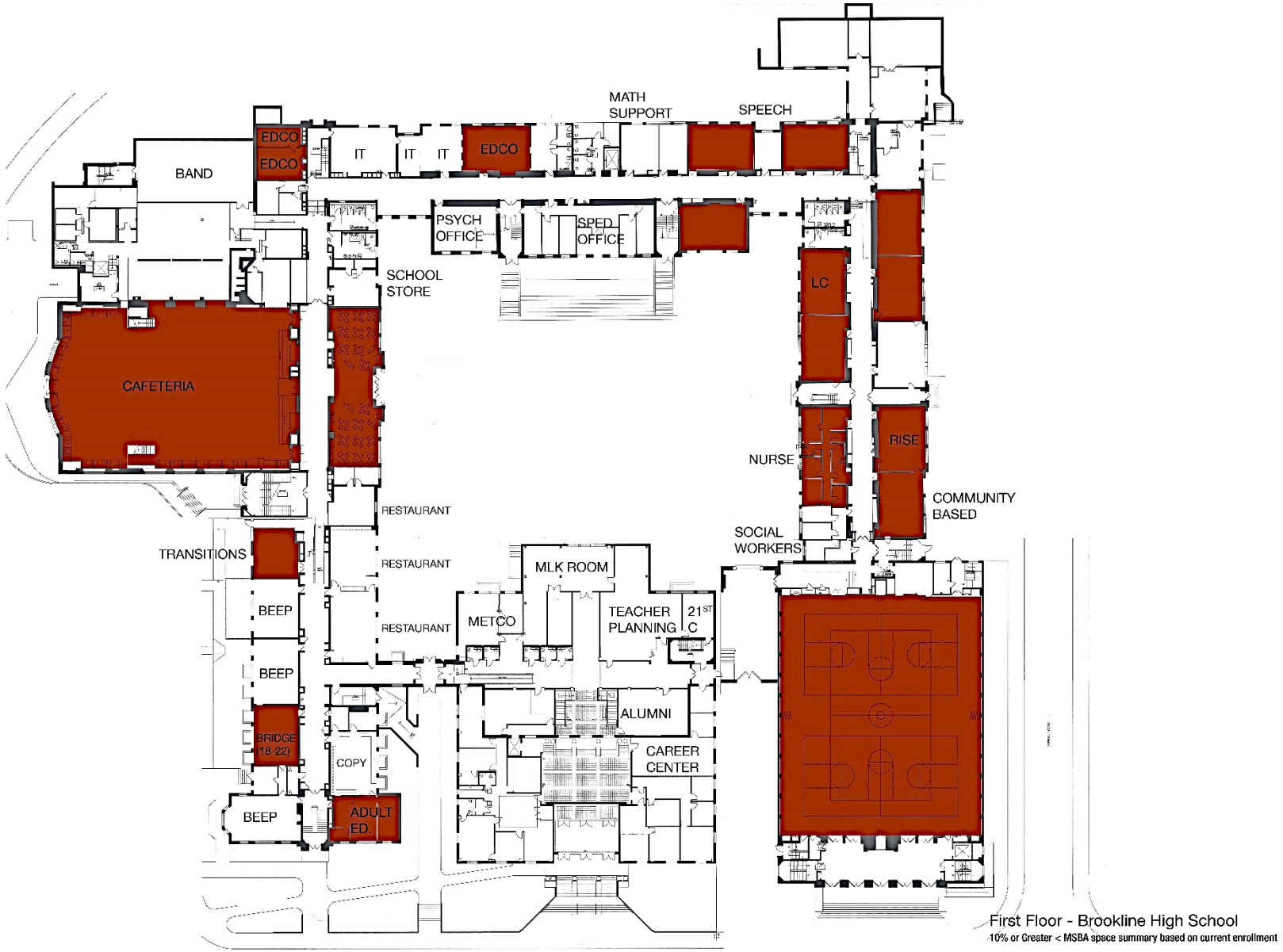
Public Schools of Brookline

SMMA

Existing First Floor Plan: Current Program

Public Schools of Brookline

SMMA



Deficiency Floor Plan

10% or Greater < MSBA Space Summary (based on current enrollment)

SMMA

Second Floor - Brookline High School

Department Legend

- Administration/ Guidance/Nurse
- Art/Music
- Building Equipment
- Cafeteria/Circulation
- Vertical Circulation
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- Custodial
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- Teacher Support
- Technology/Engineering

Existing Second Floor Plan: Current Program

Public Schools of Brookline

SMMA

Second Floor - Brookline High School

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Deficiency Floor Plan

10% or Greater < MSBA Space Summary (based on current enrollment)

SMMA

Third Floor - Brookline High School

Department Legend

- Administration/ Guidance/Nurse
- Art/Music
- Building Equipment
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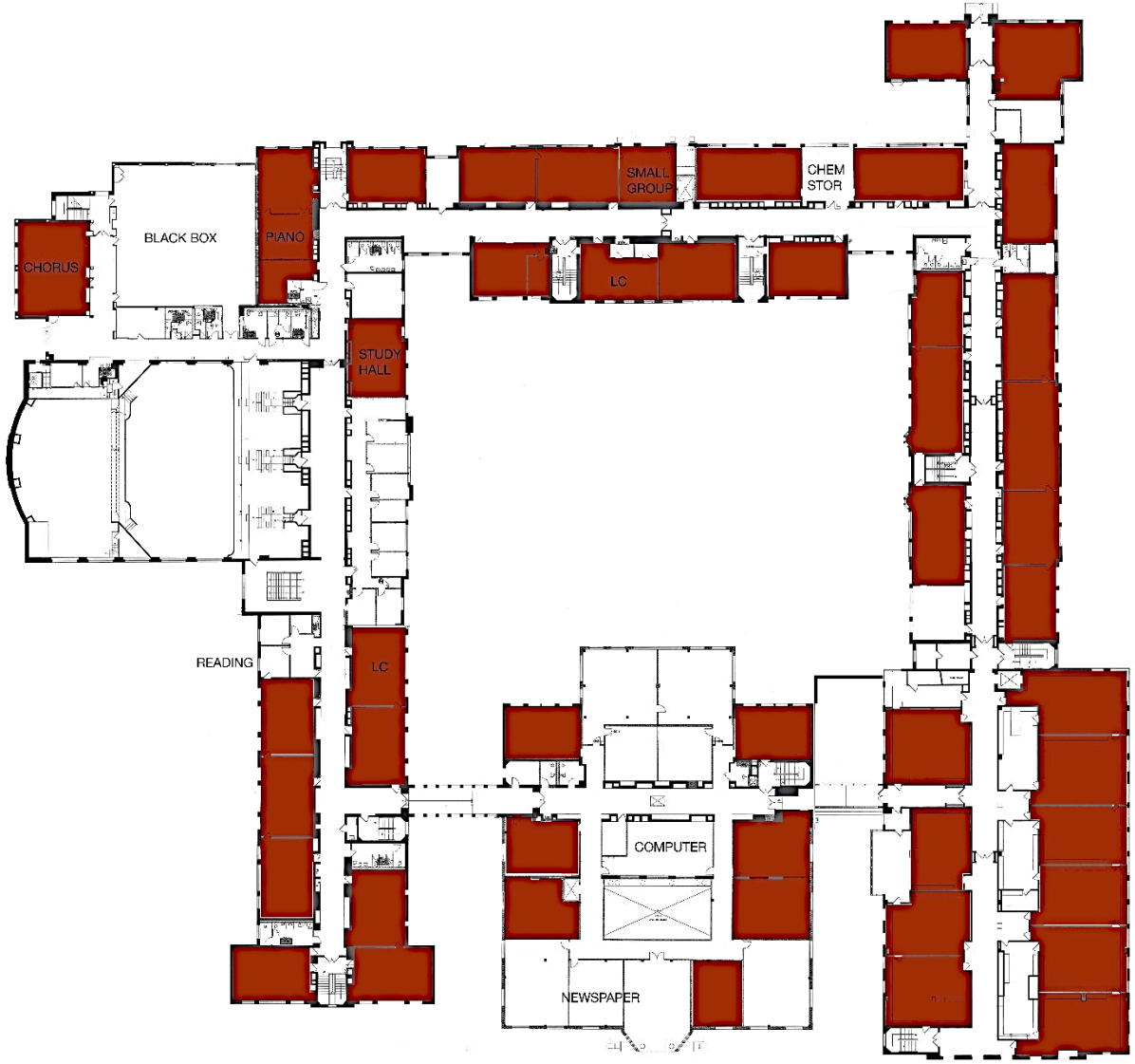
Existing Third Floor Plan: Current Program

Public Schools of Brookline

SMMA



Third Floor - Brookline High School

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Deficiency Floor Plan

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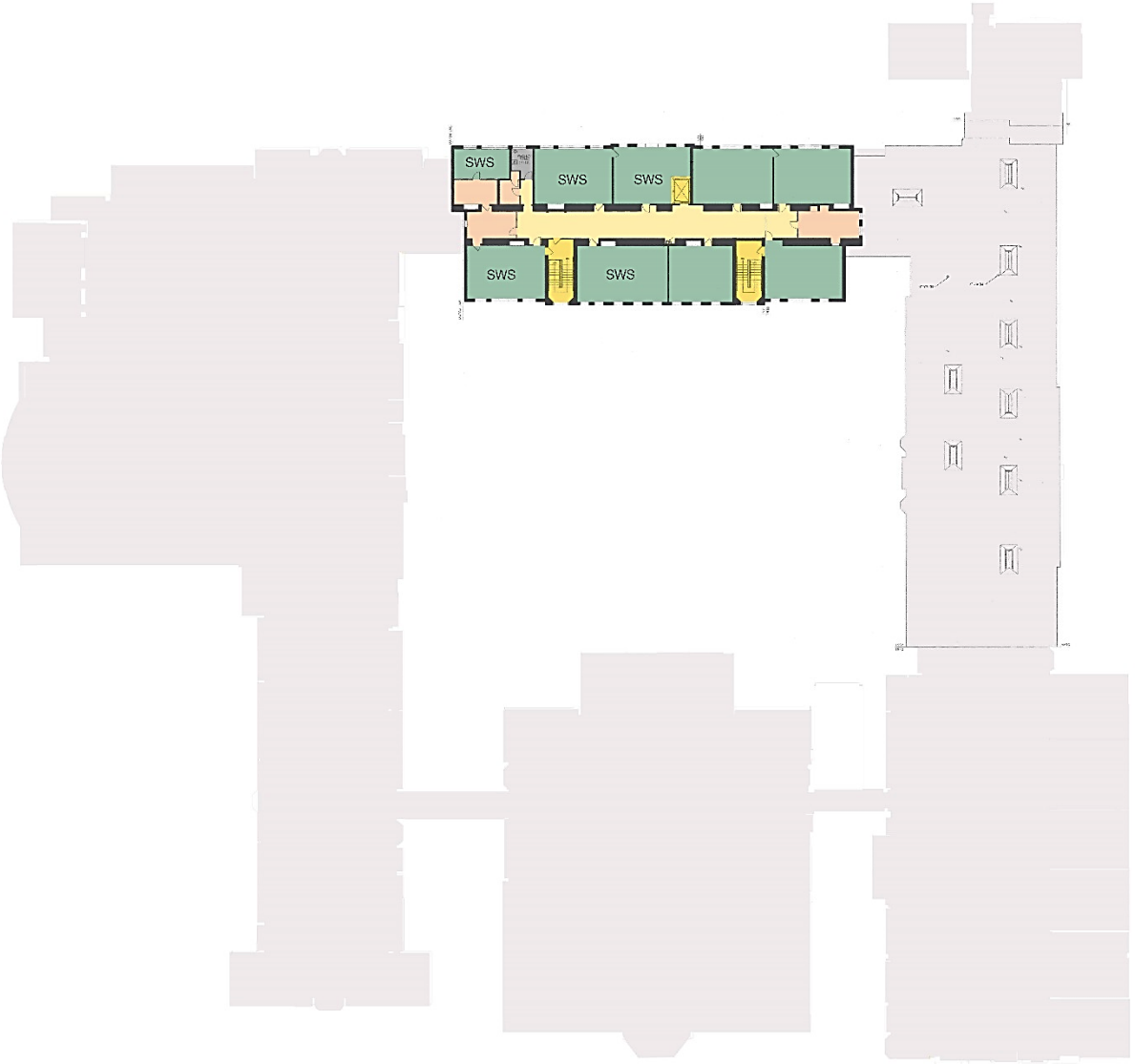
SMMA



Fourth Floor - Brookline High School

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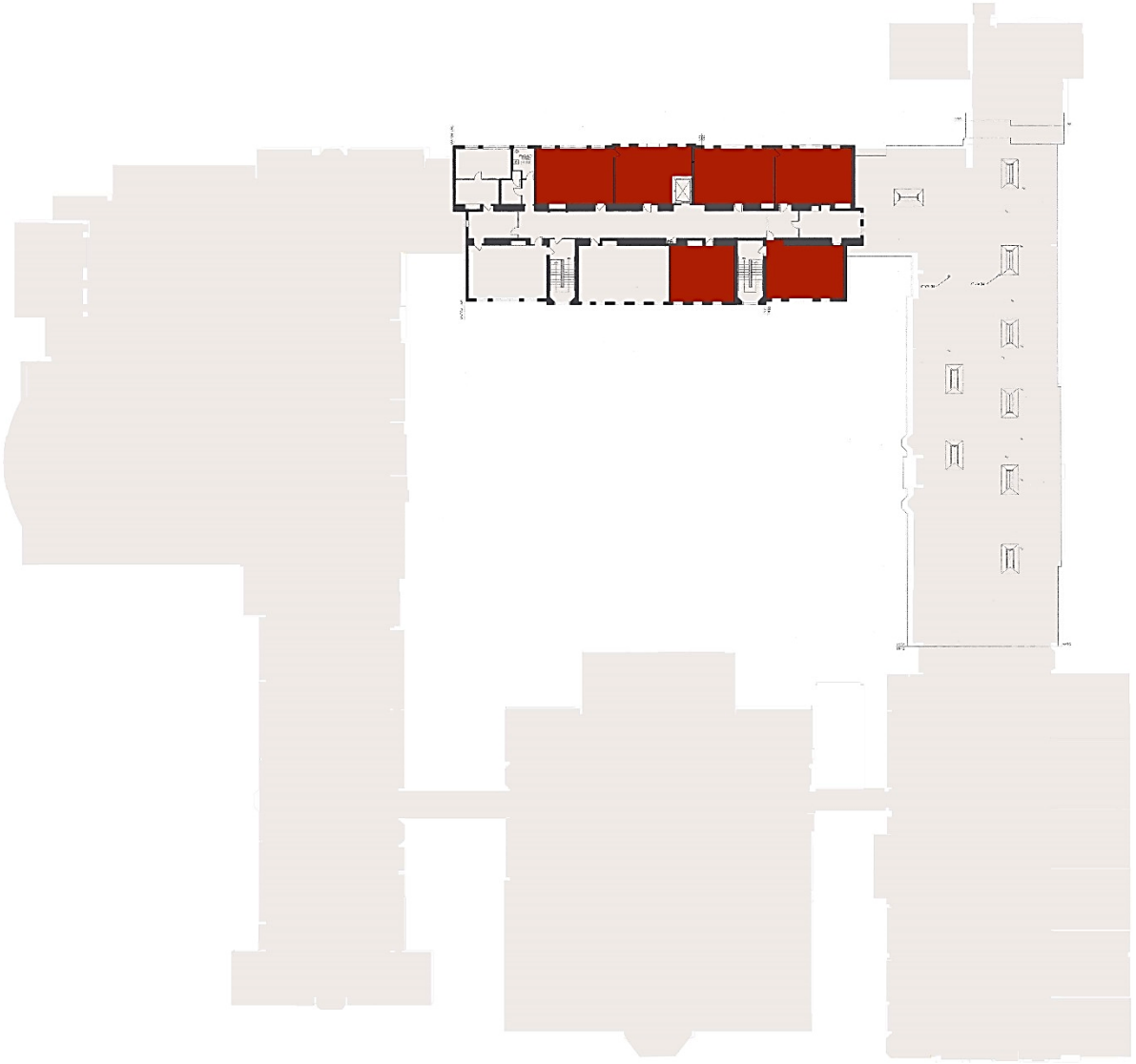
Existing Fourth Floor Plan: Current Program

Public Schools of Brookline

SMMA



Fourth Floor - Brookline High School

10% or Greater < MSBA space summary based on current enrollment

Deficiency Floor Plan

10% or Greater < MSBA Space Summary (based on current enrollment)

SMMA

Brookline High School

One Campus Options

SMMA | SYMMES MAINI & McKEE ASSOCIATES

December 16, 2014

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 as remote STEM
  - Move 6- 8 science labs to Unified Arts Building

Department Legend

- Administration/ Guidance/Nurse
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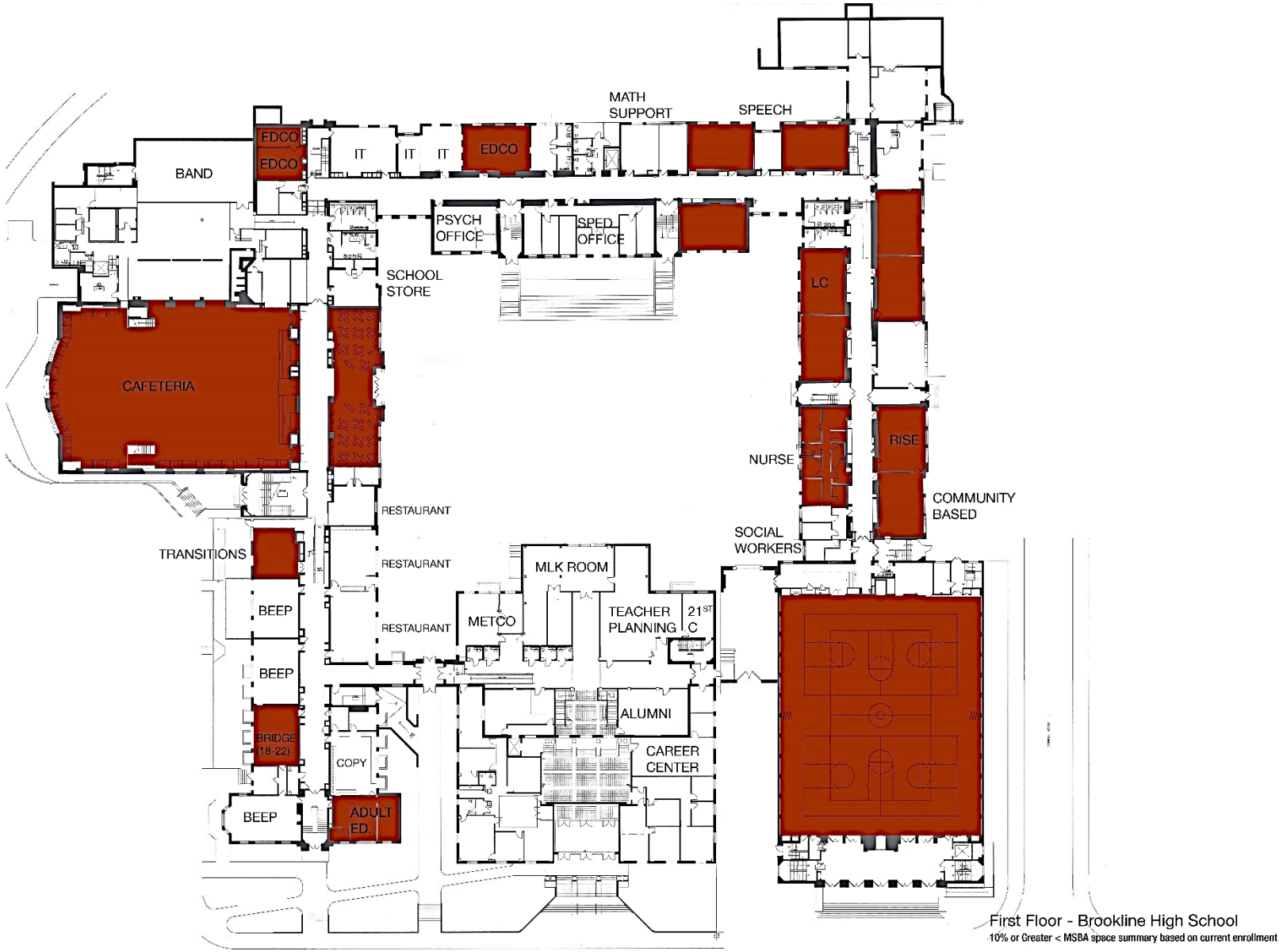
Existing First Floor Plan: Current Program

Public Schools of Brookline

SMMA



Deficiency Floor Plan

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SMMA

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- Technology/Engineering

- 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

Public Schools of Brookline

SMMA

Second Floor - Brookline High School

Department Legend

- Administration/ Guidance/Nurse
- Art/Music
- Building Equipment
- Cafeteria/Circulation
- Vertical Circulation
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Existing Second Floor Plan: Current Program

Public Schools of Brookline

SMMA

Second Floor - Brookline High School

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Deficiency Floor Plan

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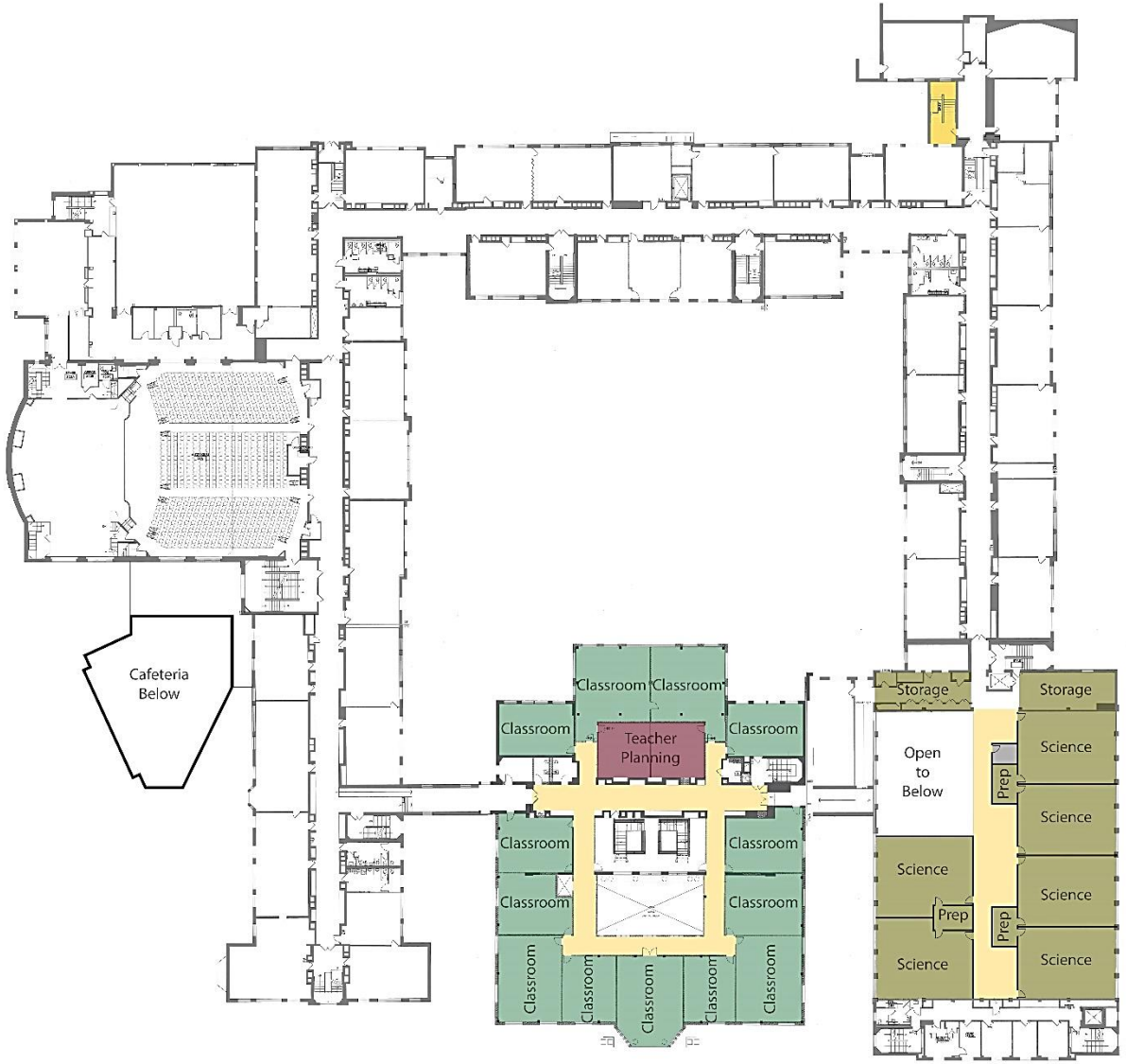
SMMA



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- Teacher Support
- Technology/Engineering

- 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

Department Legend

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Existing Third Floor Plan: Current Program

Public Schools of Brookline

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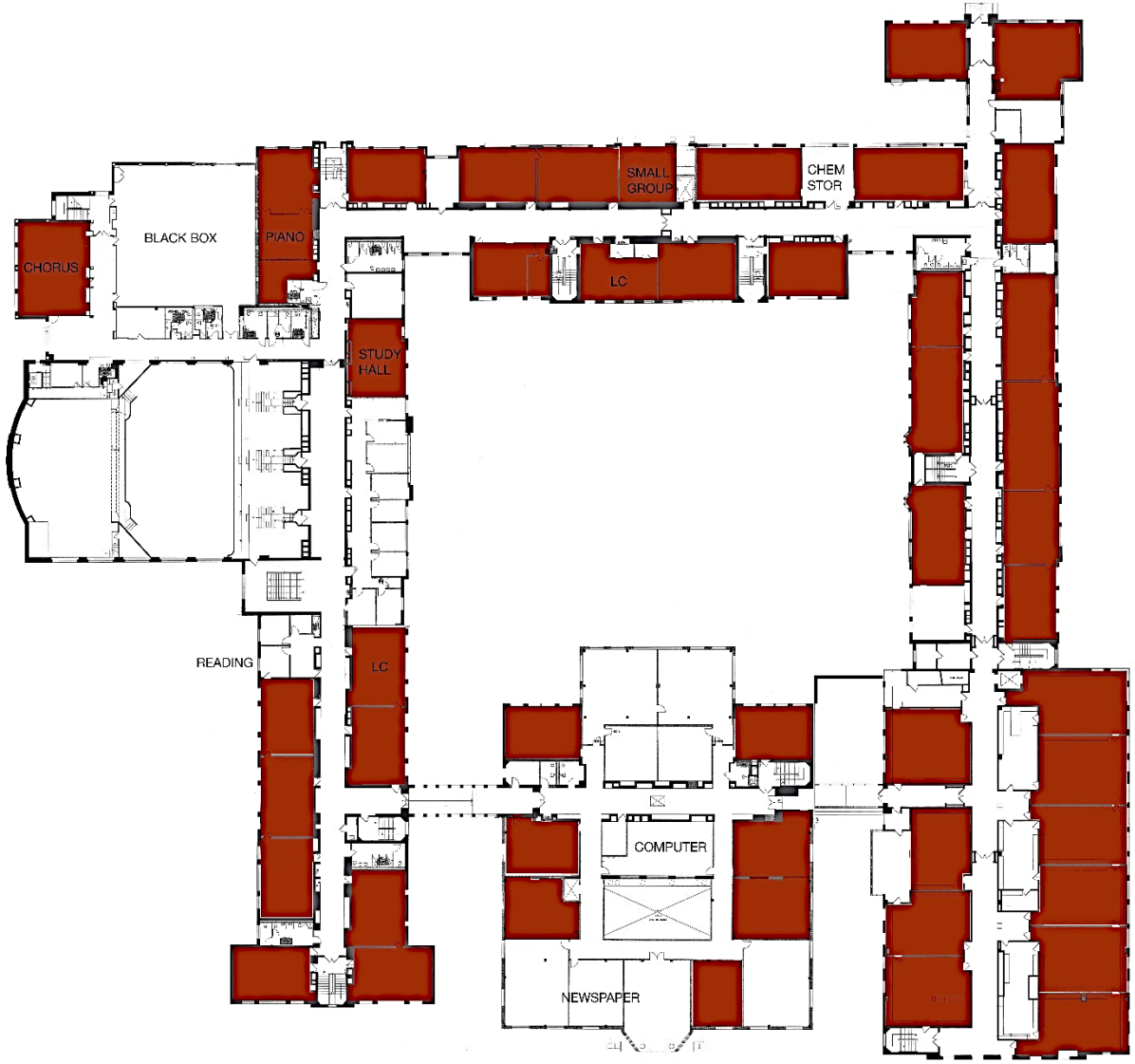

Third Floor - Brookline High School

10% or Greater < MSBA space summary based on current enrollment

Deficiency Floor Plan

10% or Greater < MSBA Space Summary (based on current enrollment)

SMMA

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- Teacher Support
- Technology/Engineering

- Relocate library to space over gymnasium
- Renovate 11 undersized science labs to 13 classrooms (TBD)

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

Public Schools of Brookline

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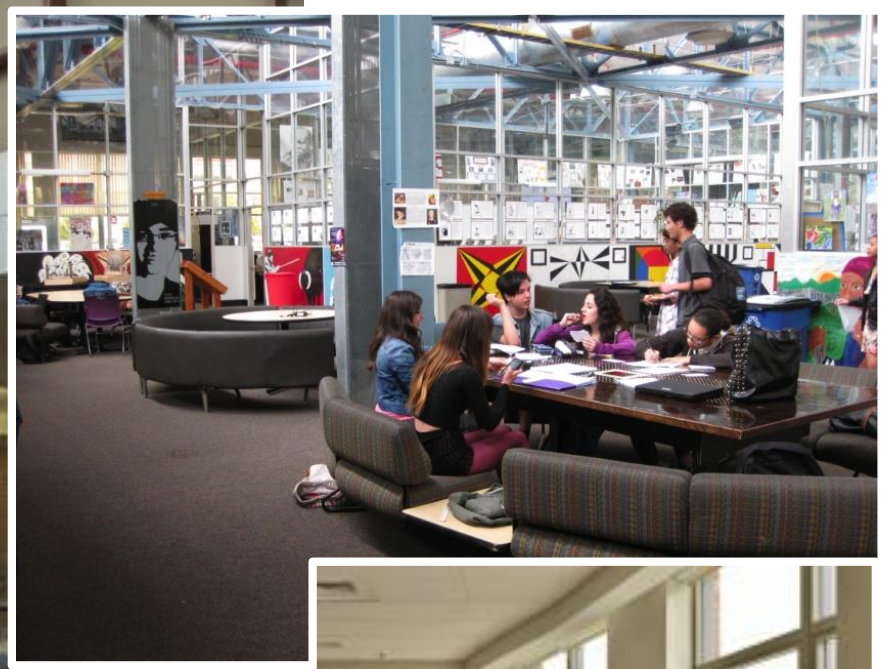
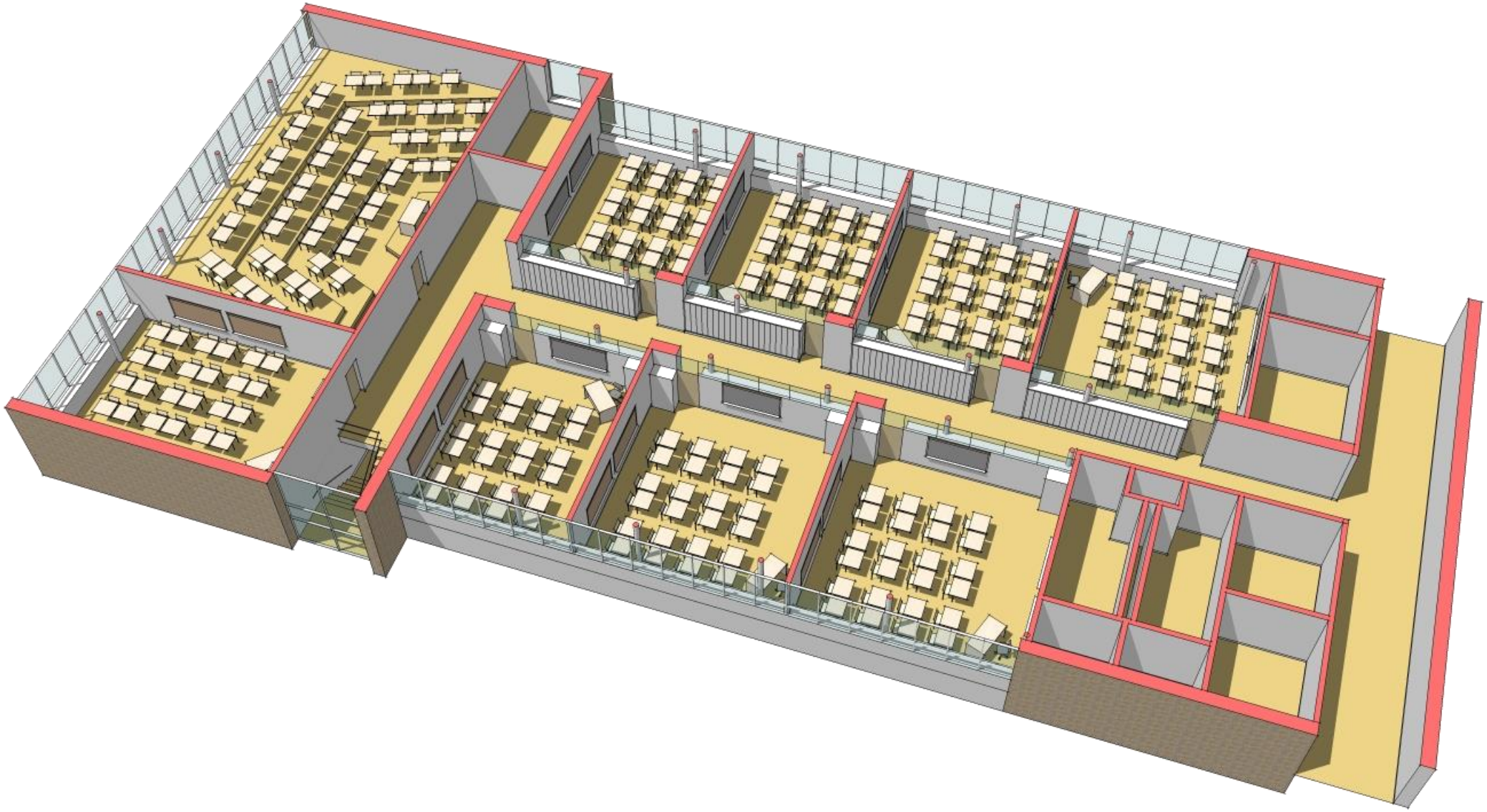


Learning Commons

Public Schools of Brookline

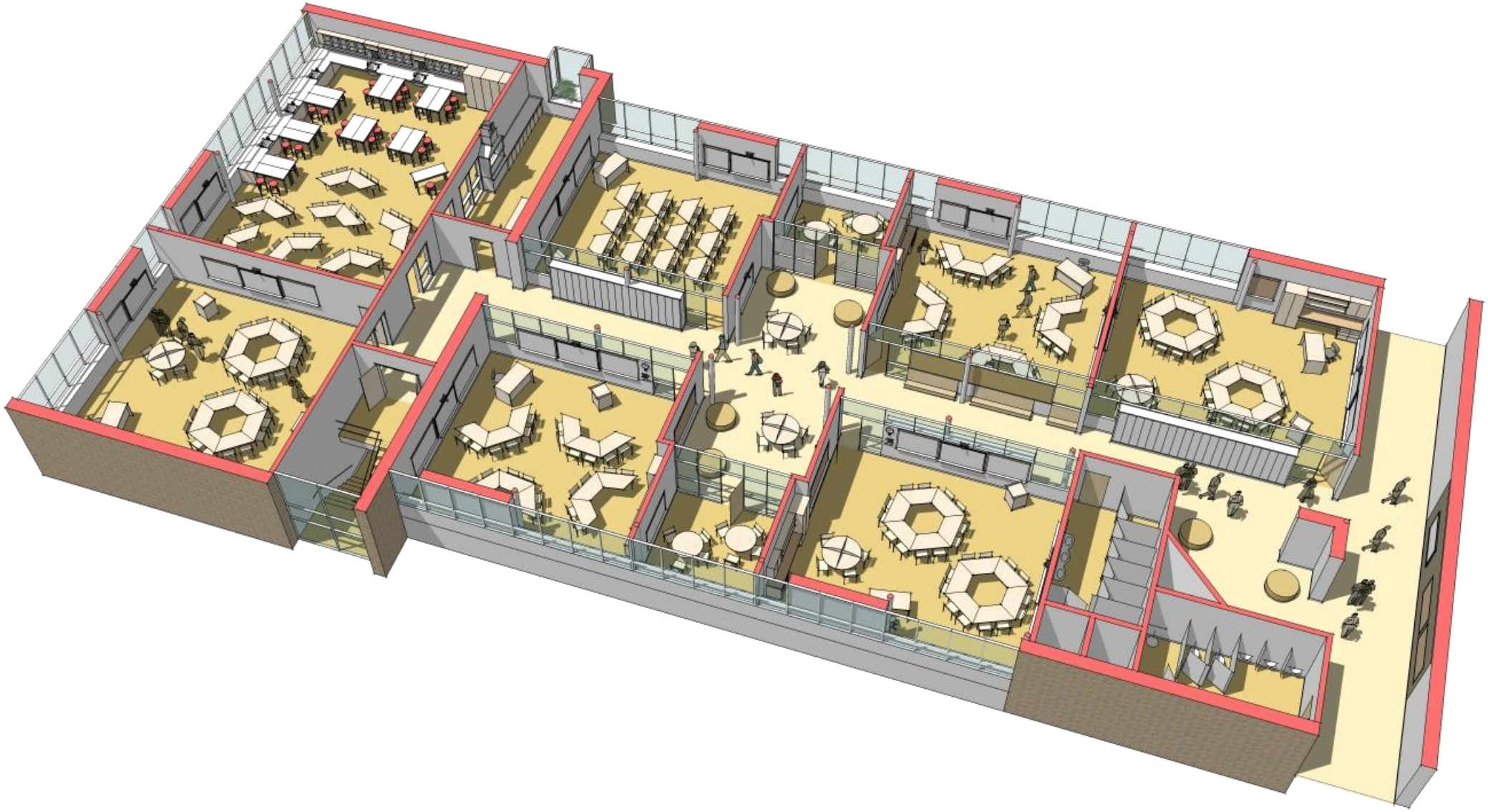
SMMA



Rethinking Double Loaded Corridors

Public Schools of Brookline

SMMA



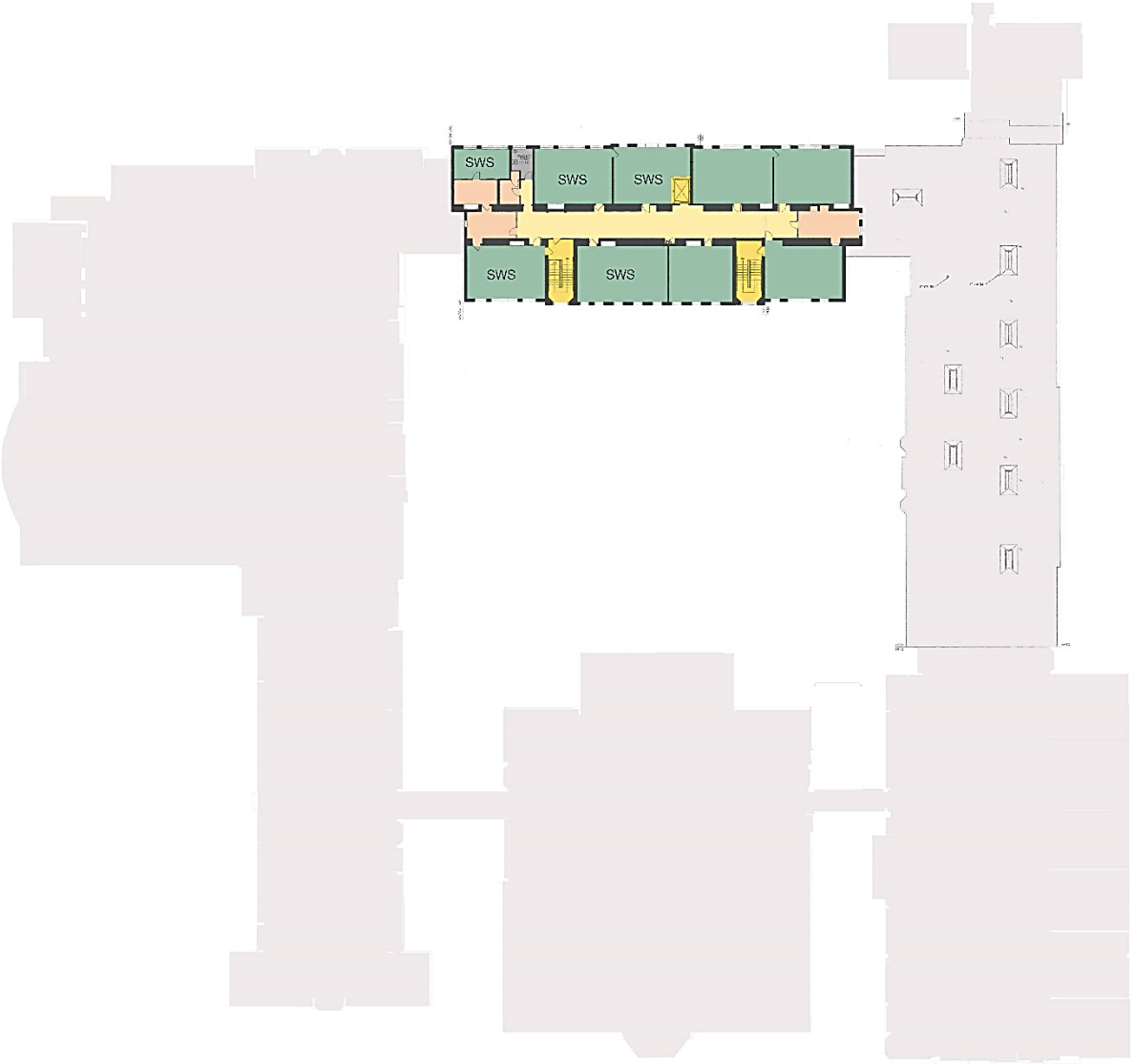
Rethinking Double Loaded Corridors

Public Schools of Brookline

SMMA

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 as remote STEM/STEAM
  - Move 6- 8 science labs to Unified Arts Building



Fourth Floor - Brookline High School

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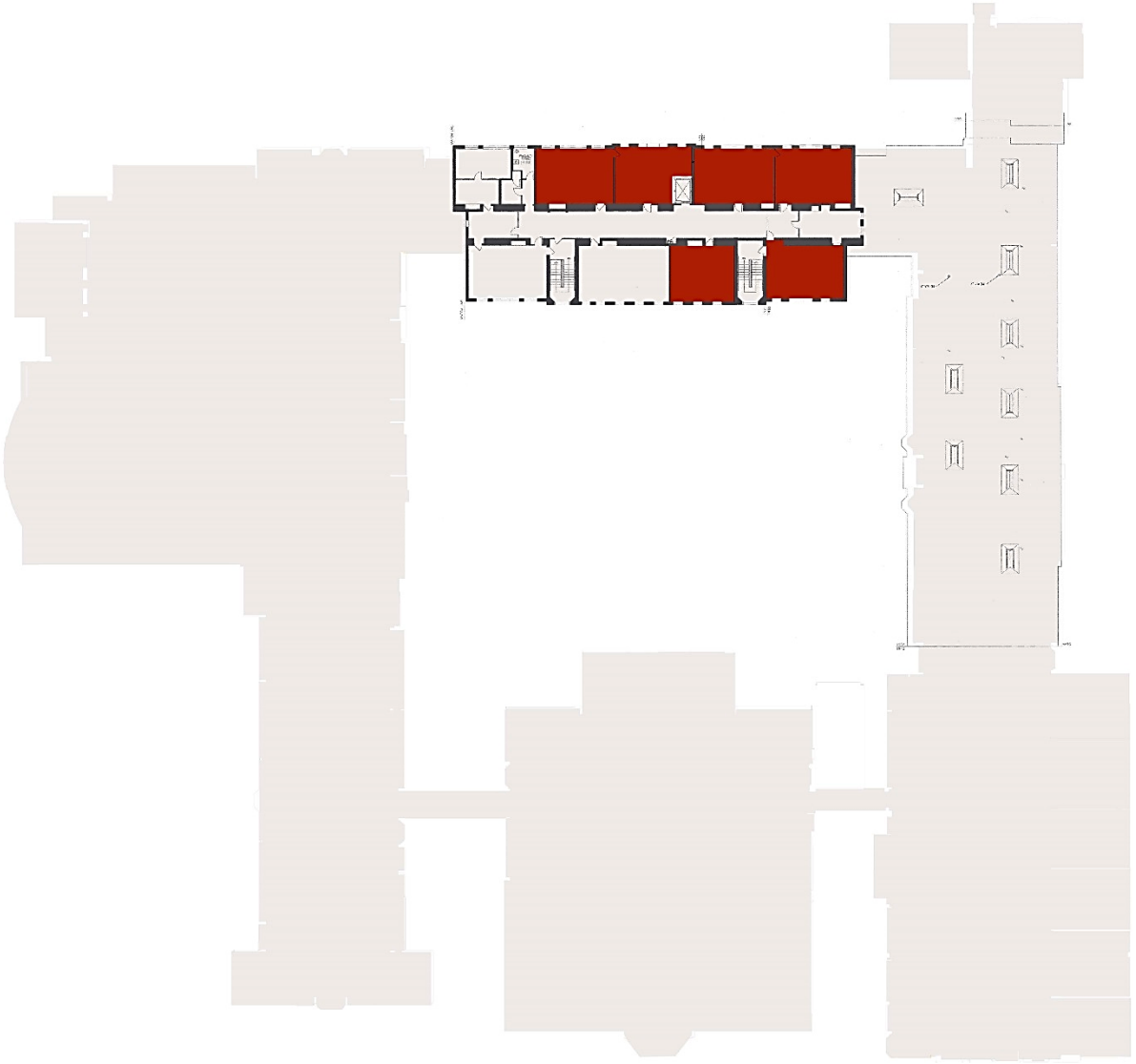
Existing Fourth Floor Plan: Current Program

Public Schools of Brookline

SMMA



Fourth Floor - Brookline High School

10% or Greater < MSBA space summary based on current enrollment

Deficiency Floor Plan

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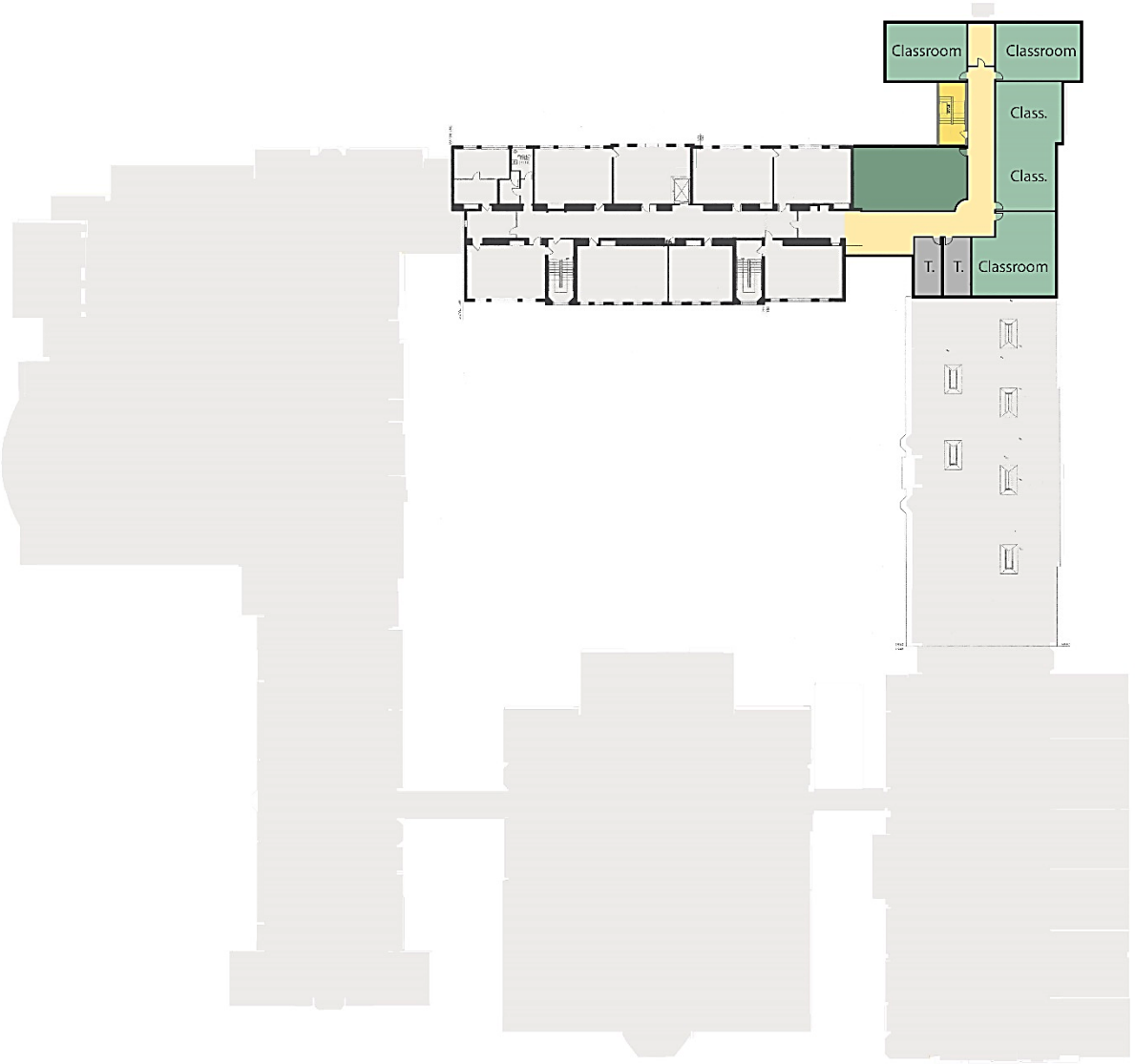
SMMA



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- Teacher Support
- Technology/Engineering

- Add 4 classrooms, 1 SPED, Teacher Planning, Toilets

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

Public Schools of Brookline

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Auditorium Cafeteria

Public Schools of Brookline

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Existing Building

Public Schools of Brookline

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Potential Additions: Cafeteria expansion and restaurant program

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Student Restaurant and Bakery

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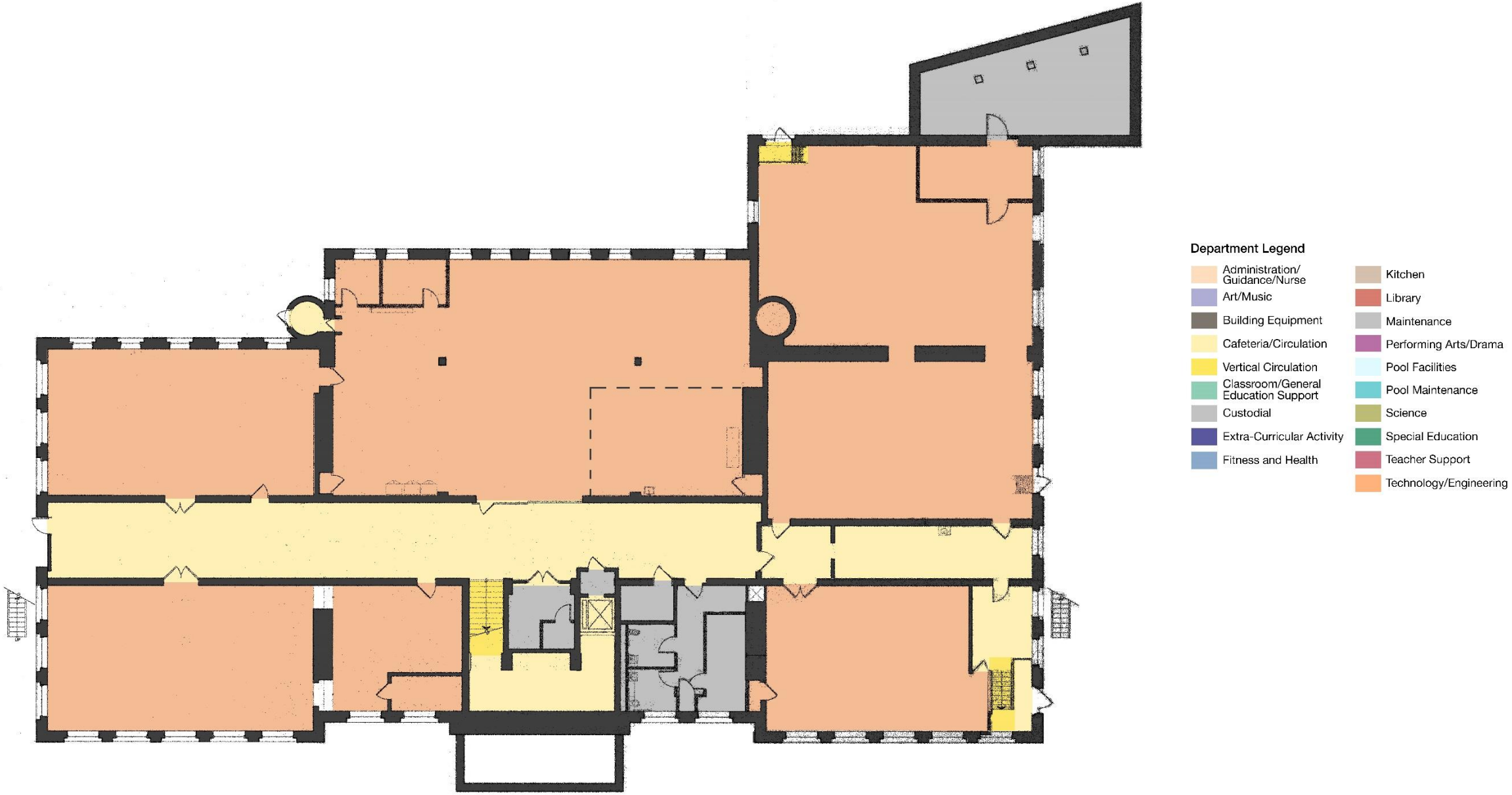
Brookline High School

Site Planning For One Campus Option

- Unified Arts Building (STEM/STEAM)
- Tappan Gymnasium
- Parking and Fields
- Modular Swing Space



Unified Arts Building: Existing Lower Level Floor Plan

Public Schools of Brookline

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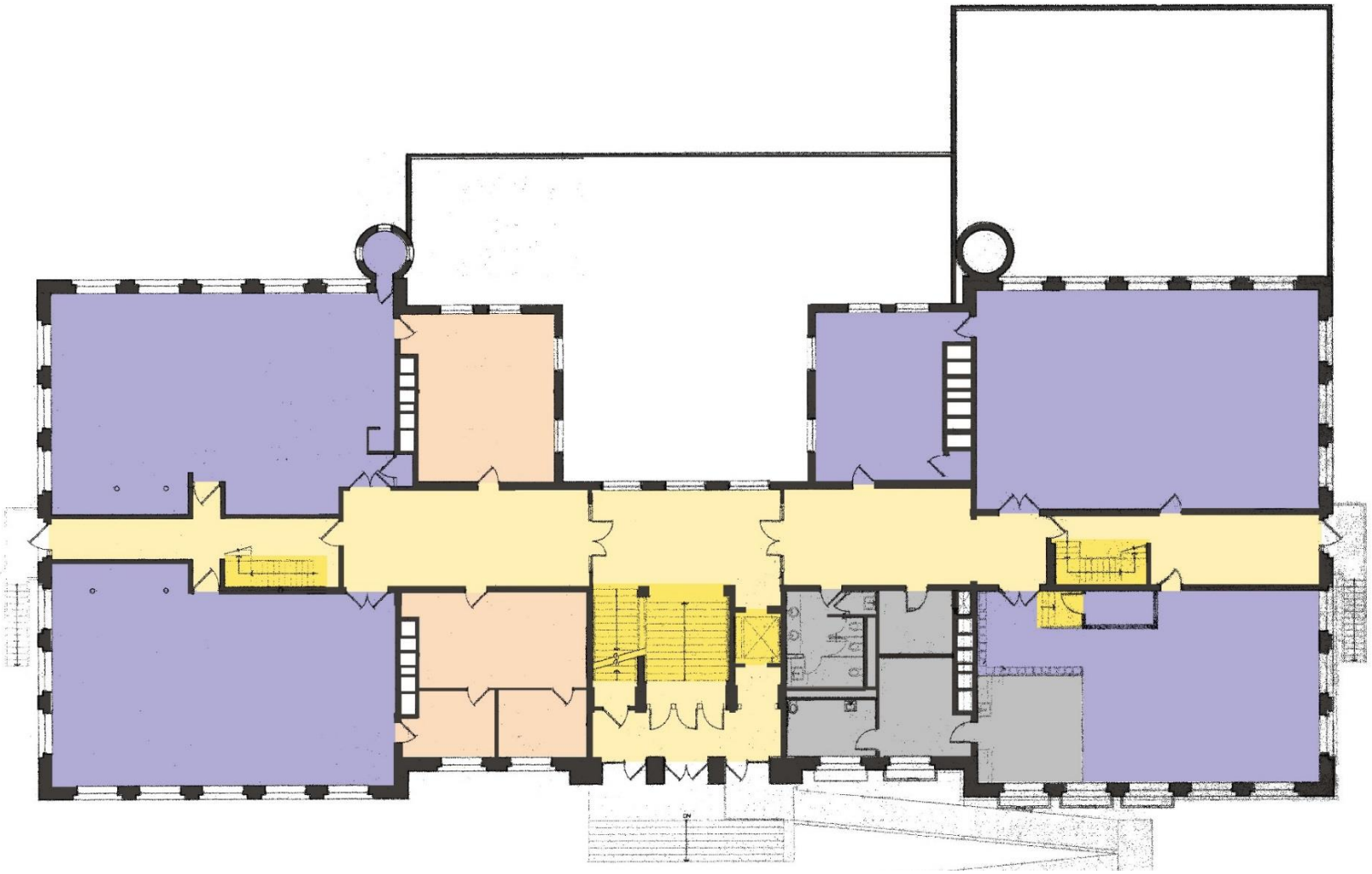

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Unified Arts Building: Existing First Floor Plan

Public Schools of Brookline

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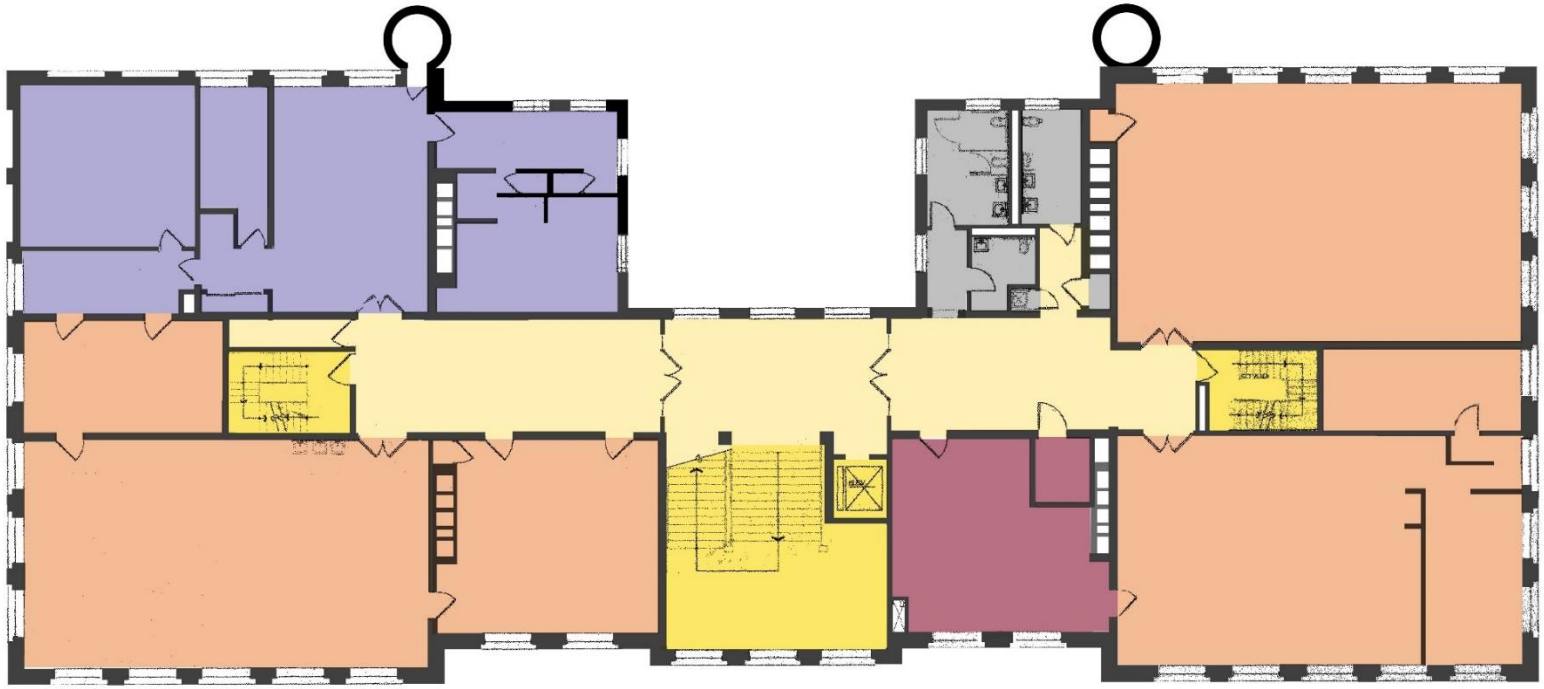

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Unified Arts Building: Existing Second Floor Plan

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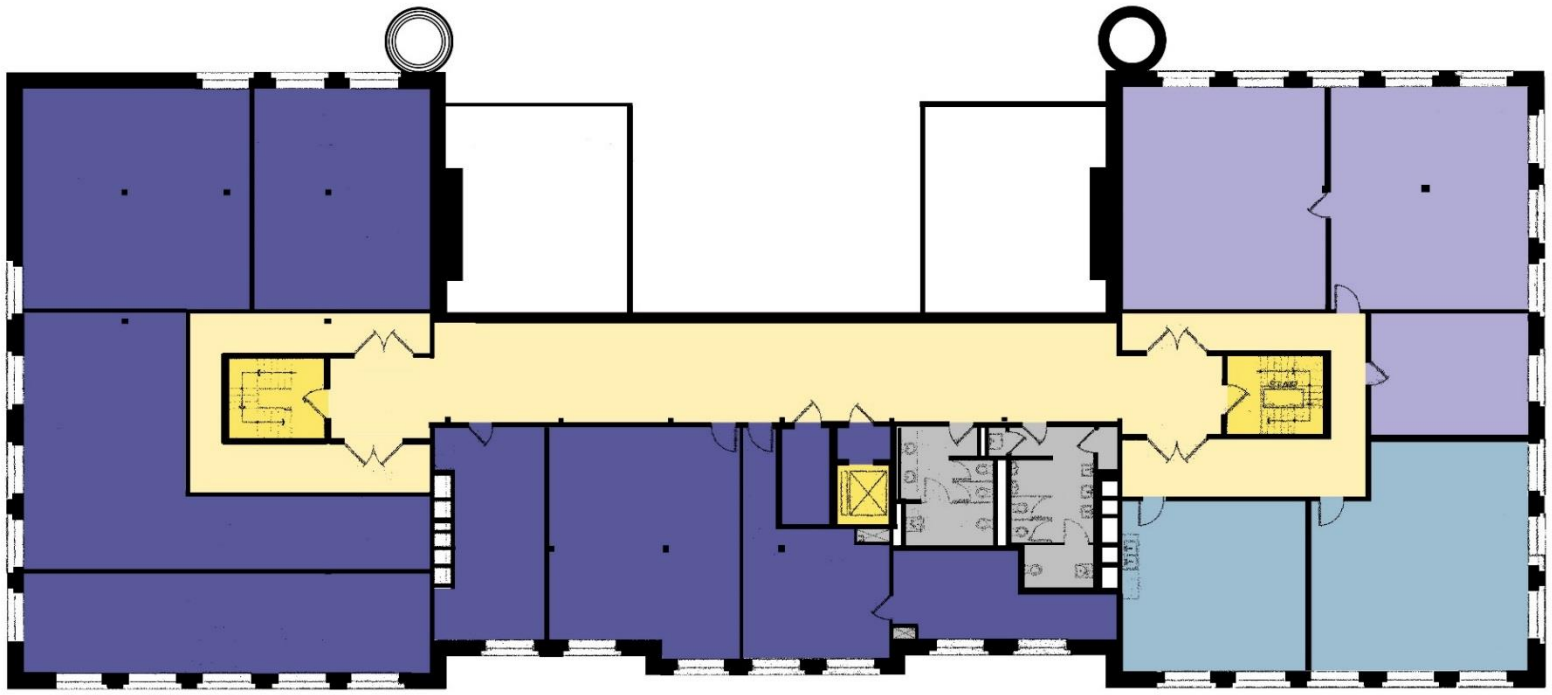

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Unified Arts Building: Existing Attic Floor Plan

Public Schools of Brookline

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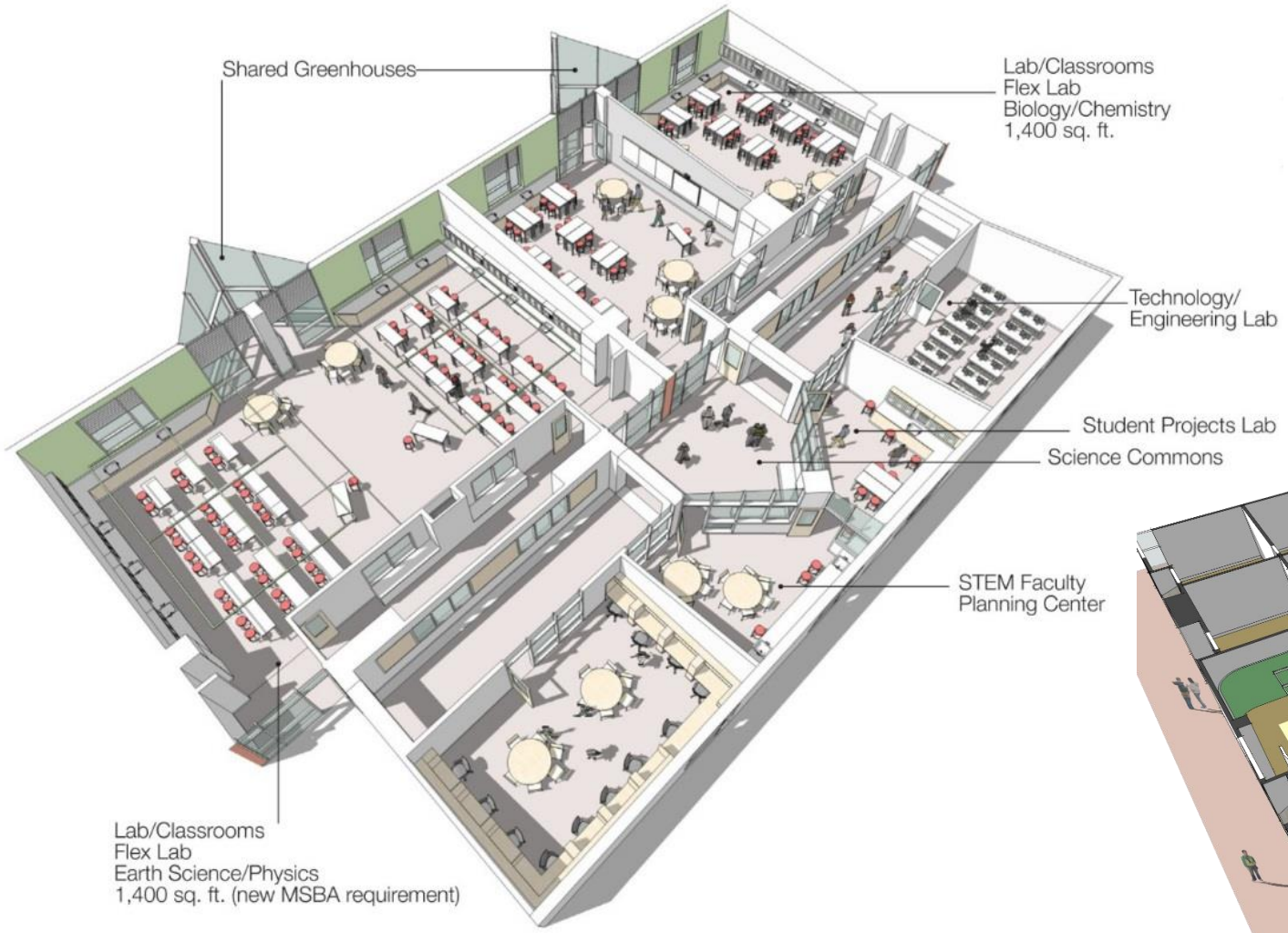

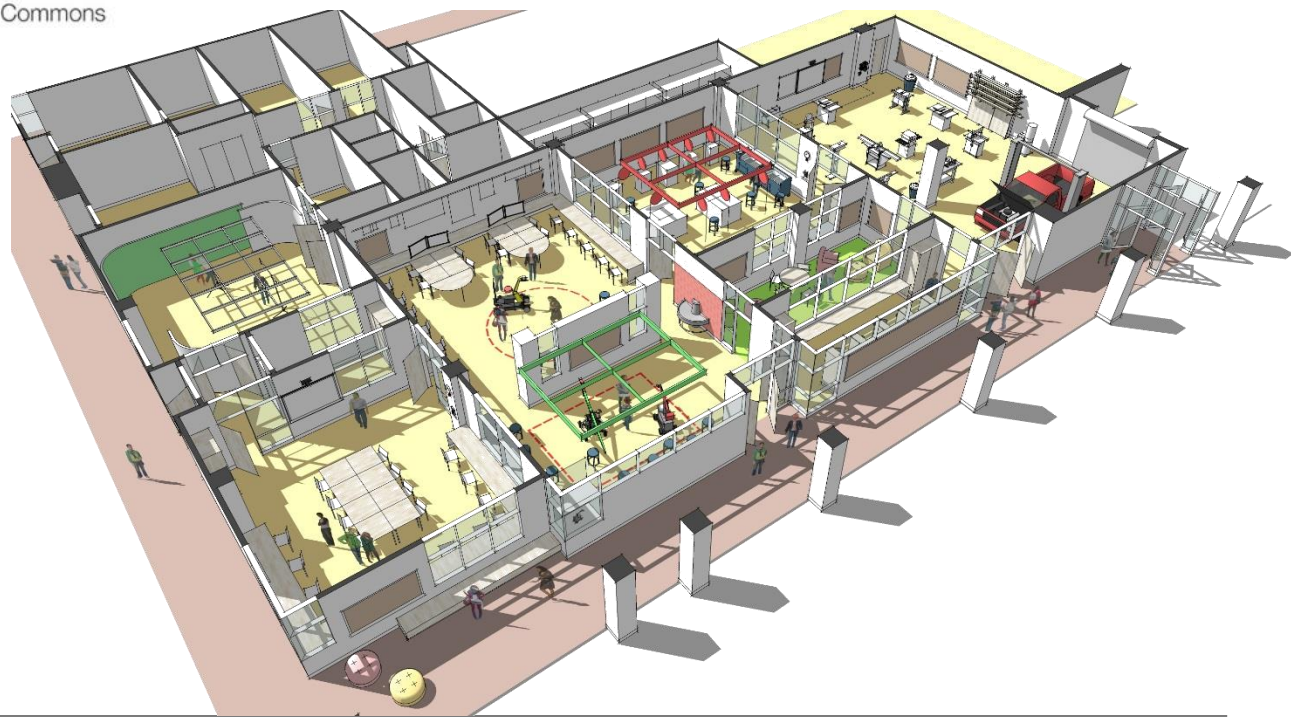

Unified Arts Building

Examples of STEM

SMMA

Existing Unified Arts Building

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Unified Arts Building: STEAM additions

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Unified Arts Building

Public Schools of Brookline

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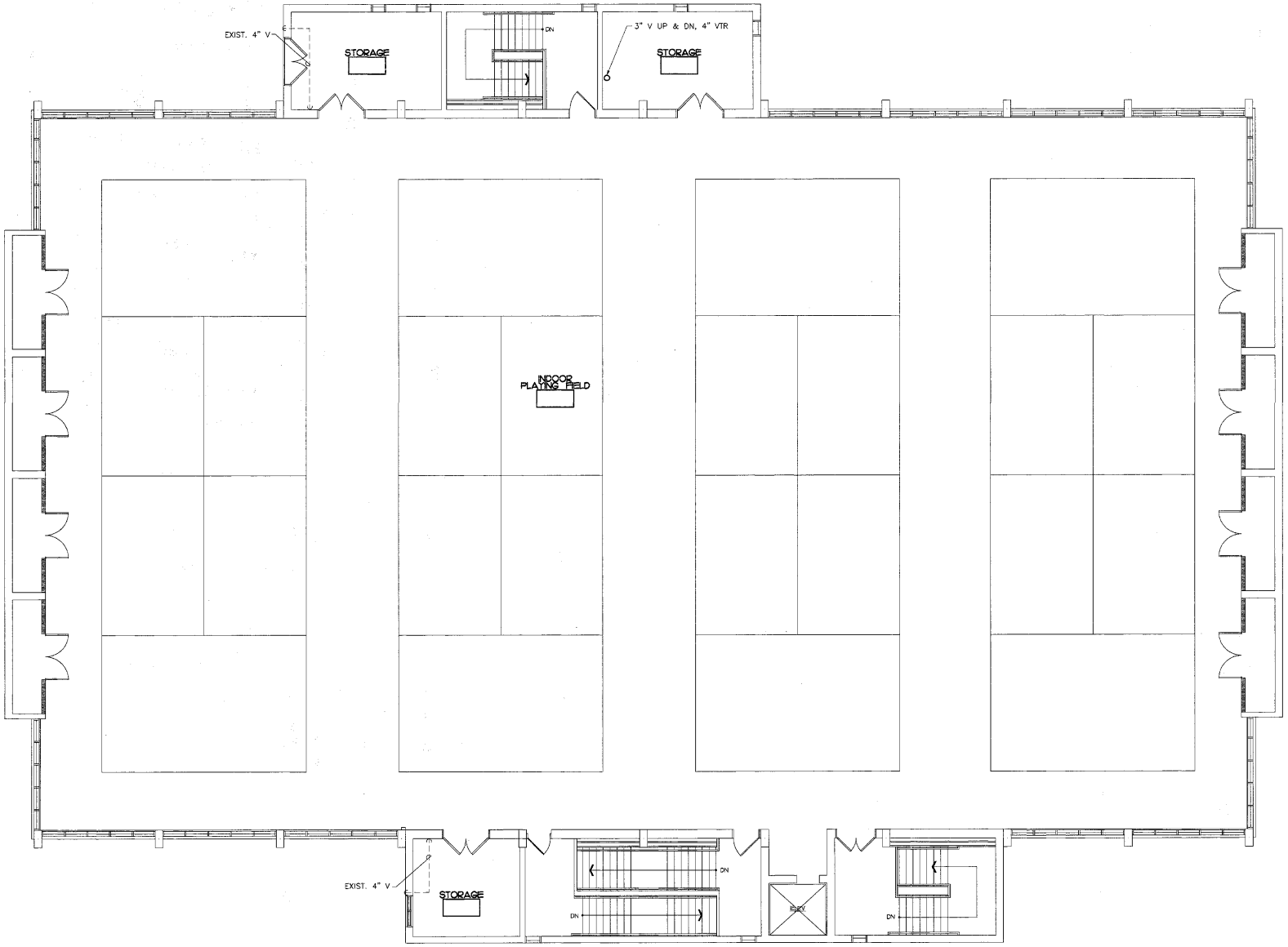
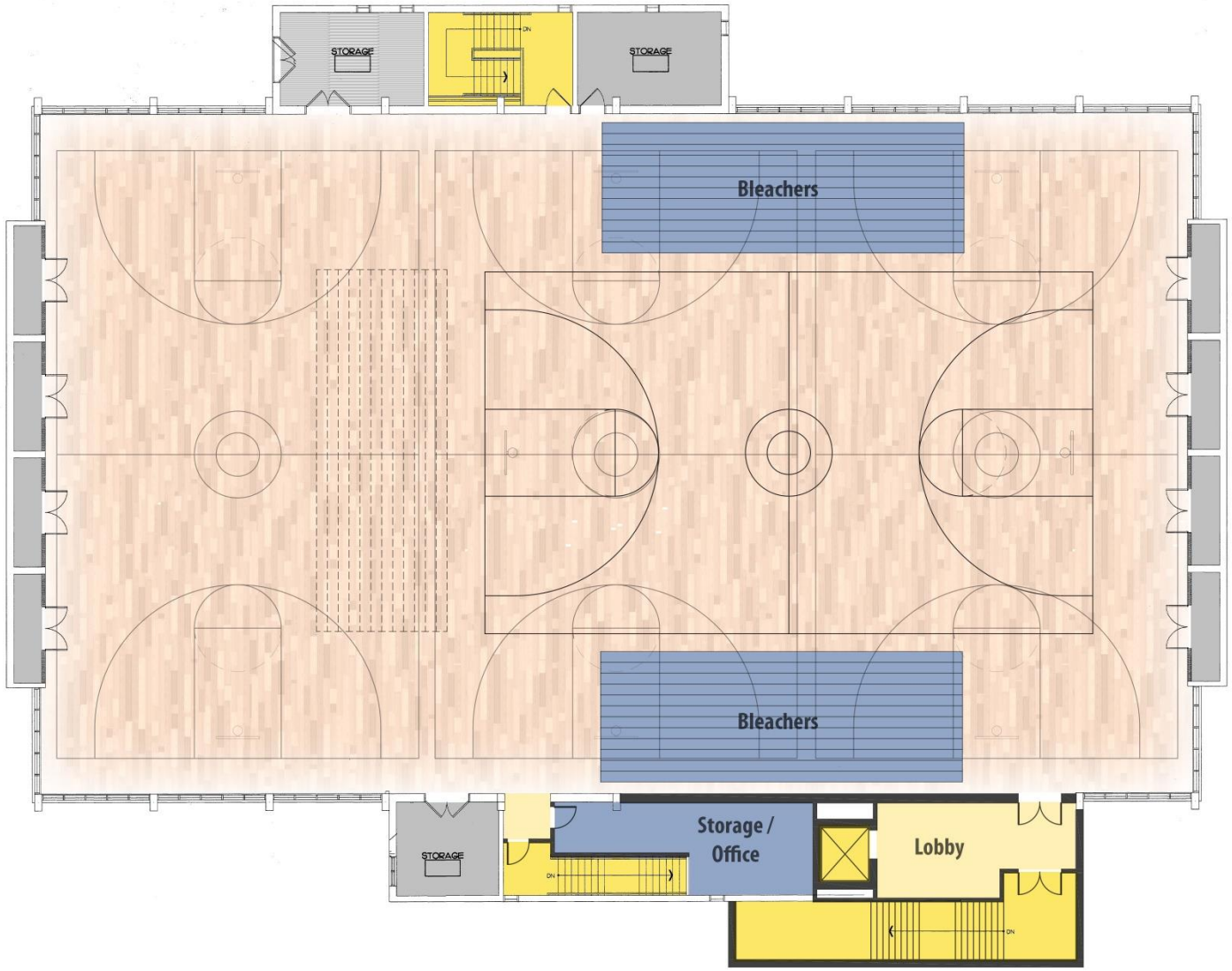


Tappan Gym Building: Upper Floor Plan

Public Schools of Brookline

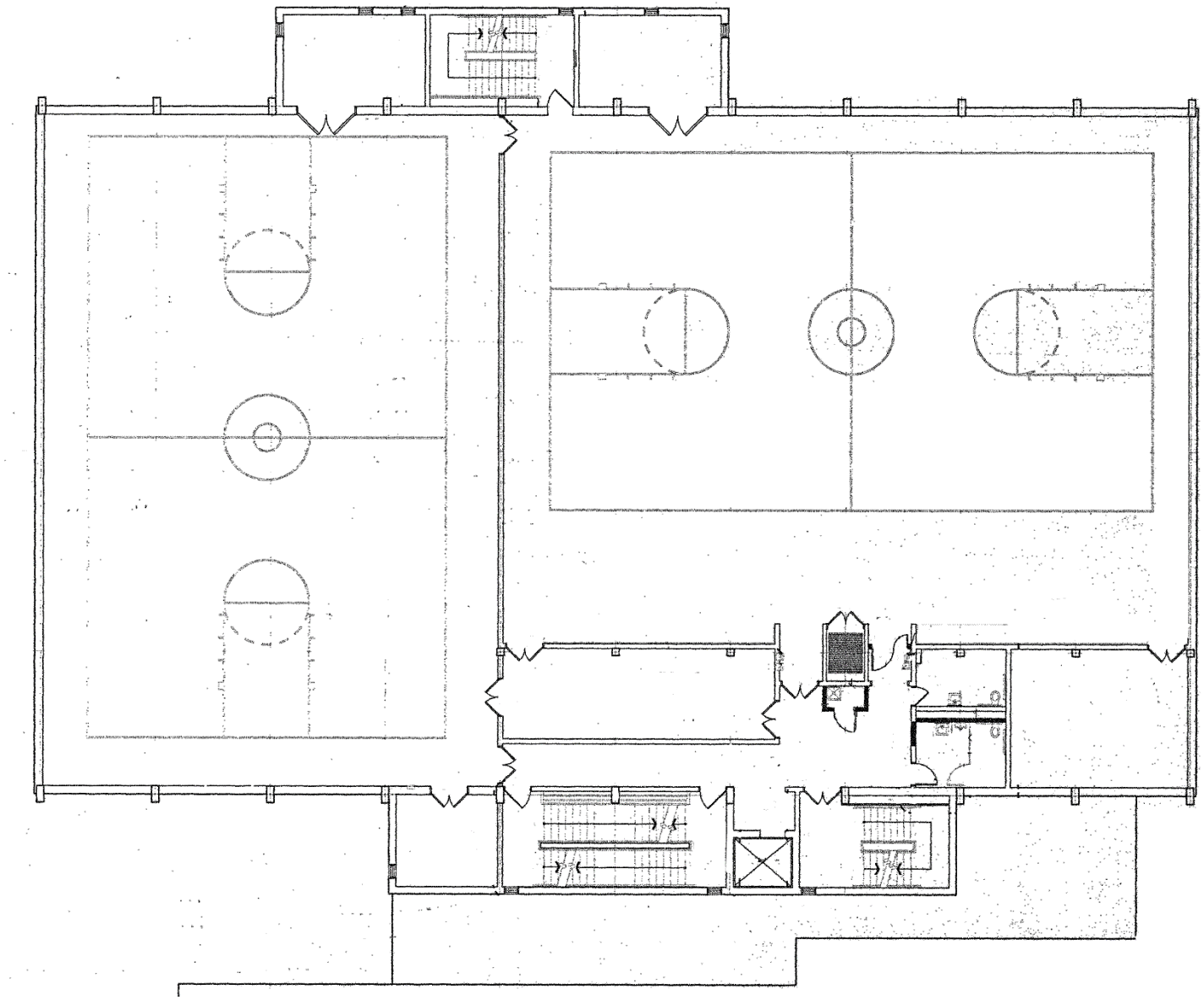
SMMA



Tappan Gym Building: Upper Floor Plan

Public Schools of Brookline

SMMA



Tappan Gym Building

Public Schools of Brookline

SMMA

Park Looking North East

Public Schools of Brookline

SMMA

Existing Park

Public Schools of Brookline

SMMA

New Underground Parking - two levels: +/- 200 spaces.

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Fields over Structured Parking

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SMMA

Existing Building: Swing Space Opportunities

Public Schools of Brookline

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Potential Temporary Modular Classroom Location

Public Schools of Brookline

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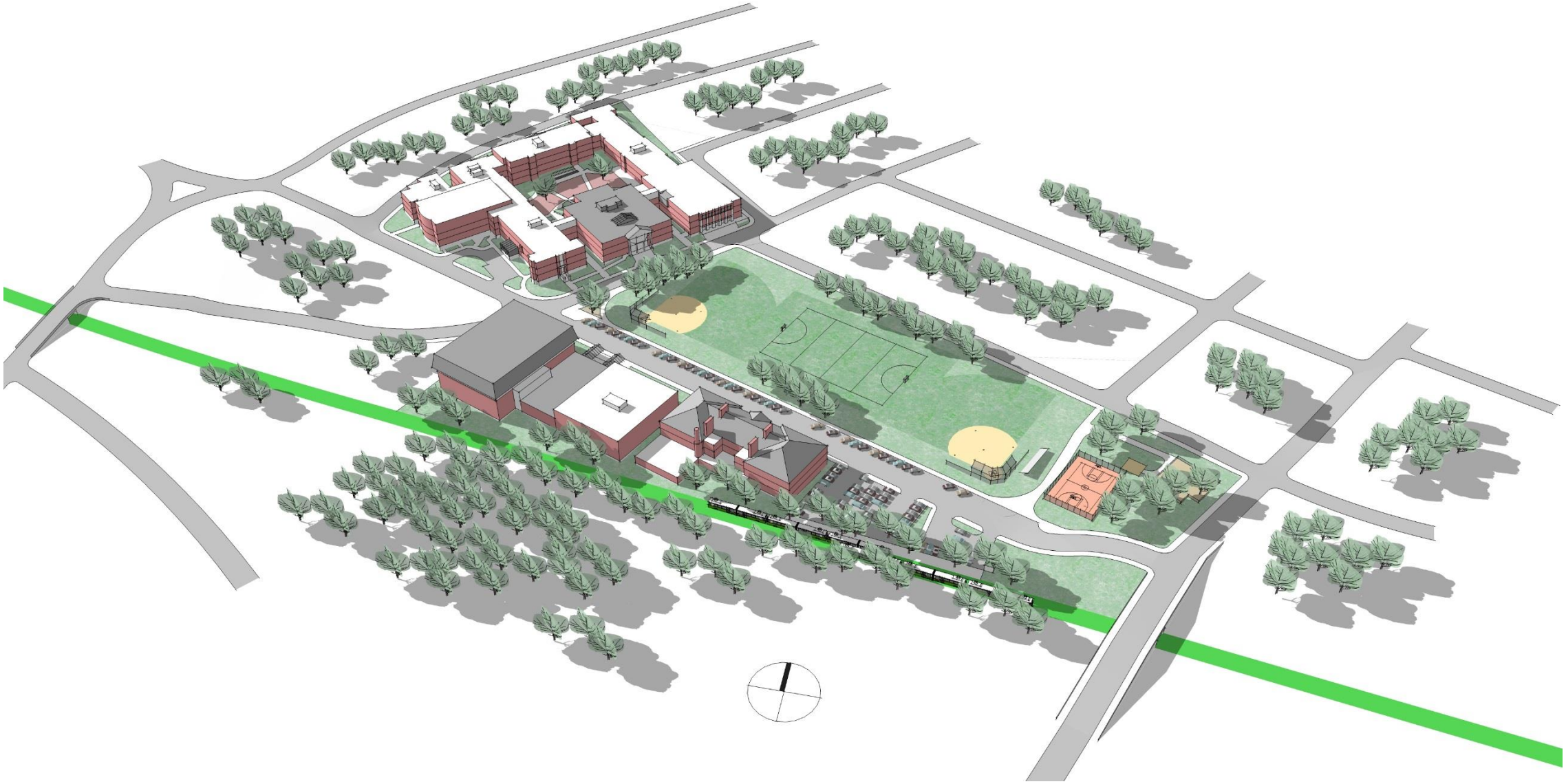


Existing High School Campus Site

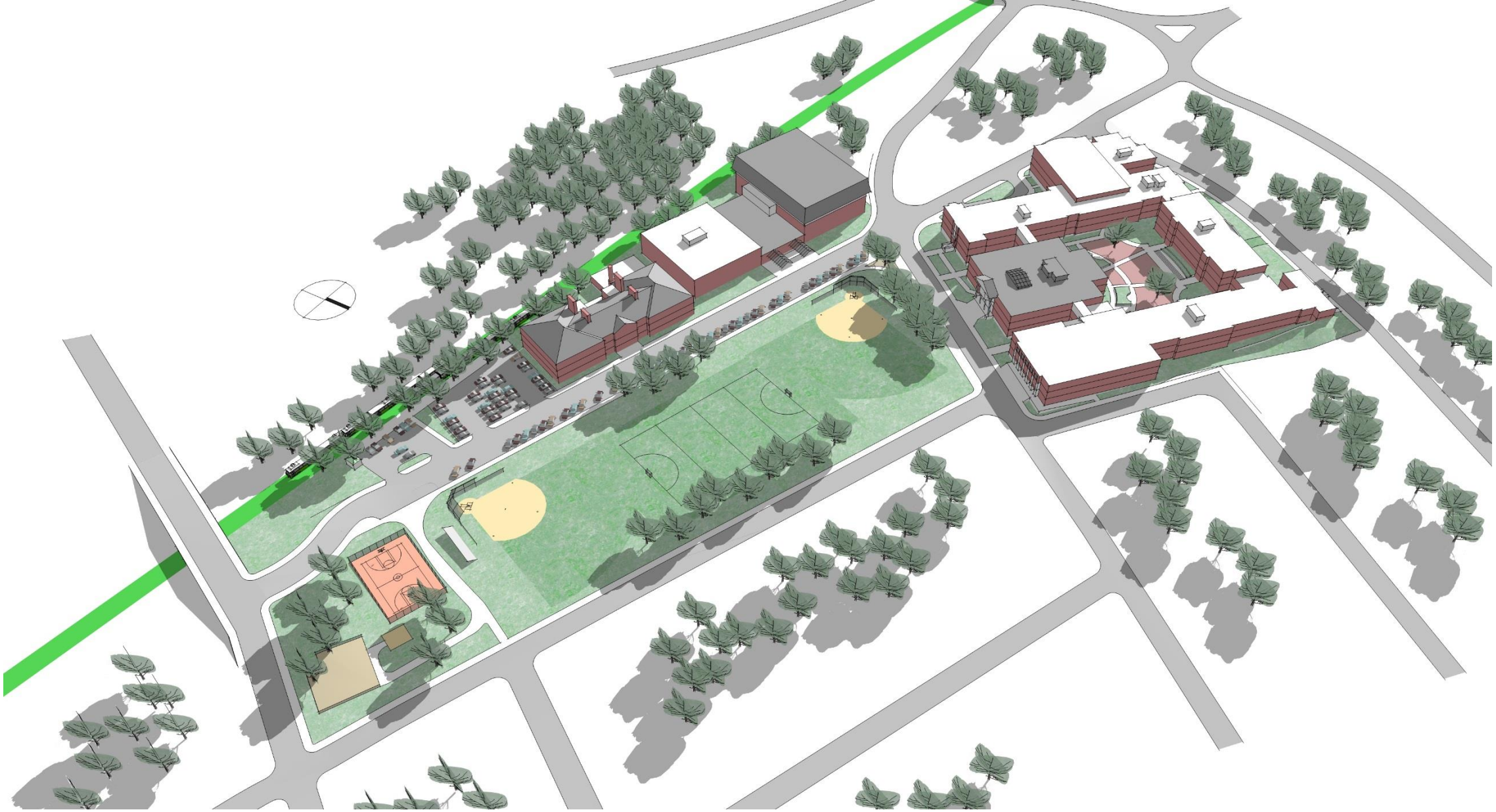
Public Schools of Brookline

SMMA

Potential Campus Build-out

Public Schools of Brookline

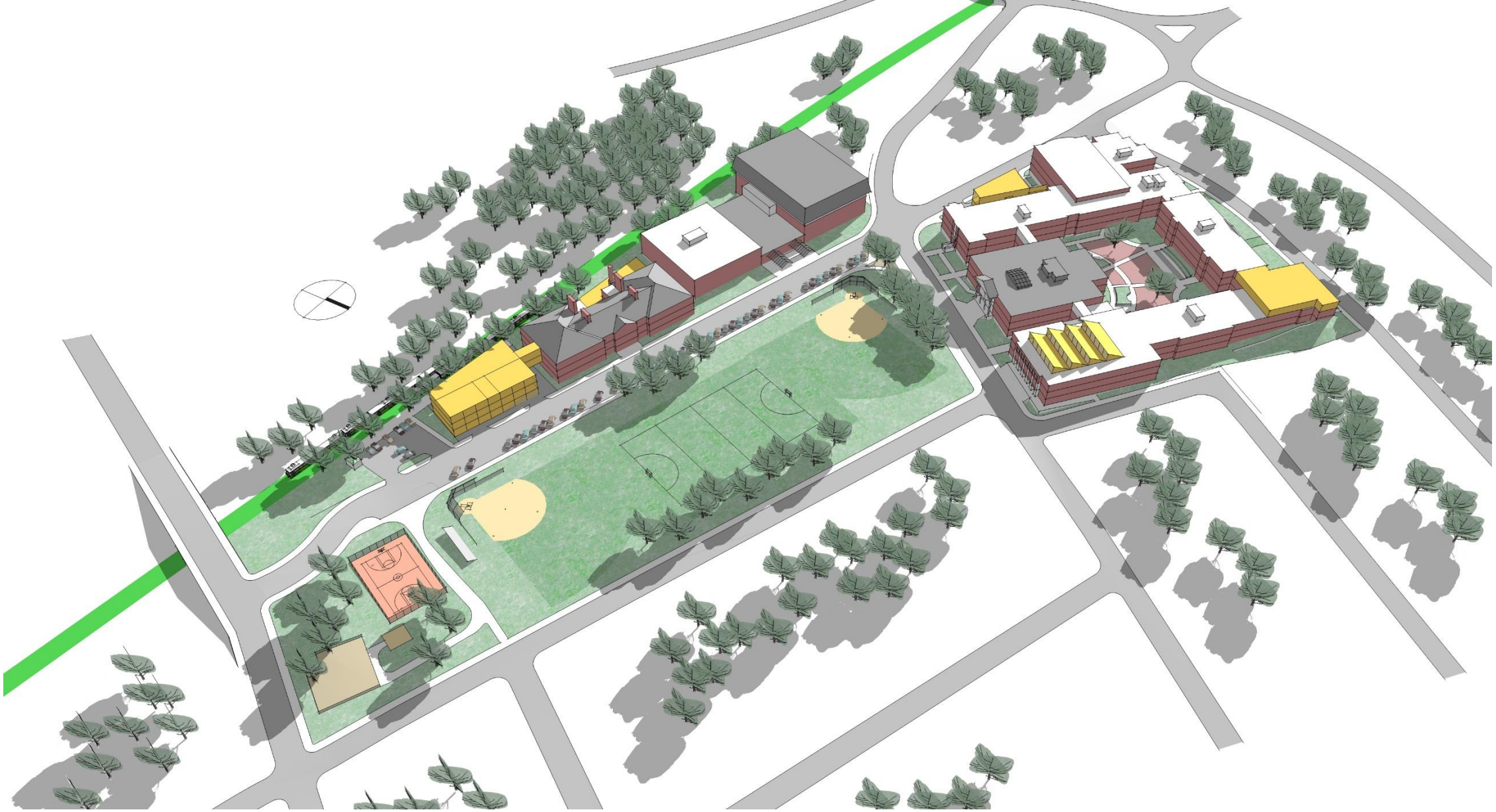
SMMA



Existing Site

Public Schools of Brookline

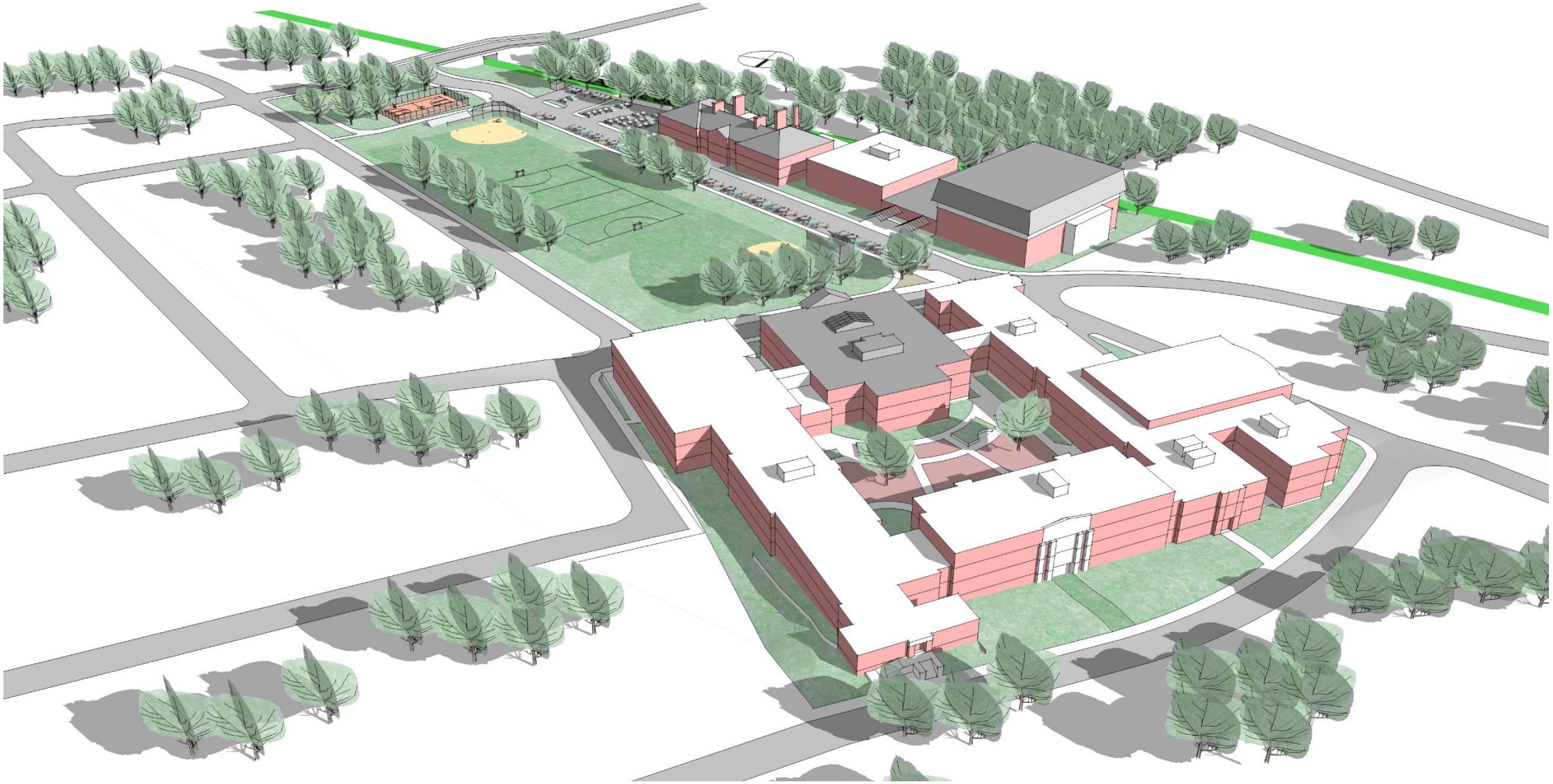
SMMA



Potential Build-out

Public Schools of Brookline

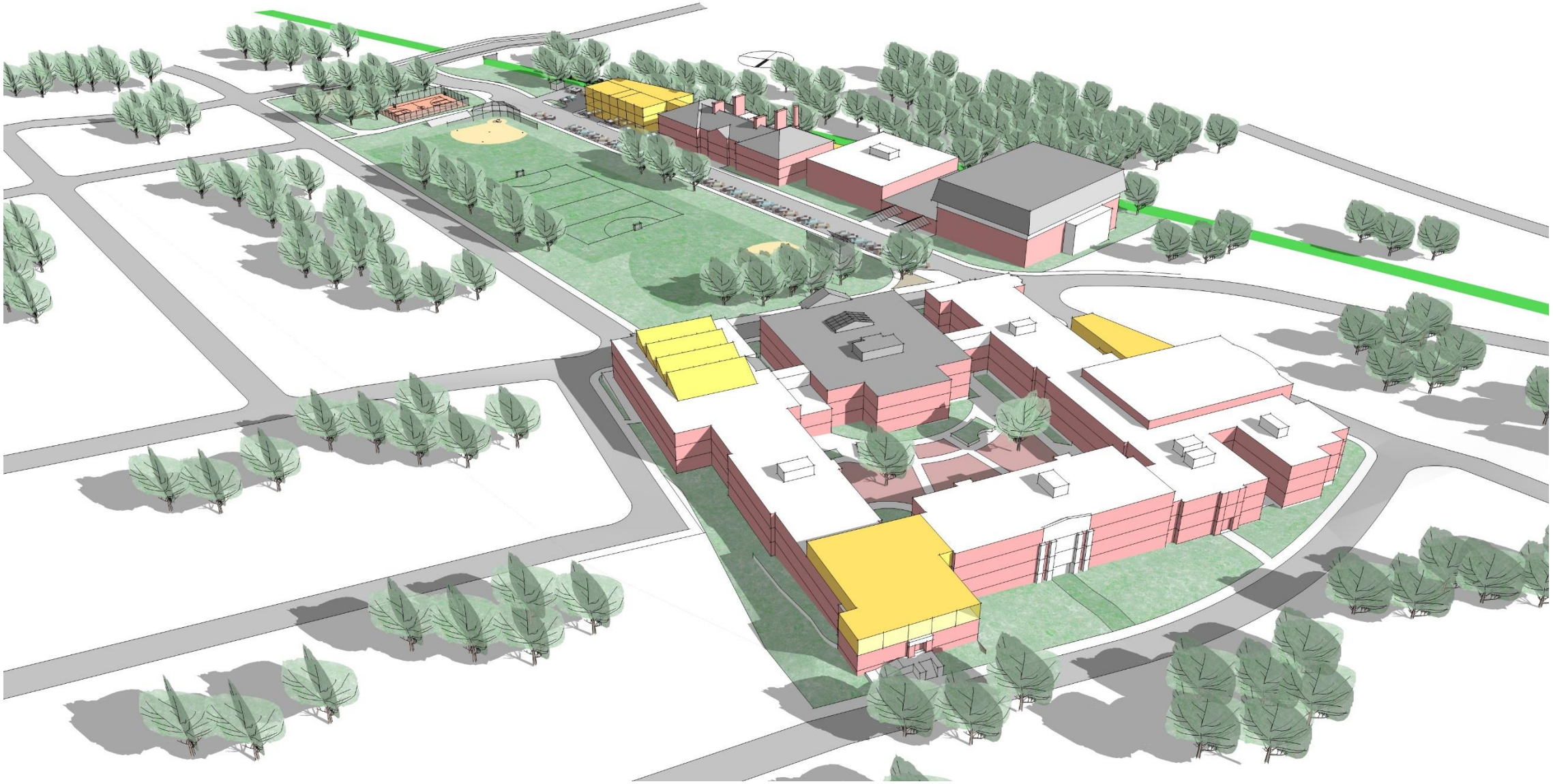
SMMA



Existing Building

Public Schools of Brookline

SMMA



Potential Additions

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Northwest Corner: Fourth Floor

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Existing Site

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Potential Build-Out

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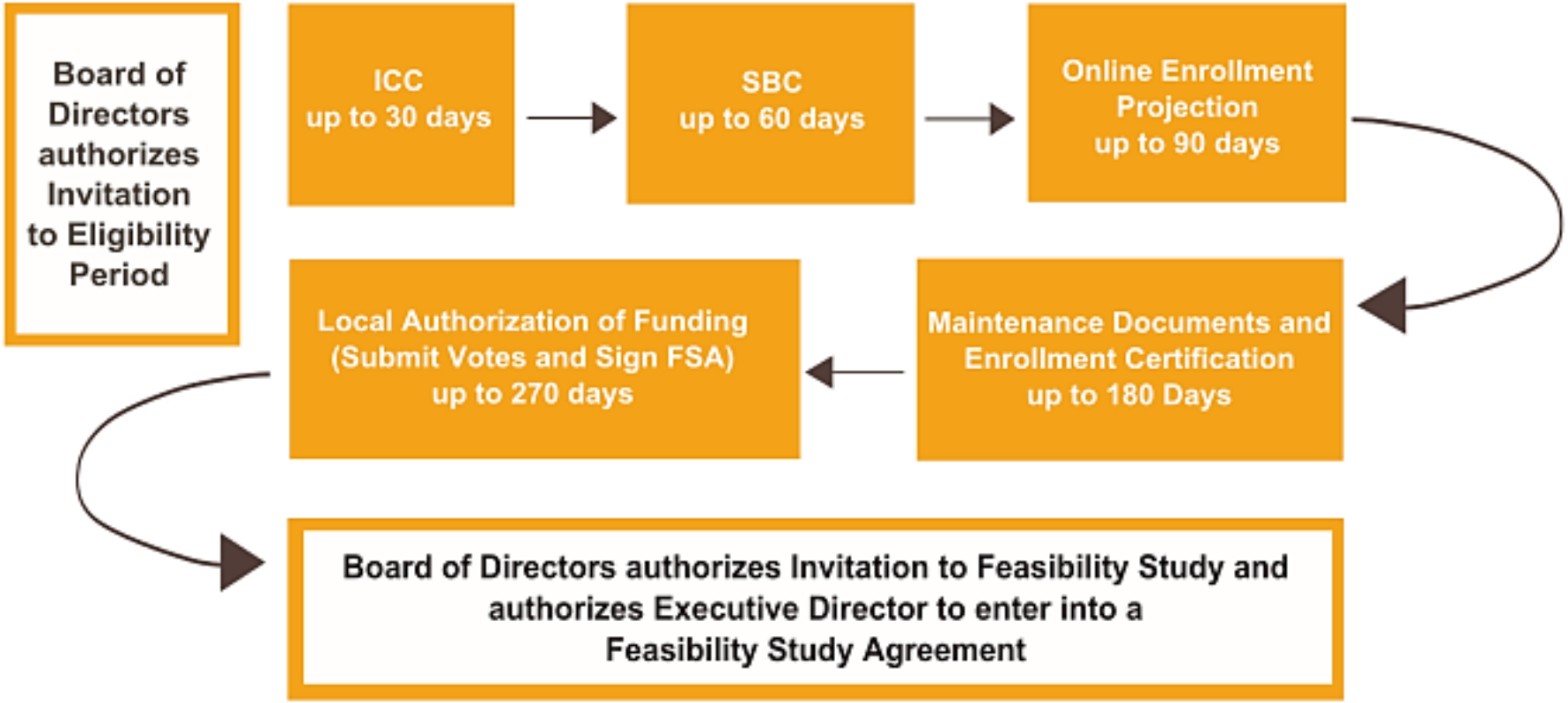
MSBA PROCESS

- The SOI process is to identify that there is a problem.
- "Elimination of existing severe overcrowding" (item 2)
- "Prevention of severe overcrowding expected to result from increased enrollments" (item 4)
- 2015 SOI Applications –
  Opening mid January 2015 thru April 2015
- Minimum 5 years

Eligibility Period Up to 270 Days



Upon Invite to Eligibility Period, Districts complete defined requirements within the timeframes listed above

Next Steps

- Select Approach
  (for planning/moving forward purpose)
- Traffic Study
- Conceptual Estimate
- Preparation of SOI (school dept.)
  - Signatures from: Superintendent,
    School Committee,
    Board of Selectman

Next Steps

- Select Approach
  (for planning/moving forward purpose)
- Traffic Study
- Conceptual Estimate
- Preparation of SOI (school dept.)
  - Signatures from: Superintendent,
    School Committee,
    Board of Selectman

Brookline High School Further Study

Brookline High School Options Refinement Presentation

SMMA | SYMMES MAINI & McKEE ASSOCIATES

February 26, 2015

AGENDA:

- Staff Meeting Review
- One Campus Options (Additional Site Options/Opportunities)
  Revised Floor Plans
- Reflecting the Visioning
- Two Campus Options - Discussion
- Next Steps and the MSBA Timeline
  Schedule Discussion
  Tipping Point Committee
- Community Meeting Presentation

AGENDA: Community Meeting Presentation (3/2/15)

- History / Process
- Anticipated Growth
- Educational Space Requirements
- Visioning Reflected
- Existing Building Characteristics
- One Campus Options and Second HS/Campus Scenario(s)
  Board of Selectmen Site Search Study
- Next Steps and the MSBA Timeline

History / Process

- Build on HMFH Concept Study
- Program Analysis – Space / 21st C Needs
- Visioning Sessions 1& 2 (June and Sept. 2014)
  - The intent of the Visioning process was to engage a representation of the Brookline community to understand and contribute to the high school 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
- Options Development
- Remaining: Traffic Study; Conceptual Cost Development; Final Report

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!

Growth Impact on Space – 2,600 students

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

Classroom Requirements

		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?								

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

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
  - SWS, Idea Available to Other
- Hand’s-on and Experiential Learning
  - Maker Space(s)
- Conversational Classrooms
  - Flexible Furniture, Right Sized Classrooms
- Flexible Technology
  - 1:1 Campus Environment
- Big School, Small Feel
  - Small Learning Communities

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

- Integration Between Disciplines / Departments
  - STEM, STE**A**M
- Green / Sustainability
  - School as a Teaching Tool
- Collaborative Spaces for Students and Faculty (Jointly)
  - Small Group Instruction, Maker Spaces, Informal Learning Spaces
- Learn by Doing
  - CTE, expand Project Based Learning

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

Visioning Reflected – Fab Lab

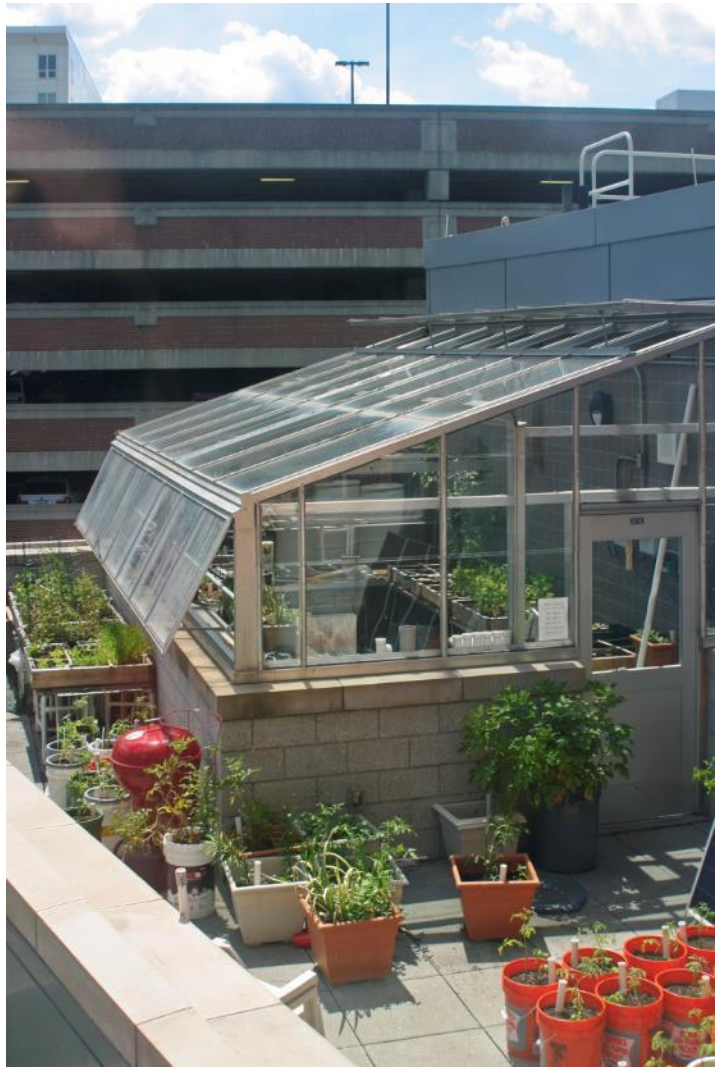
- Integration Between Disciplines / Departments
  - STEM, STEAM
- Collaborative Spaces for Students and Faculty (Jointly)
  - Maker Spaces, Informal Learning Spaces

Visioning Reflected

Learn by Doing: Display and Project-Based Learning

Visioning Reflected

Green/Sustainability: School as a Teaching Tool



Brookline High School

One Campus vs. Two

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February 3, 2014

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

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

South Brookline Campus

South Brookline 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)

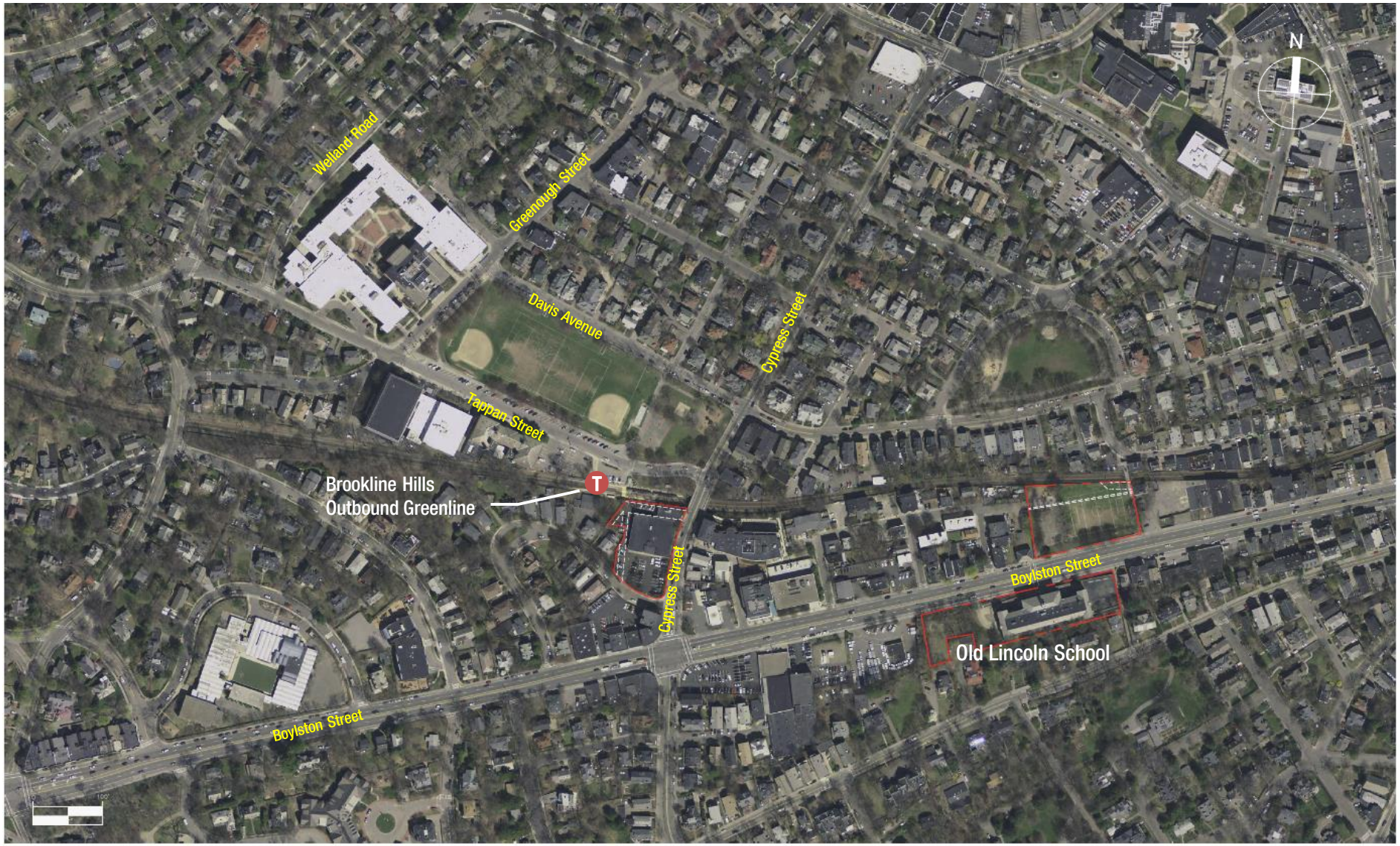
South Brookline Campus

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
- 2.8 miles from Reservoir Station (Riverside Green Line)
- Bussing likely required
- Challenging topography
- Politically challenging
- Larger staff and ongoing operational costs

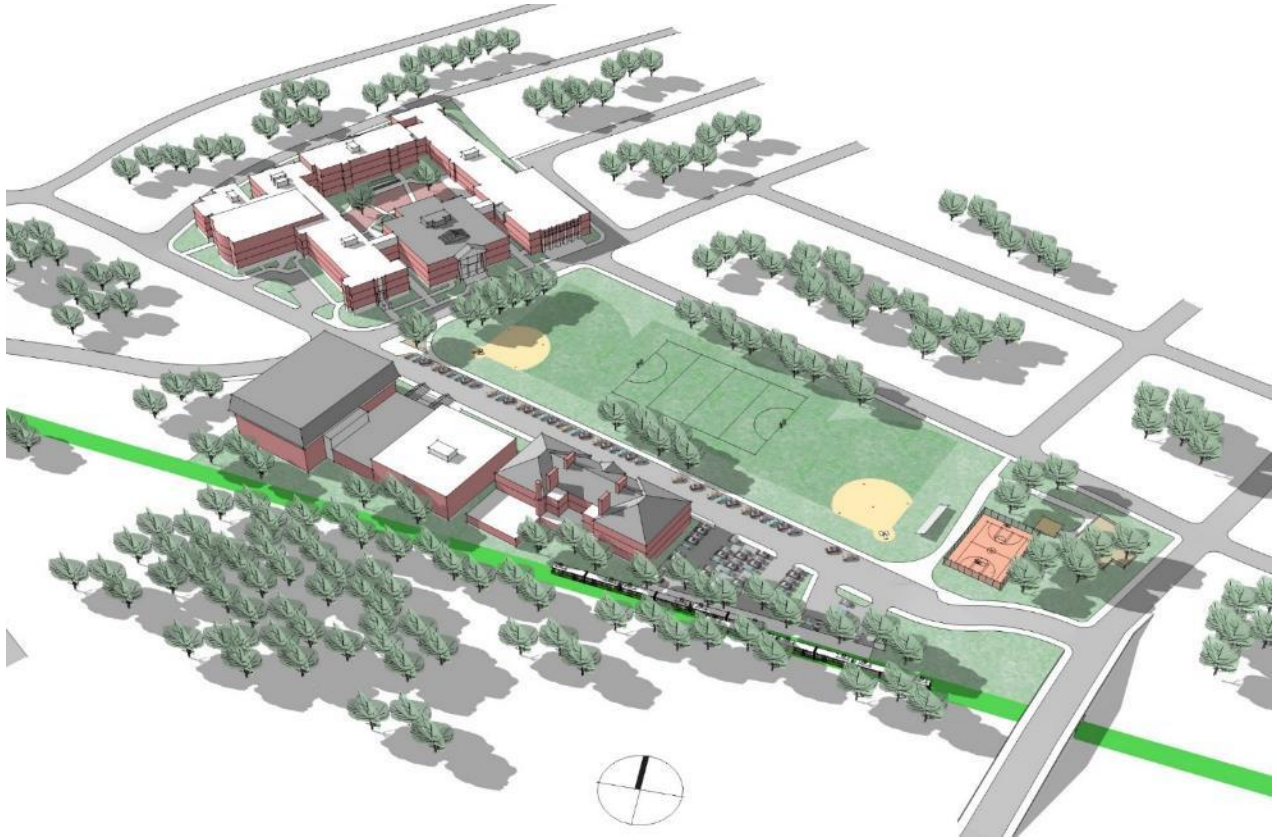
High School Environs

Nearby Opportunities



Current Campus

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



One Campus – Larger Main Campus Goals

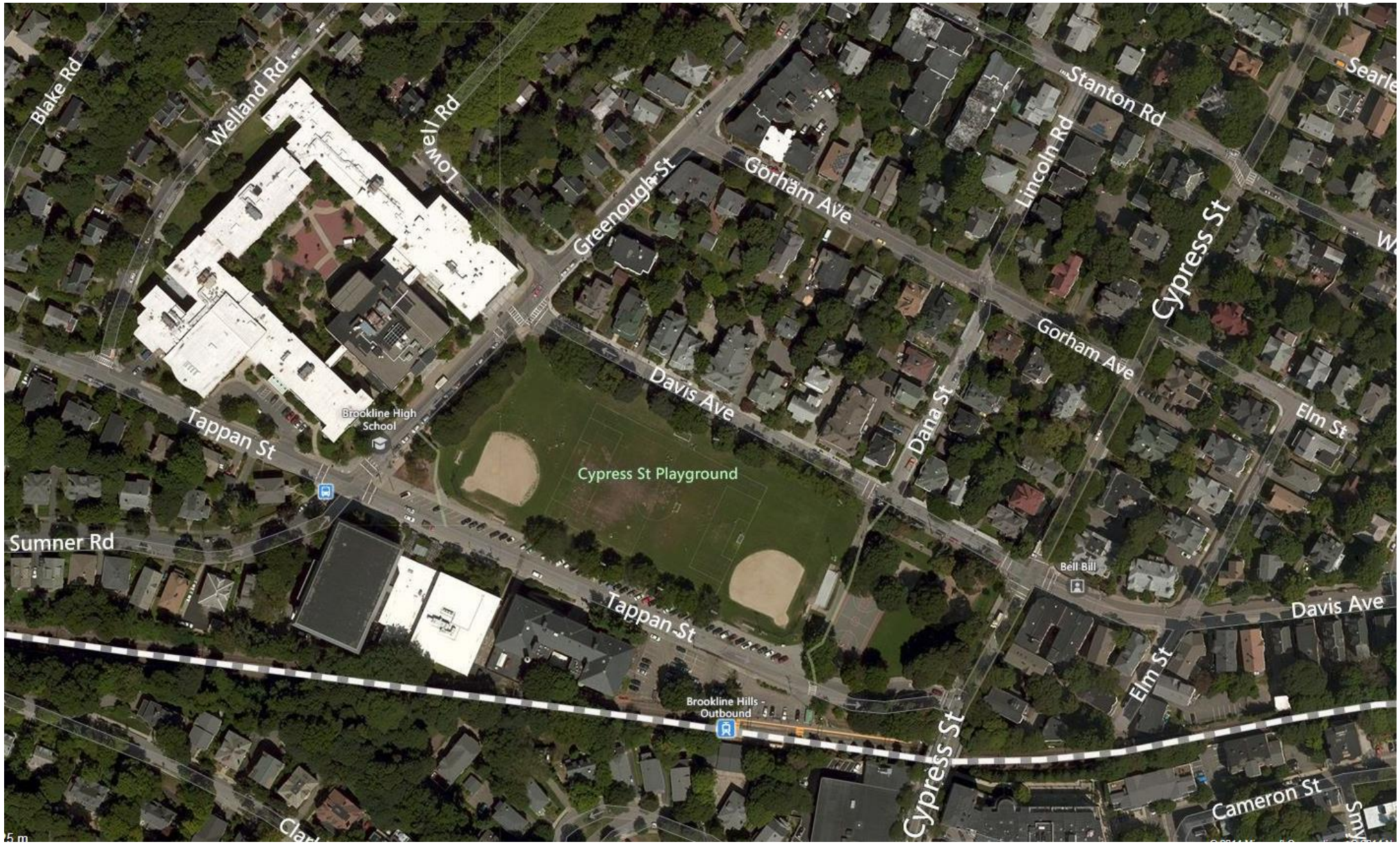
PROS:

- Status Quo for Student Culture and Community
- Opportunity to Address All Spaces
- Potential Use of Old Lincoln School
- Potential Acquisition of Route 9 Real Estate or “Tin Building”
- Potential Retention of Some Programs not Normally Funded
- Opportunity to Right Size All or Most Science Rooms
- Opportunity to Right Size Some Academic Classrooms
- Old Lincoln School proximity and availability TBD?

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
- Phasing and Construction Impacts TBD



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Existing Campus Aerial

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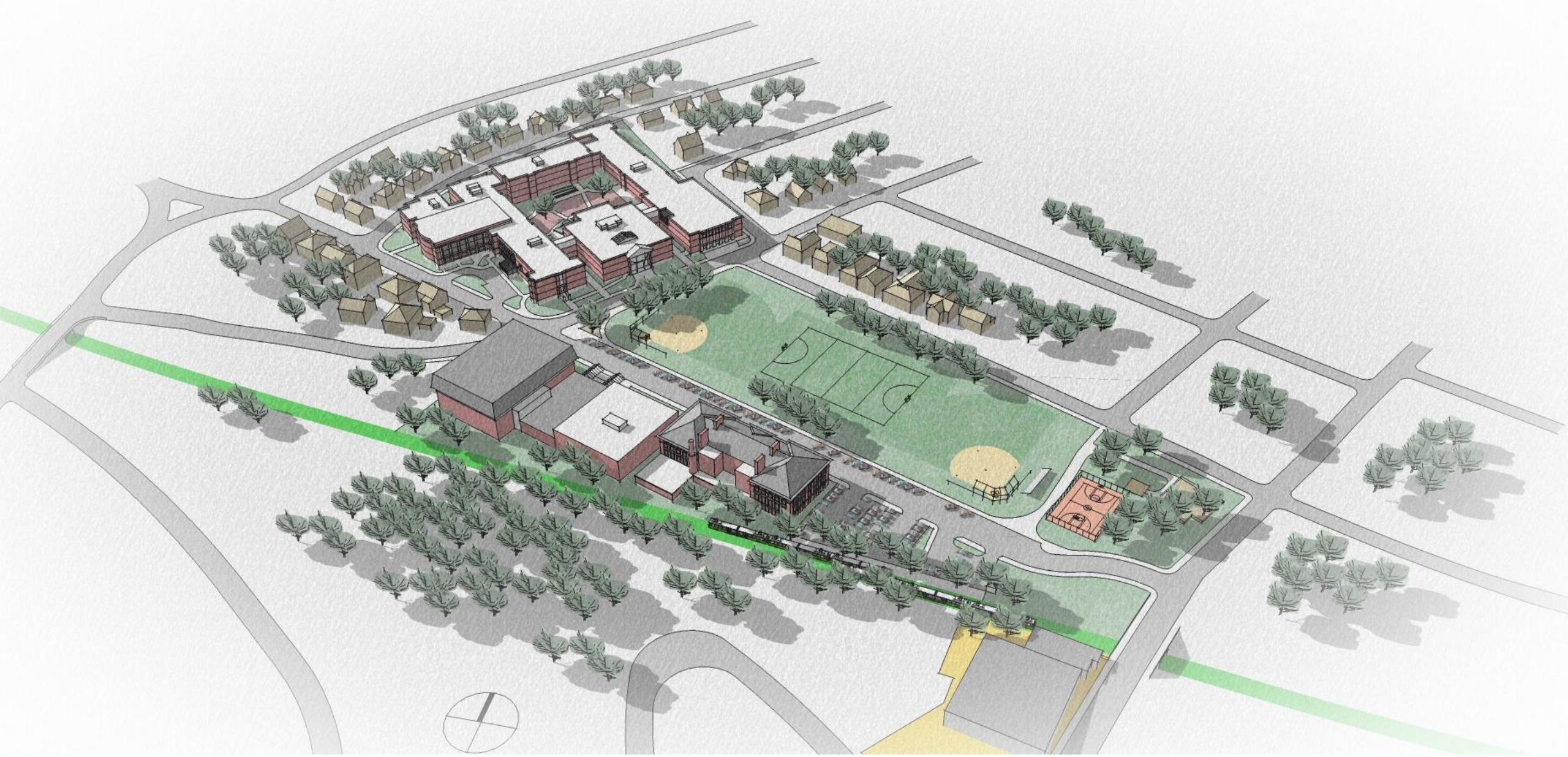

Existing High School Campus Site

Public Schools of Brookline

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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
- Technology/Engineering

Existing Basement Floor Plan: Current Program

Public Schools of Brookline

SMMA

Legend

- Appropriately Used within 5%
- 5 to 20% Under MSBA
- 25% or More < MSBA
- 10% or More > MSBA
- Not Part of MSBA Project

*Based on 2015 Population

Existing Basement Floor Plan: MSBA Deficiency Plan

Public Schools of Brookline

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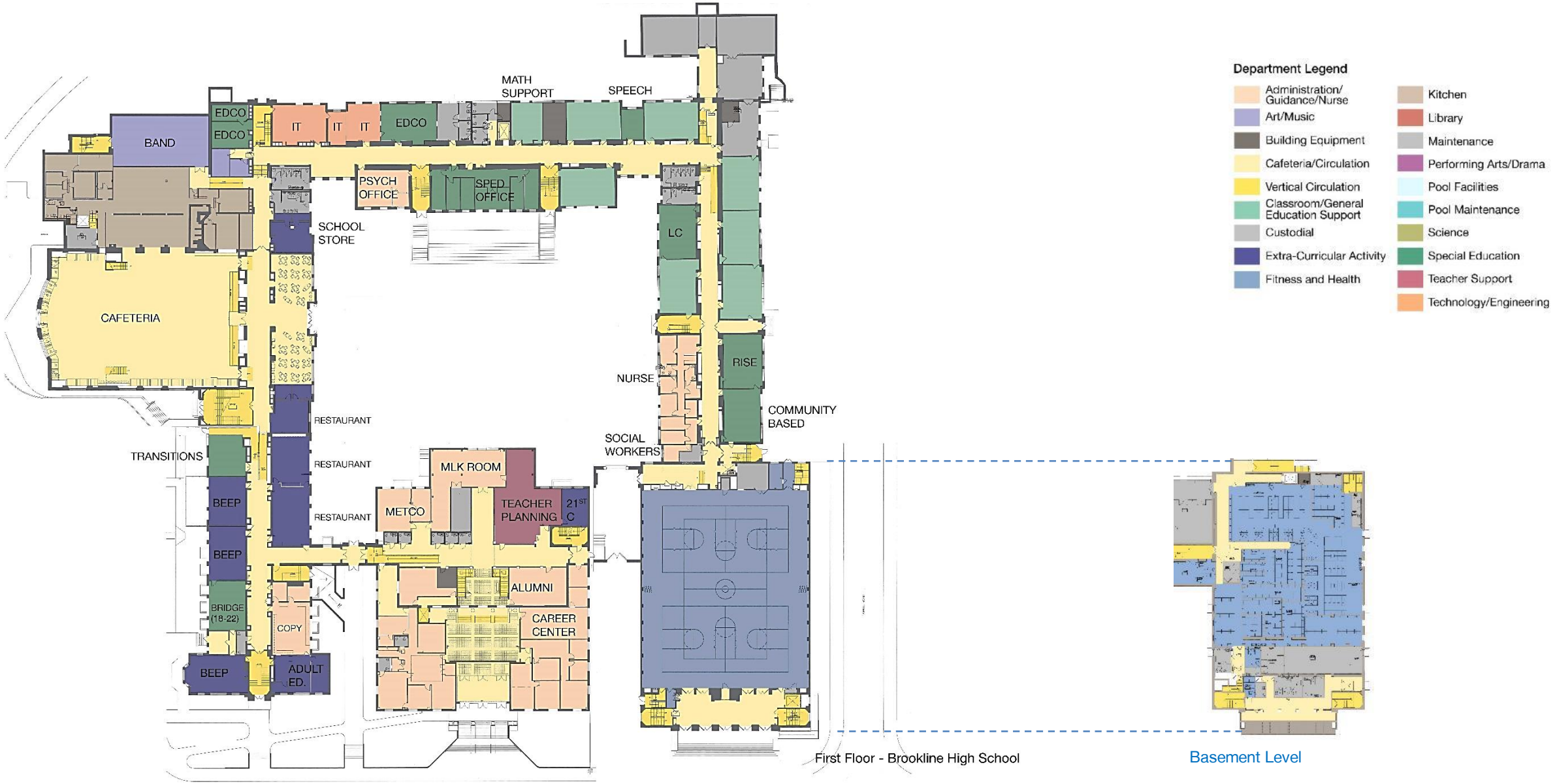

Existing First Floor Plan: Current Program

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Existing First Floor Plan: MSBA Deficiency Plan

Public Schools of Brookline

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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
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Existing Second Floor Plan: Current Program

Public Schools of Brookline

SMMA

Second Floor - Brookline High School

Legend

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- 25% or More < MSBA
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- Not Part of MSBA Project

*Based on 2015 Population

Existing Second Floor Plan: MSBA Deficiency Plan

Public Schools of Brookline

SMMA

Third 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
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- Performing Arts/Drama
- Pool Facilities
- Pool Maintenance
- Science
- Special Education
- Teacher Support
- Technology/Engineering

Existing Third Floor Plan: Current Program

Public Schools of Brookline

SMMA

Third Floor - Brookline High School

Legend

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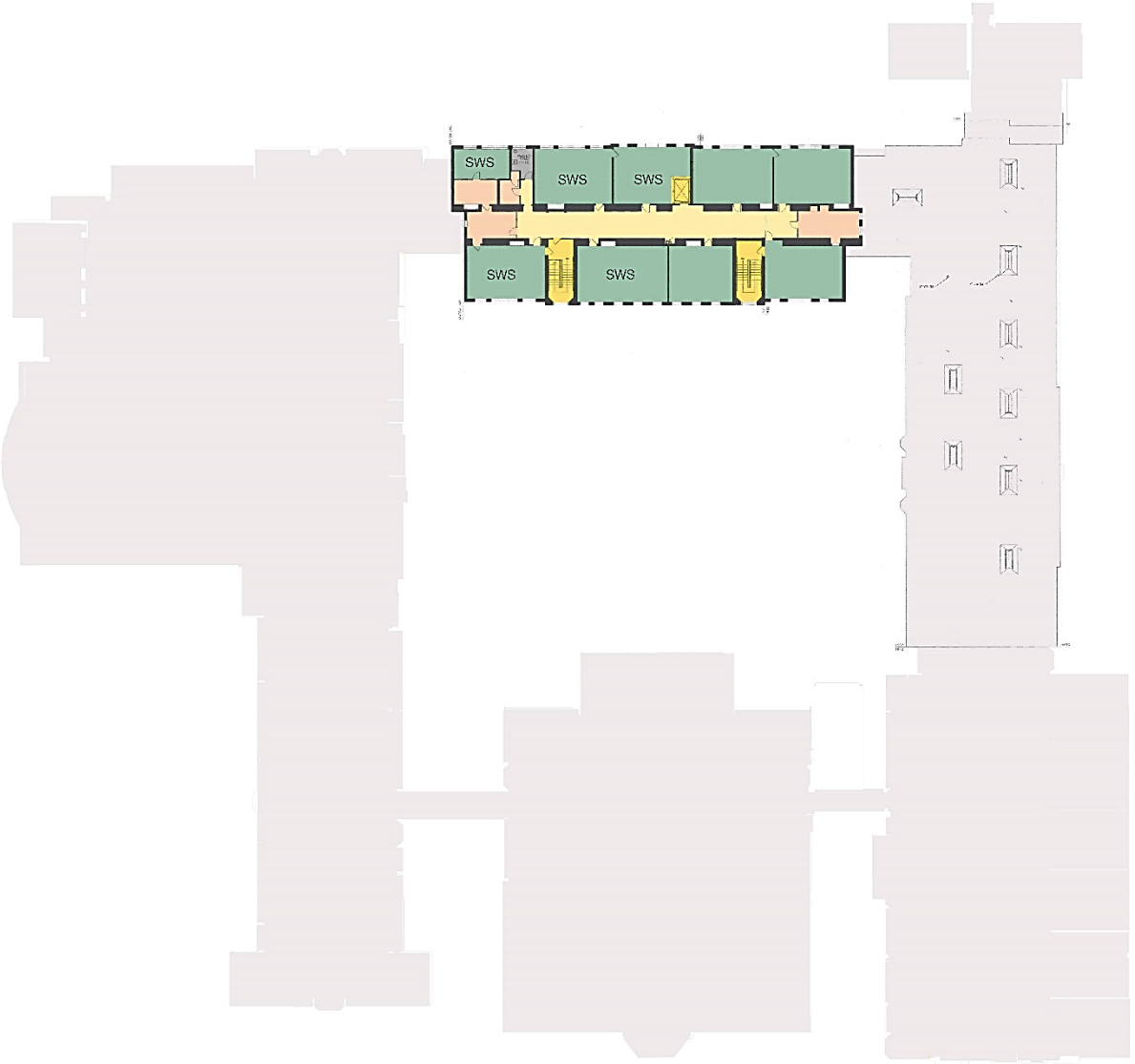
*Based on 2015 Population

Existing Third Floor Plan: MSBA Deficiency Plan

Public Schools of Brookline

SMMA



Fourth Floor - Brookline High School

Department Legend

- Administration/ Guidance/Nurse
- Art/Music
- Building Equipment
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- Vertical Circulation
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Existing Fourth Floor Plan: Current Program

Public Schools of Brookline

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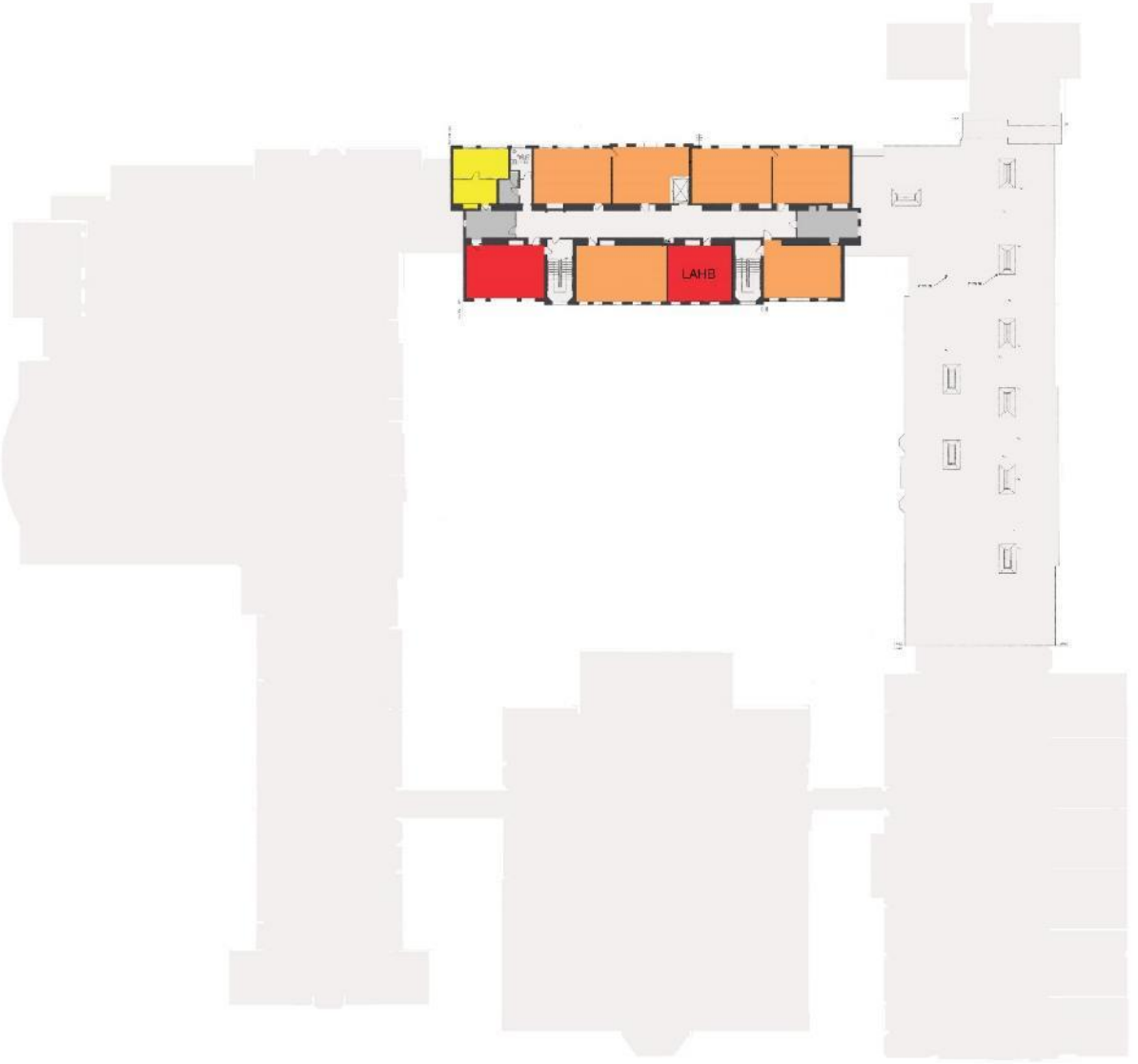

Fourth Floor - Brookline High School

Legend

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- 5 to 20% Under MSBA
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*Based on 2015 Population

Existing Fourth Floor Plan: MSBA Deficiency Plan

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Brookline High School

One Campus Options

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February 3, 2014

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 as distributed

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

  STEM/STEAM
- Expand Campus Boundaries: 111 Cypress Street, Old Lincoln School, Other

First Floor - Brookline High School

Department Legend

- Administration/ Guidance/Nurse
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- Teacher Support
- Technology/Engineering

Existing First Floor Plan: Current Program

Public Schools of Brookline

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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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Auditorium & Cafeteria Site

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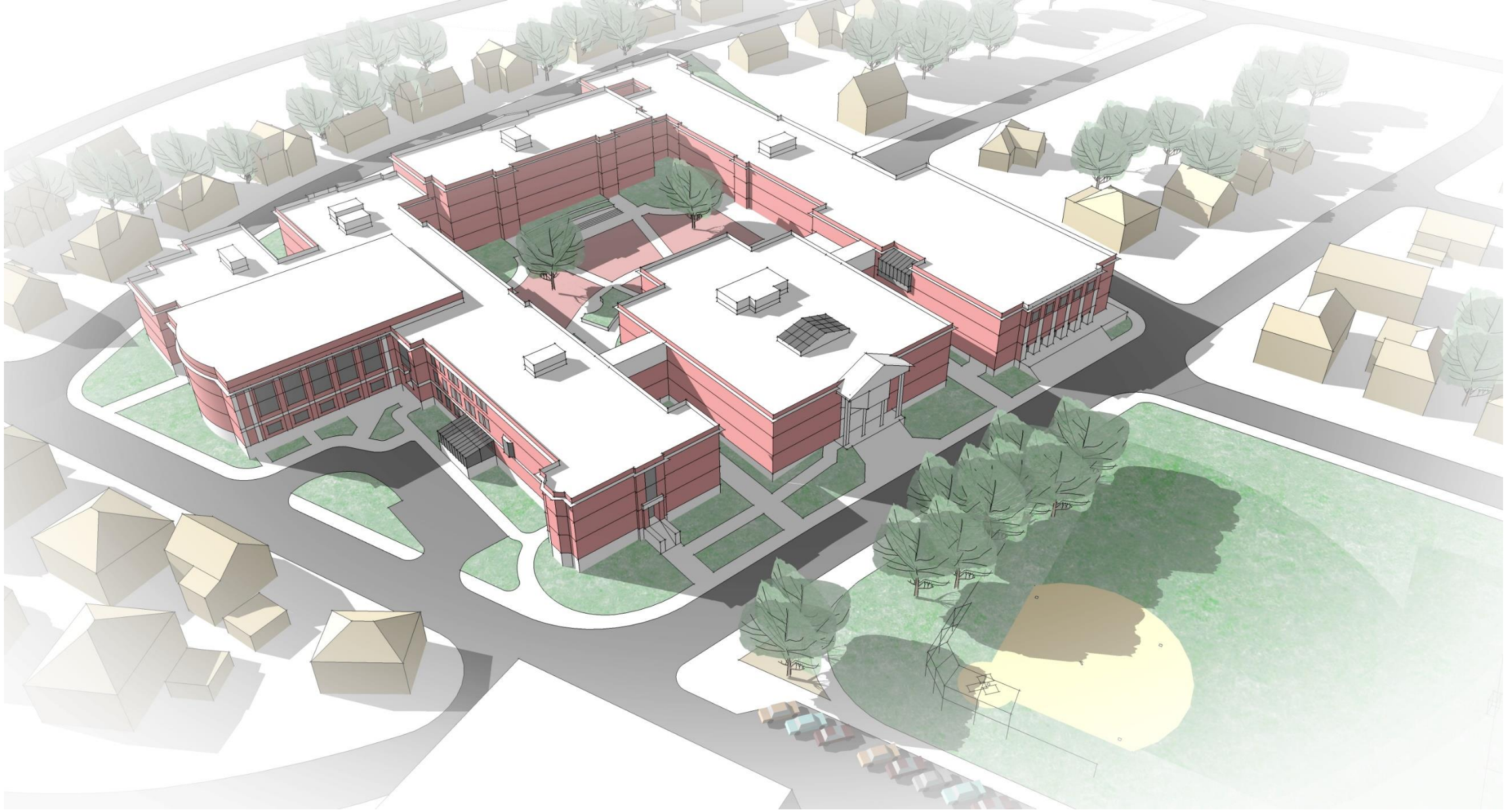

Existing Building: Option 1 Space Opportunities

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Potential Building: Option 1 Space Opportunities

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Student Restaurant and Bakery Example

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Cafeteria as Central Commons Example

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Second Floor - Brookline High School

Department Legend

- Administration/ Guidance/Nurse
- Art/Music
- Building Equipment
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- Teacher Support
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Existing Second Floor Plan: Current Program

Public Schools of Brookline

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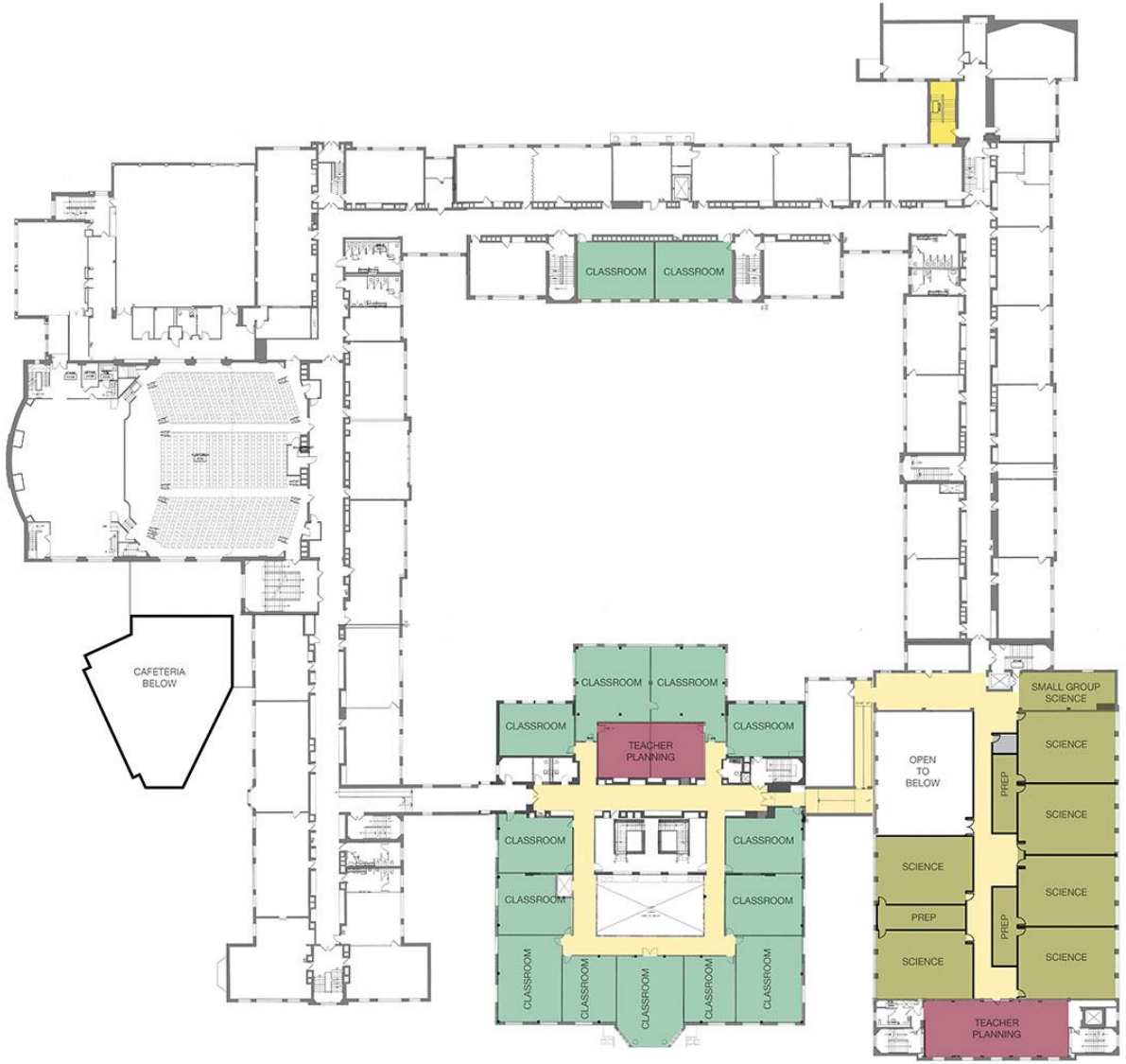

- Use Library Space More Efficiently – Match 3rd Floor Layout
- Total 13 “Full Size” Science Labs
- 13 Classrooms±
- 1 Teacher Planning Center

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

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Rethinking Double Loaded Corridors

Public Schools of Brookline

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Rethinking Double Loaded Corridors

Public Schools of Brookline

SMMA

Rethinking Double Loaded Corridors

Public Schools of Brookline

SMMA

Rethinking Double Loaded Corridors

Public Schools of Brookline

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Rethinking Double Loaded Corridors

Public Schools of Brookline

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Rethinking Double Loaded Corridors

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Spaces for 21st Century Learning

Corridors of Power

Third Floor - Brookline High School

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Existing Third Floor Plan: Current Program

Public Schools of Brookline

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- Science
- Special Education
- Teacher Support
- Technology/Engineering

- 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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Learning Commons

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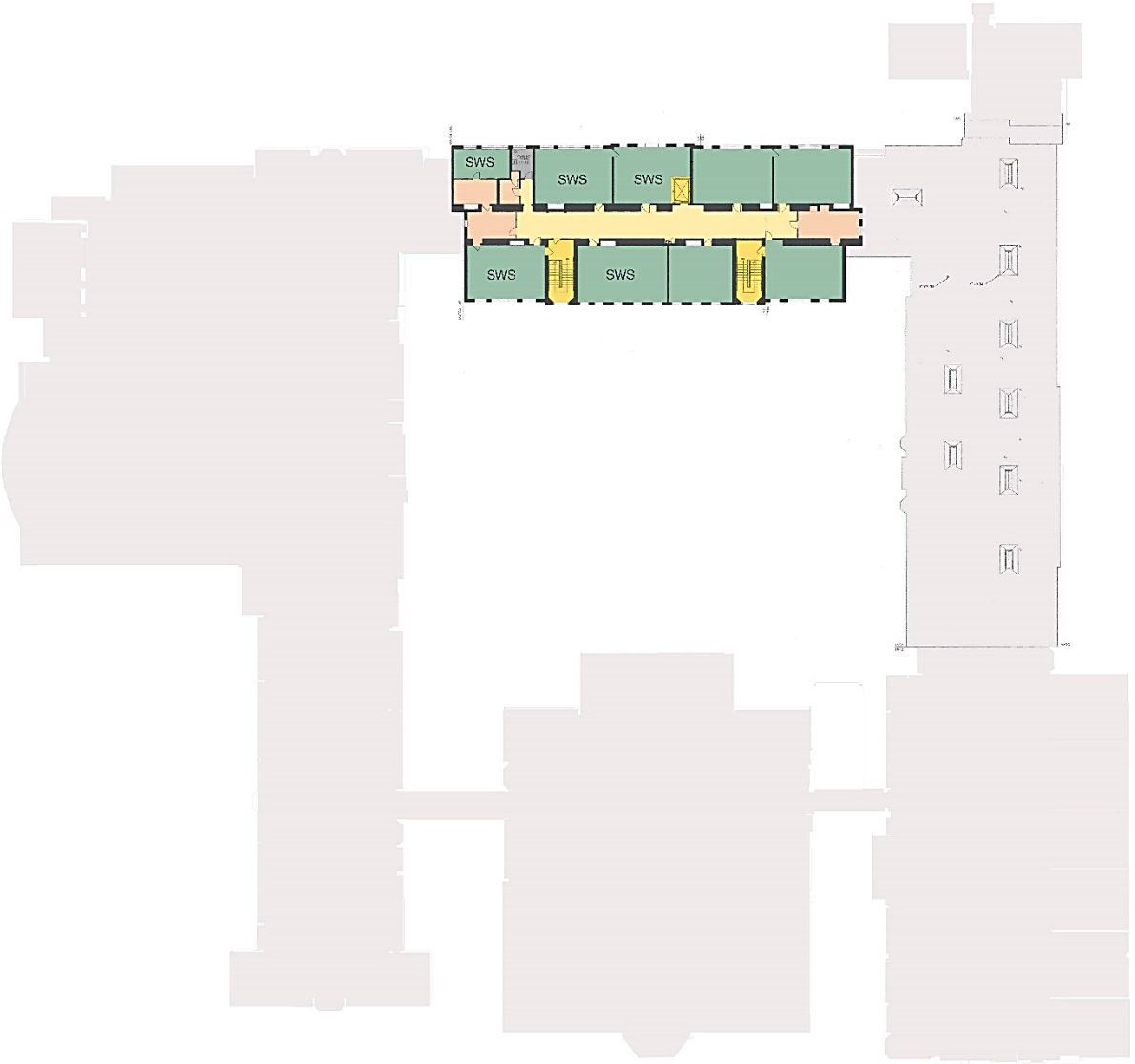

Fourth Floor - Brookline High School

Department Legend

- Administration/ Guidance/Nurse
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Existing Fourth Floor Plan: Current Program

Public Schools of Brookline

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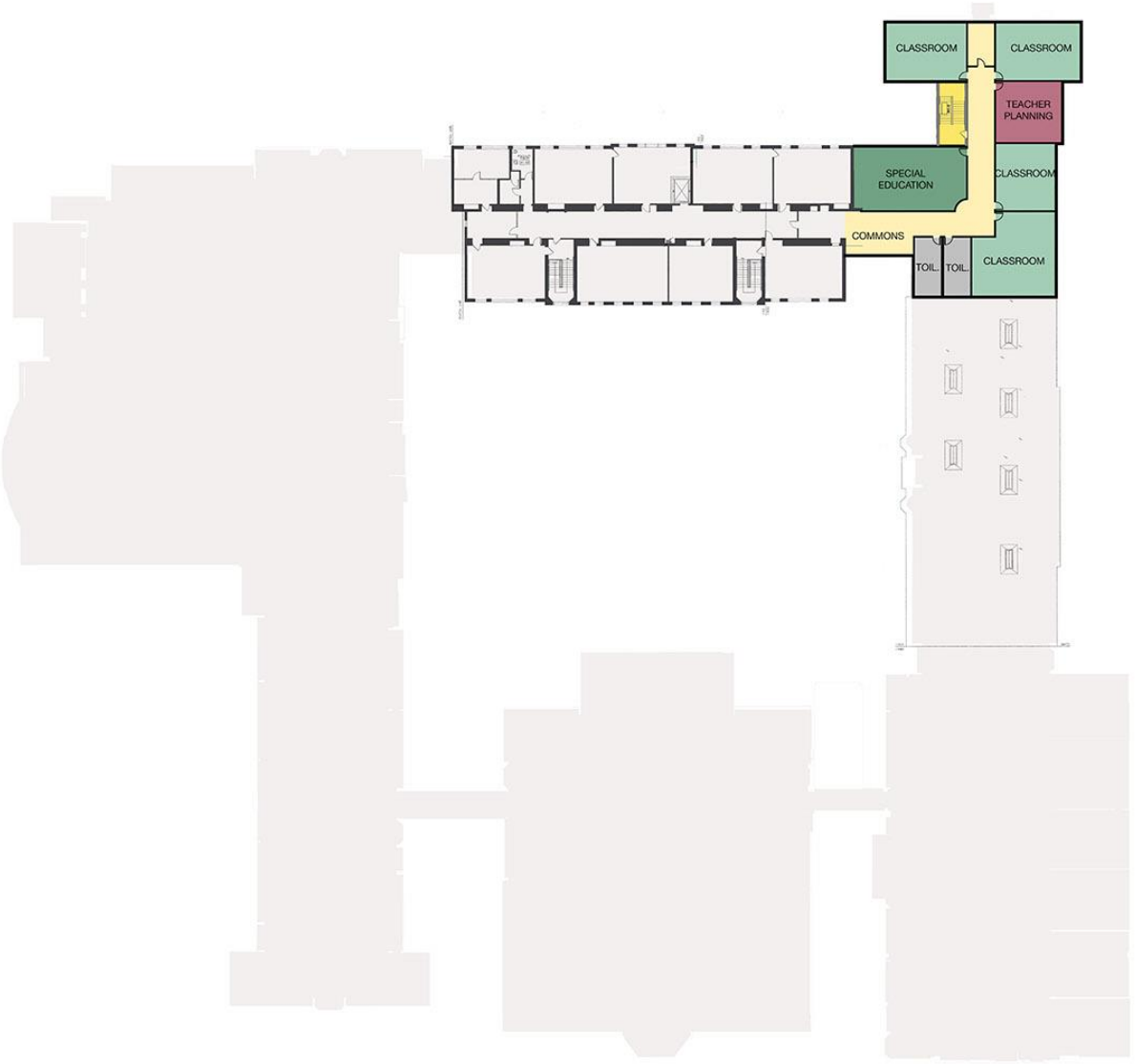

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- Pool Maintenance
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- Special Education
- Teacher Support
- Technology/Engineering

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

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

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Northwest Corner: Fourth Floor

Public Schools of Brookline

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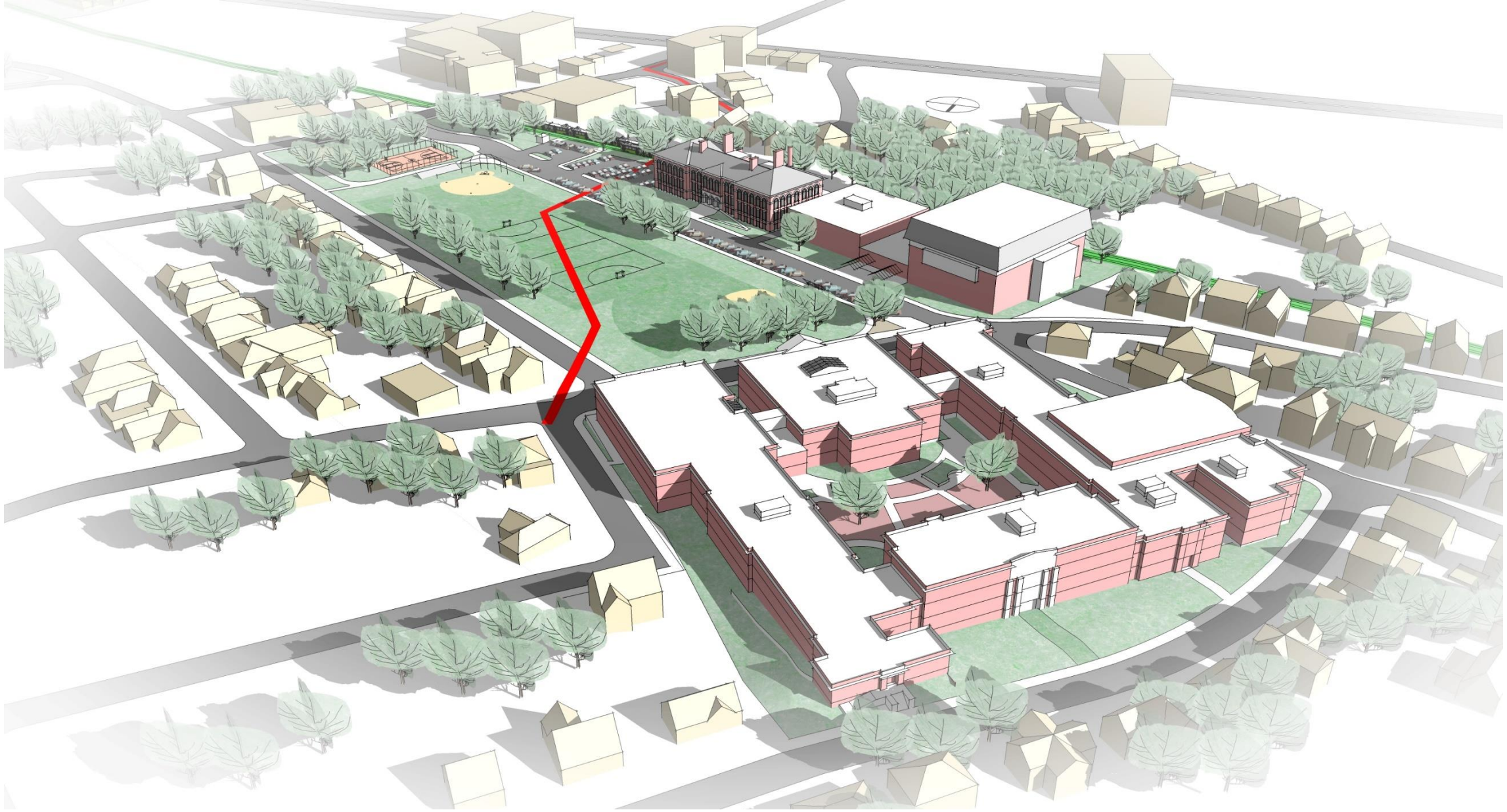

Existing Building

Public Schools of Brookline

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Potential Additions

Public Schools of Brookline

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Brookline High School

Site Planning For One Campus Option

- Unified Arts Building (STEM/STEAM)
- Tappan Gymnasium
- 111 Cypress Street
- Old Lincoln School & Route 9 Properties
- Parking and Fields (Cypress Playground and Park)
- Modular Swing Space

SITE	Owner	Land Area	Zoning District	Max FAR	Max Height	Front Yard	Side Yard	Rear Yard	% Open Space (landscape)	NOTES
Lincoln School	Town of Brookline	63,660 sf 1.46 ac	General Business G-1.0	1.0	40’	-	-	10+L/10	-	Confirm Availability & Timeline Historic status
Boylston Street Playground (Lincoln School)	Town of Brookline, Boylston Playground	50,884 sf 1.16 ac	Apartment House M-1.0 (CAM)	1.0	40’	25’	20+L/10	40’	20%	Confirm Park Designation
111 Cypress, Medical Building	Henry Lewis Trust	39,808 sf 0.91 ac	Local Business L-0.5	0.5	‘40	10’	-	10+L/10	-	“Tin Building”

Sites Near High School Campus

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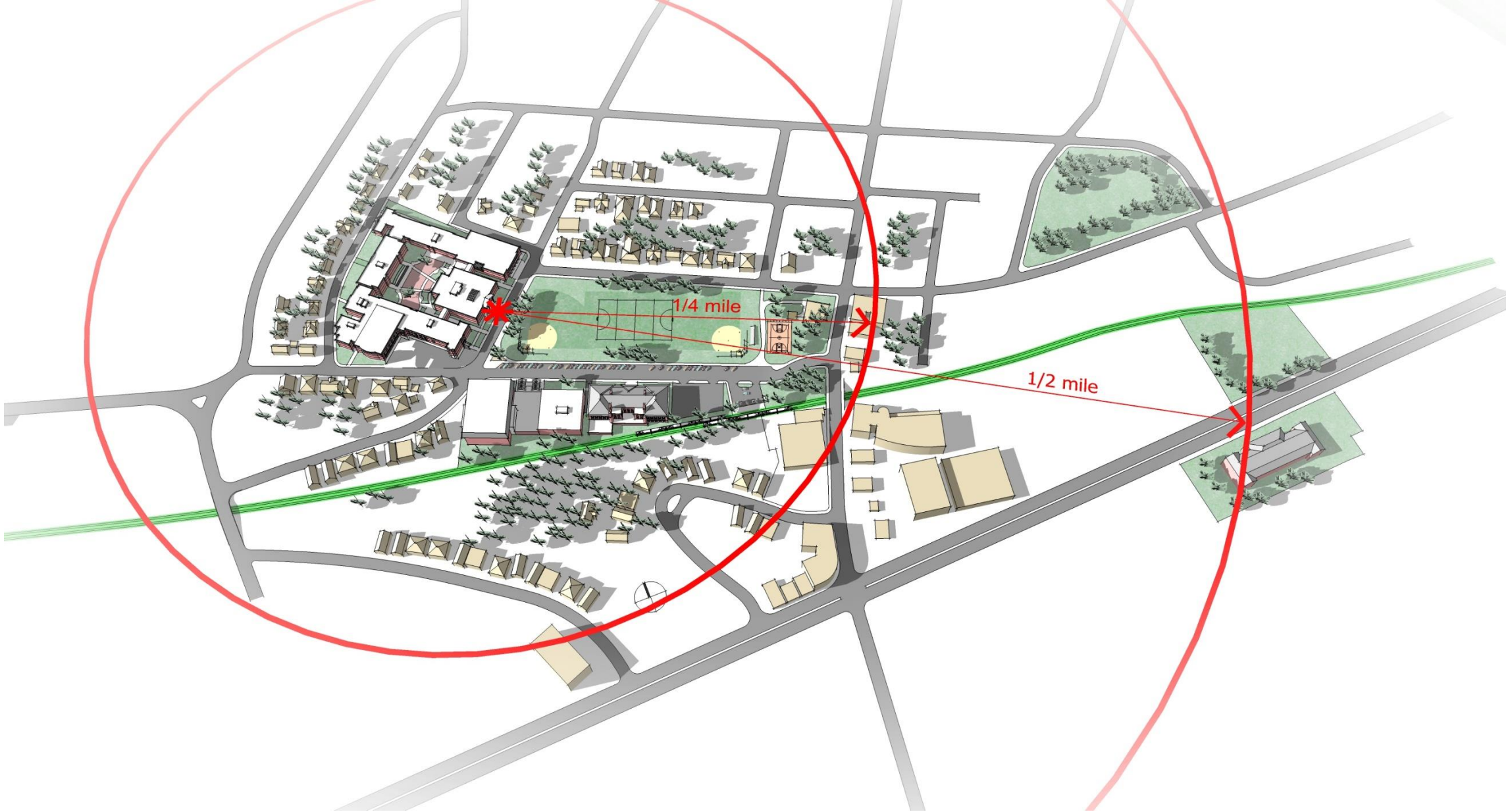

Potential Campus Expansion

Public Schools of Brookline

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111 Cypress Street: Medical Office Building

Site

111 Cypress Street: Medical Office Building

Site Photographs

Unified Arts Building: Existing Site Condition

Public Schools of Brookline

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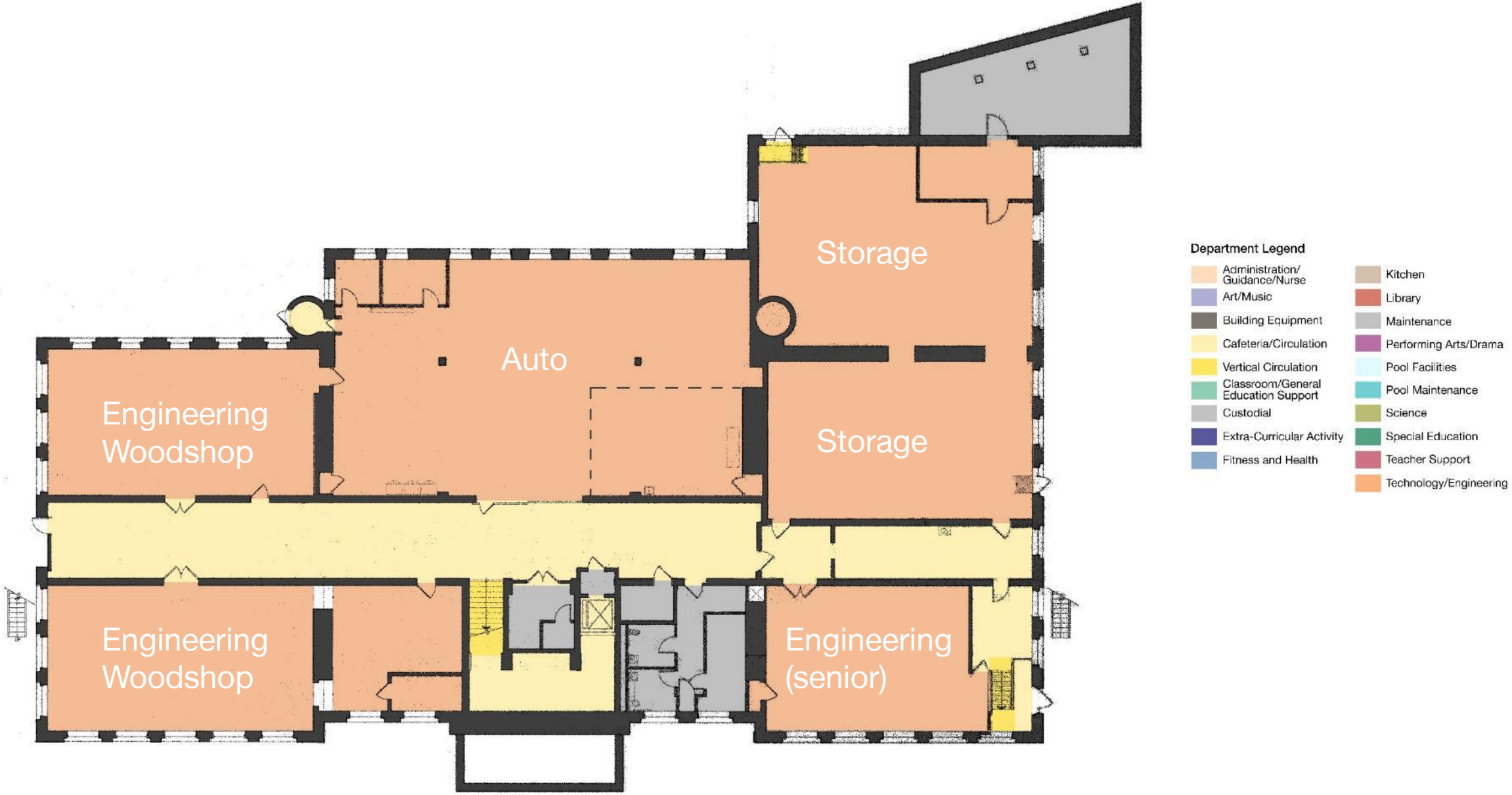

Unified Arts Building: Existing Lower Level Floor Plan

Public Schools of Brookline

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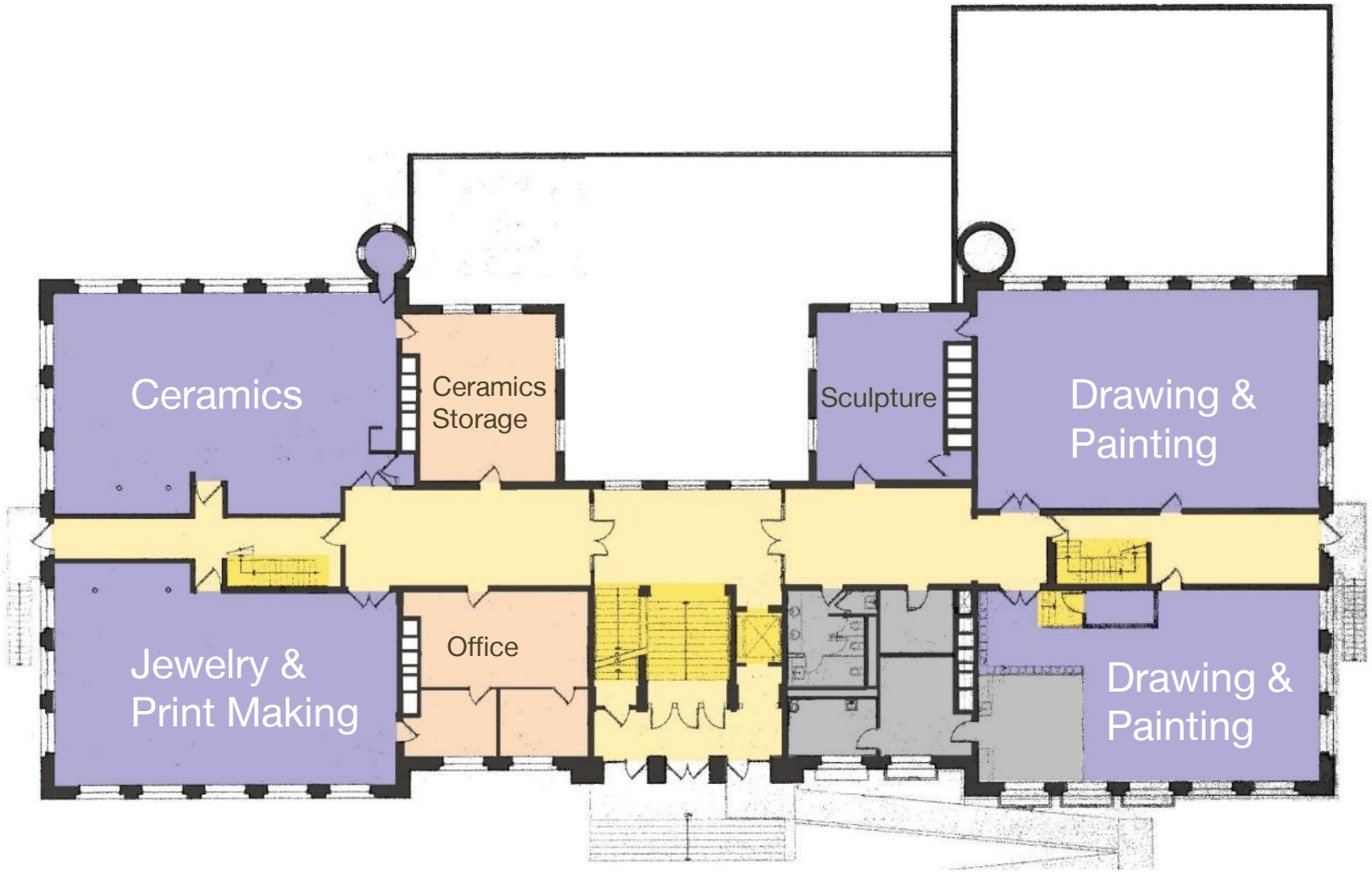

Department Legend

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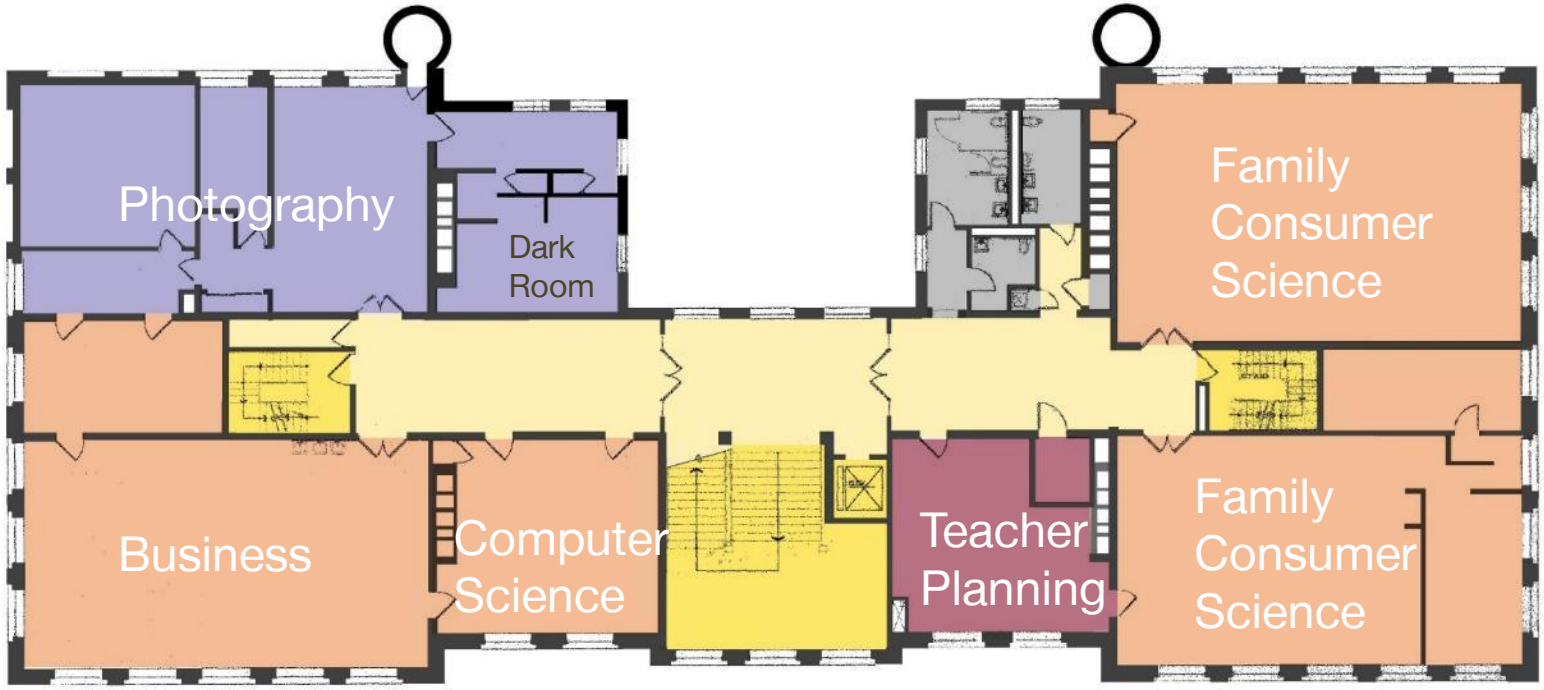
- Teacher Support
- Technology/Engineering

Unified Arts Building: Existing First Floor Plan

Public Schools of Brookline

SMMA



Department Legend

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- Custodial
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- Maintenance
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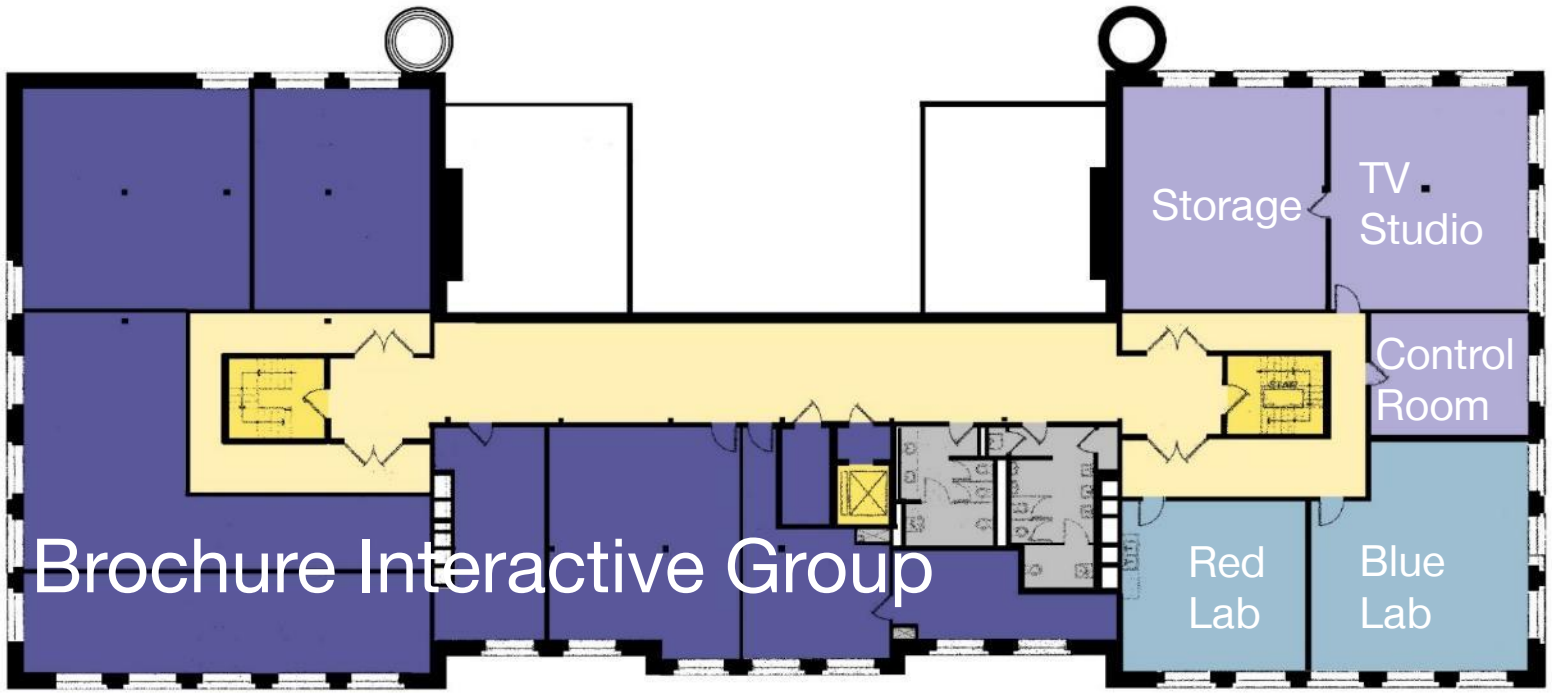
- Pool Facilities
- Pool Maintenance
- Science
- Special Education
- Teacher Support
- Technology/Engineering

Unified Arts Building: Existing Second Floor Plan

Public Schools of Brookline

SMMA



Department Legend

- Administration/ Guidance/Nurse
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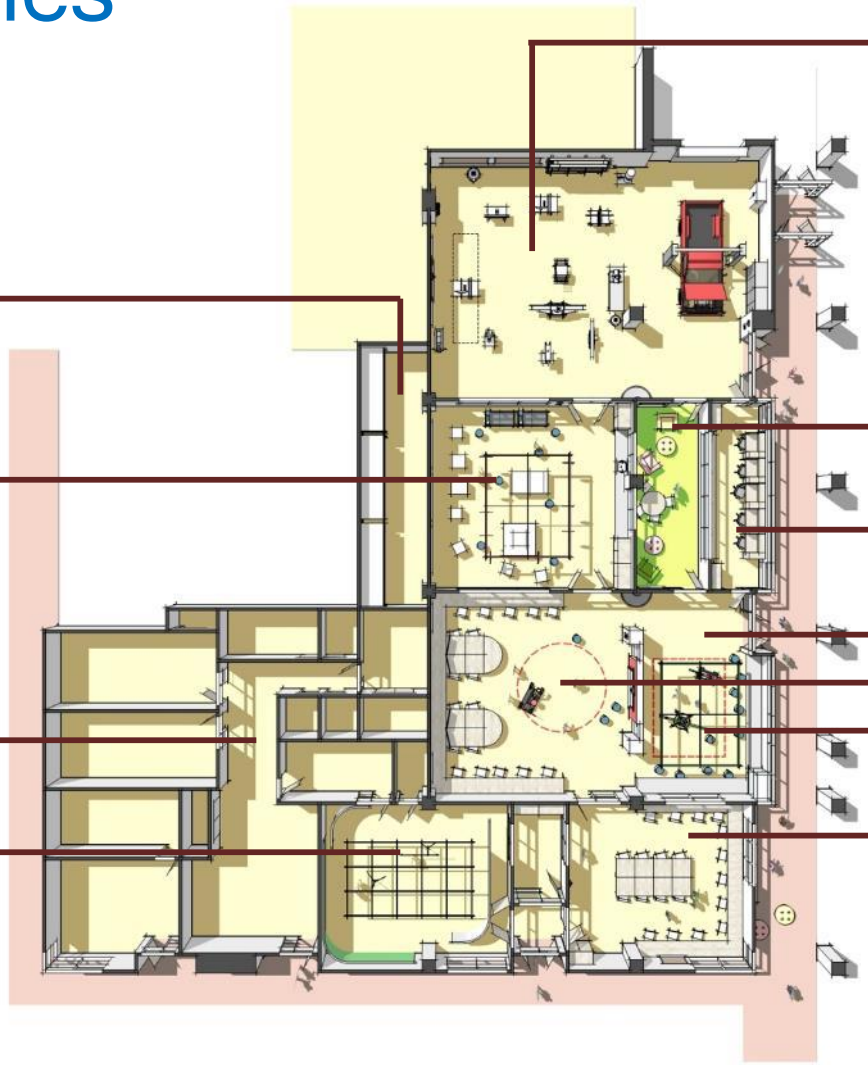
Unified Arts Building: Existing Third Floor Plan

Public Schools of Brookline

SMMA

Critical Adjacencies



Heavy Equipment Lab
Wood Shop with Lift &
Auto Bay
(2,500 SF)

Project Storage
(500 SF)

Genius Lab
Student Center (400 SF)

Machine Shop
(1,000 SF)

Teacher Planning
(300SF)

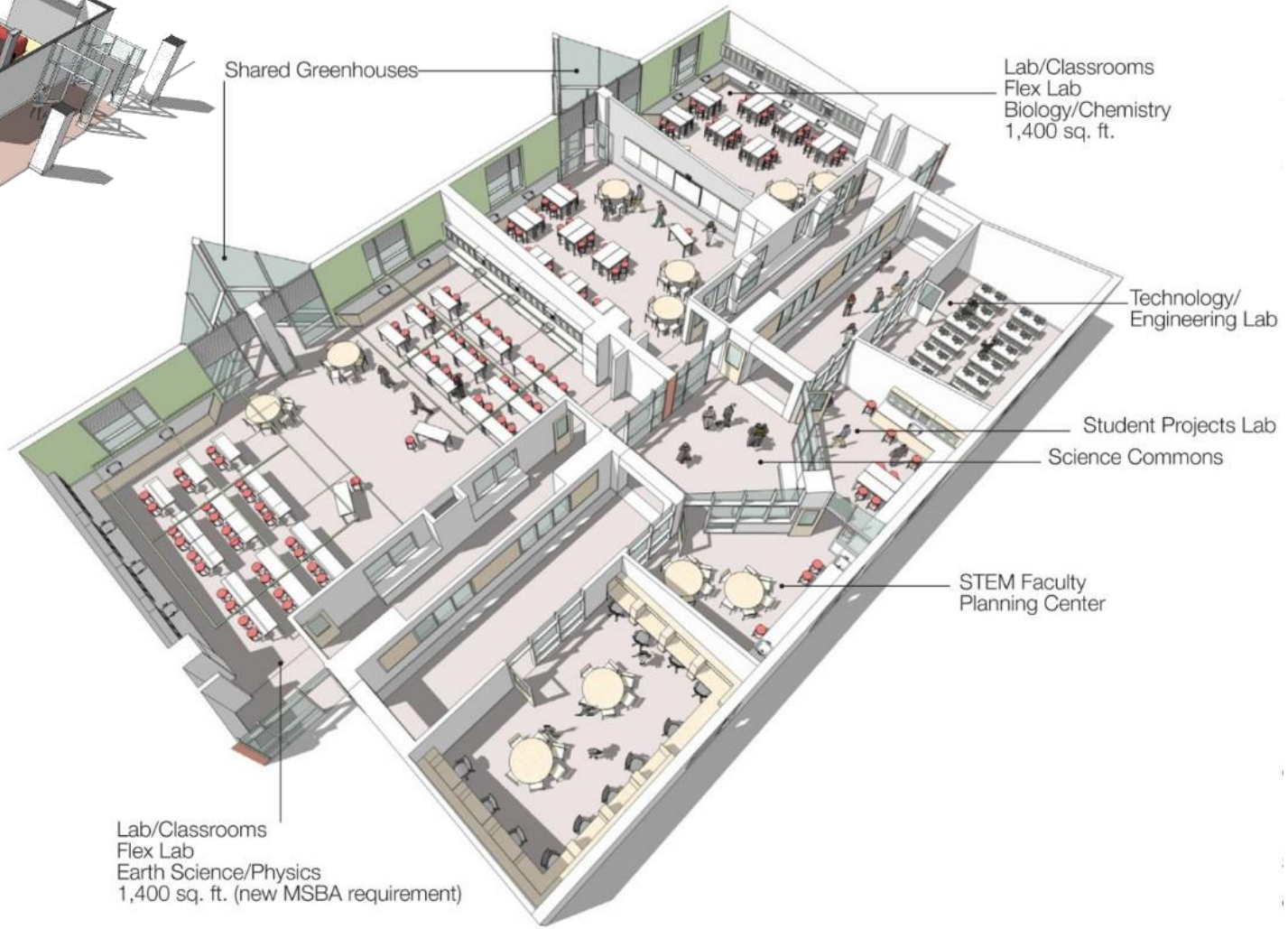
Innovation Lab:
CADD/Cam

CCTV Spaces

Robotics Center
(1,800 SF)

TV Studio &
Control Rooms
(850 SF)

Editing Suite/Graphic
Arts Lab
(1000 SF)

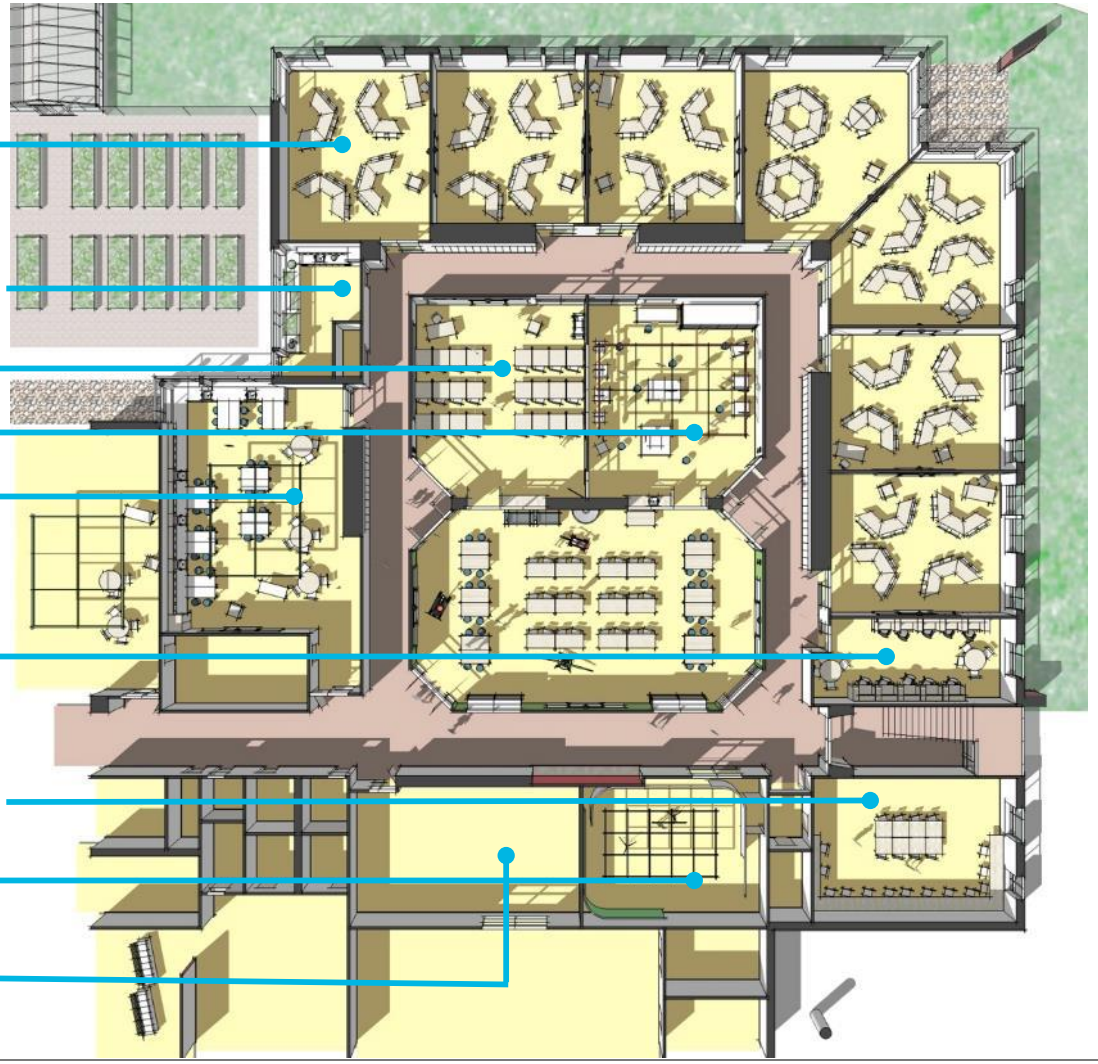


Unified Arts Building: Examples of STEM

Public Schools of Brookline

SMMA

Critical Adjacencies: Lower Level



Math Classroom (825 SF)

Service Learning Program (250 SF)

CADD Lab (1,000 SF)

Machine Shop (1,000 SF)

Physics Labs (2 @ 1,440 SF)

Teacher Planning (750 SF)

Editing Suite/MAC Lab (1,250 SF)

TV Studio (850)

Robotics Lab (1,200 SF)

Fab Lab

North Middlesex Regional High School: STEM POD Fab Lab

Public Schools of Brookline

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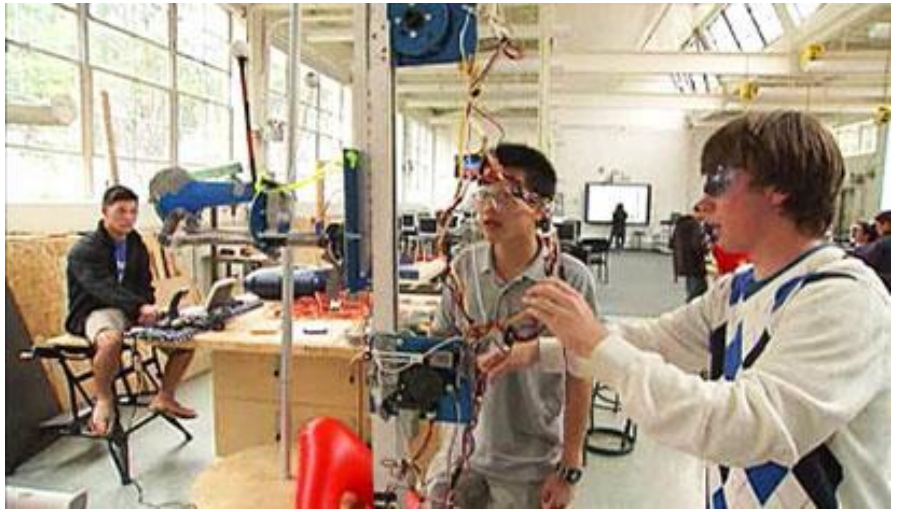
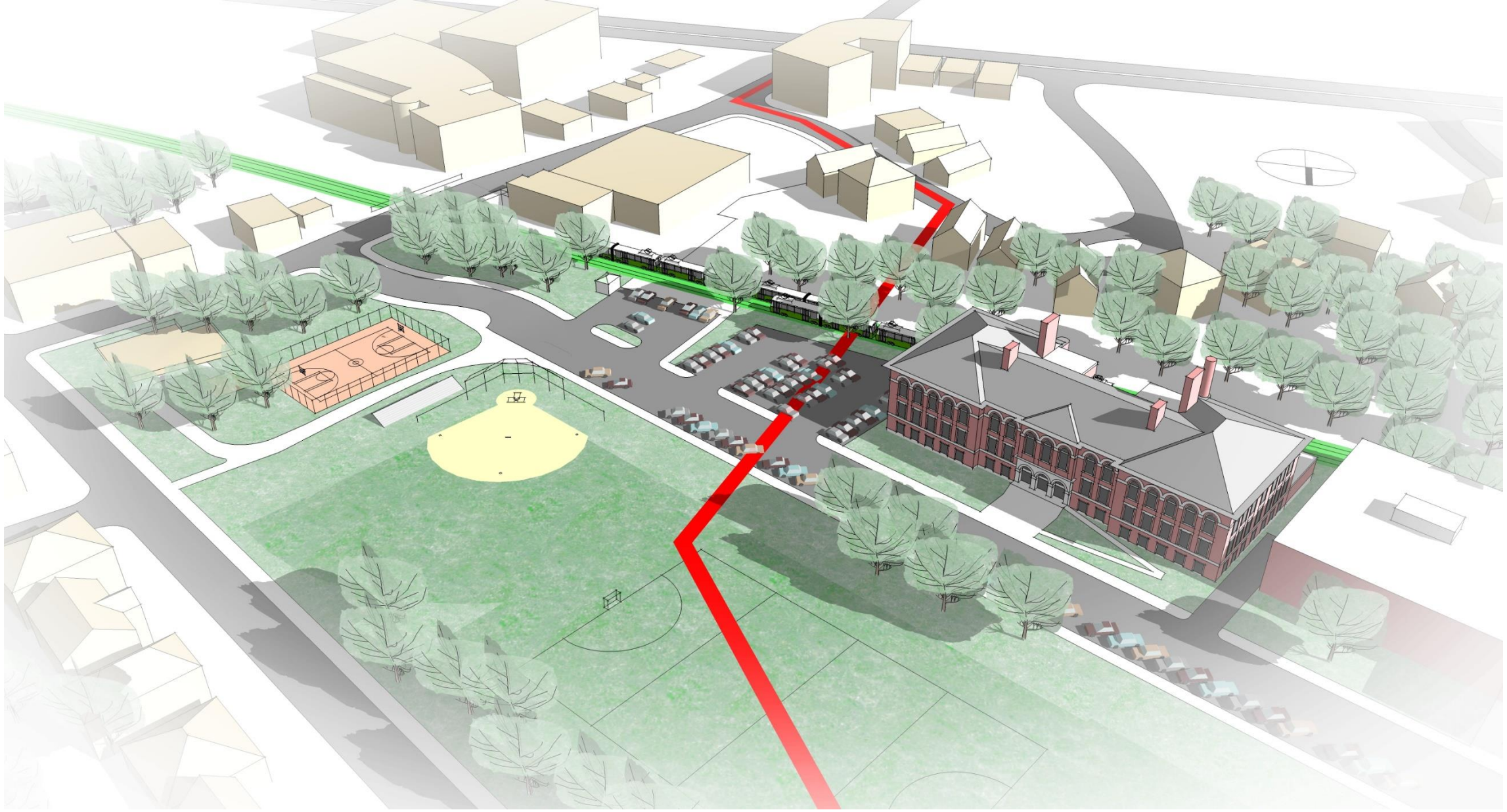
Fab Lab





Existing Unified Arts Building

Public Schools of Brookline

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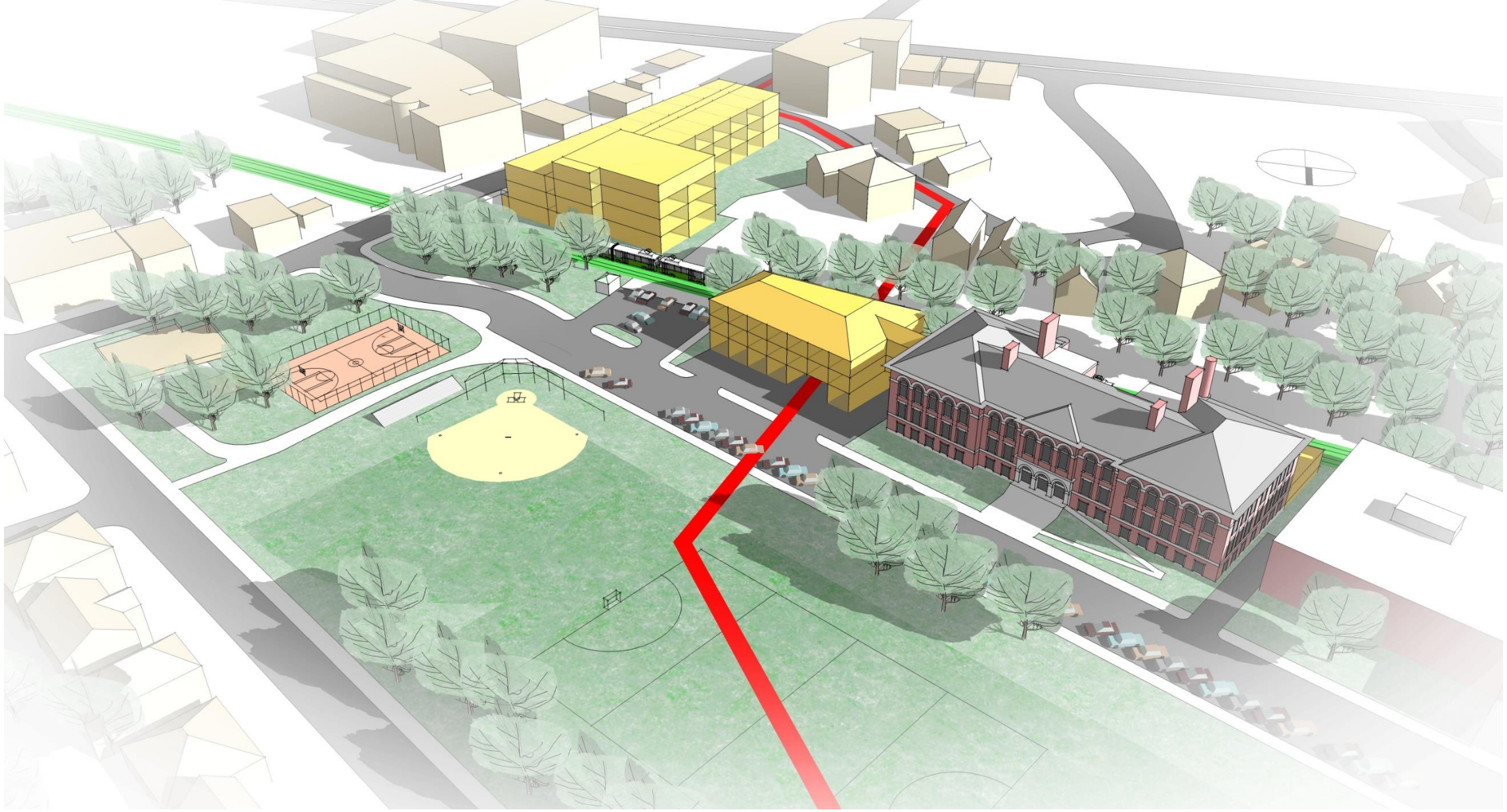


Potential UAB Build-Out

Public Schools of Brookline

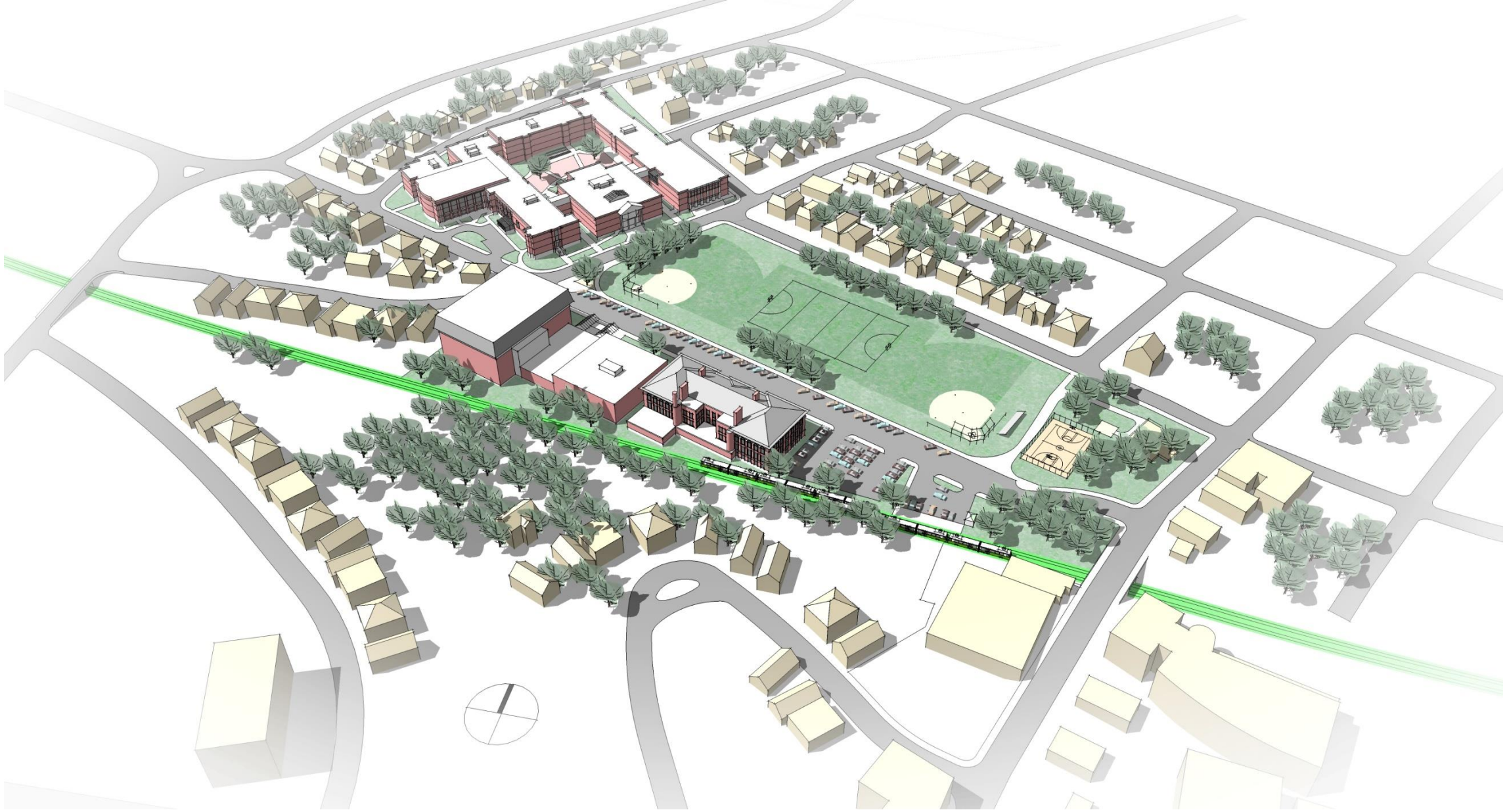
SMMA

Brookline High School

One Campus Site Possibilities

SMMA | SYMMES MAINI & McKEE ASSOCIATES

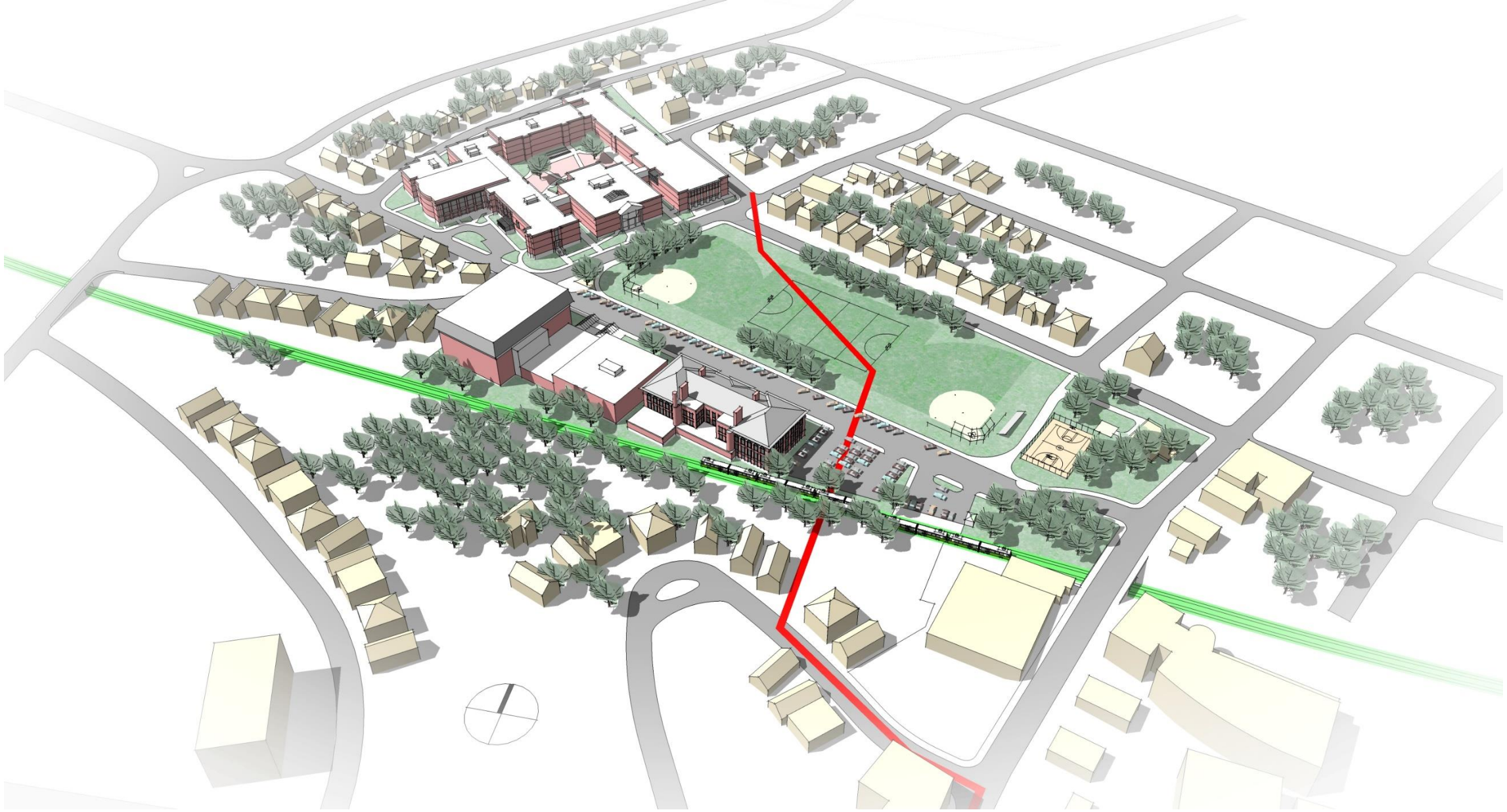
February 3, 2014



Existing High School Campus Site

Public Schools of Brookline

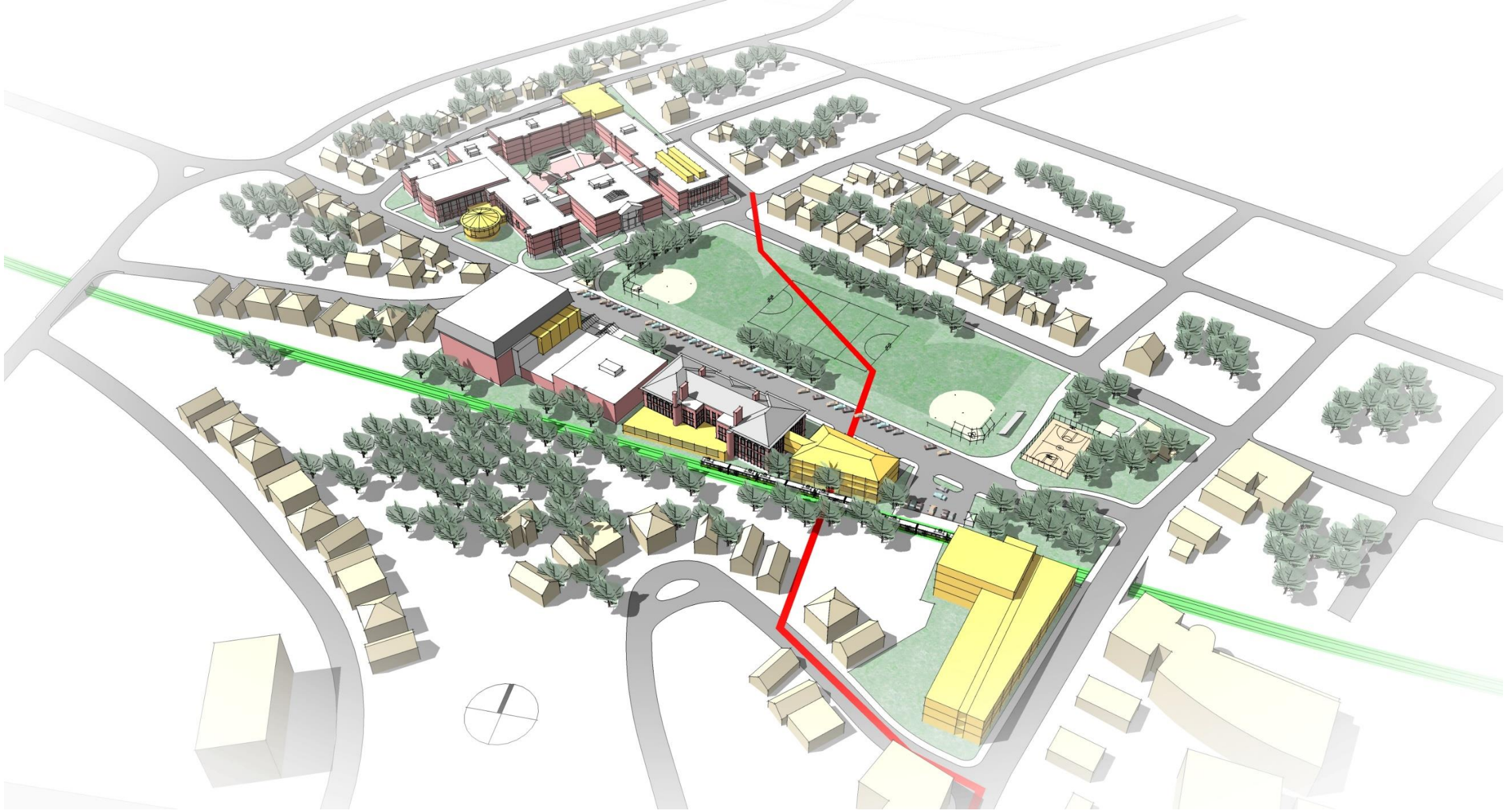
SMMA



Existing High School Campus Site

Public Schools of Brookline

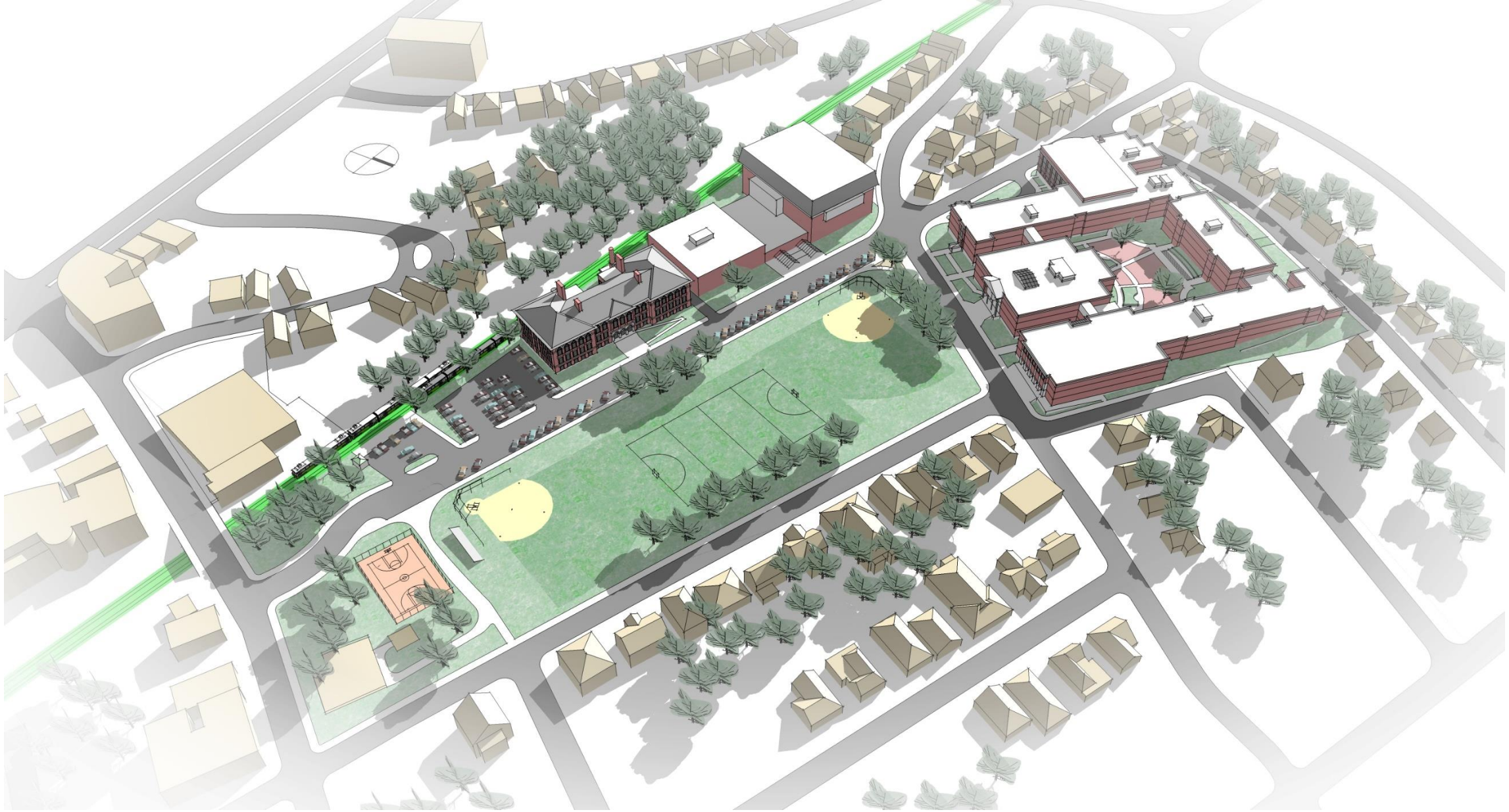
SMMA



Potential Campus Build-Out

Public Schools of Brookline

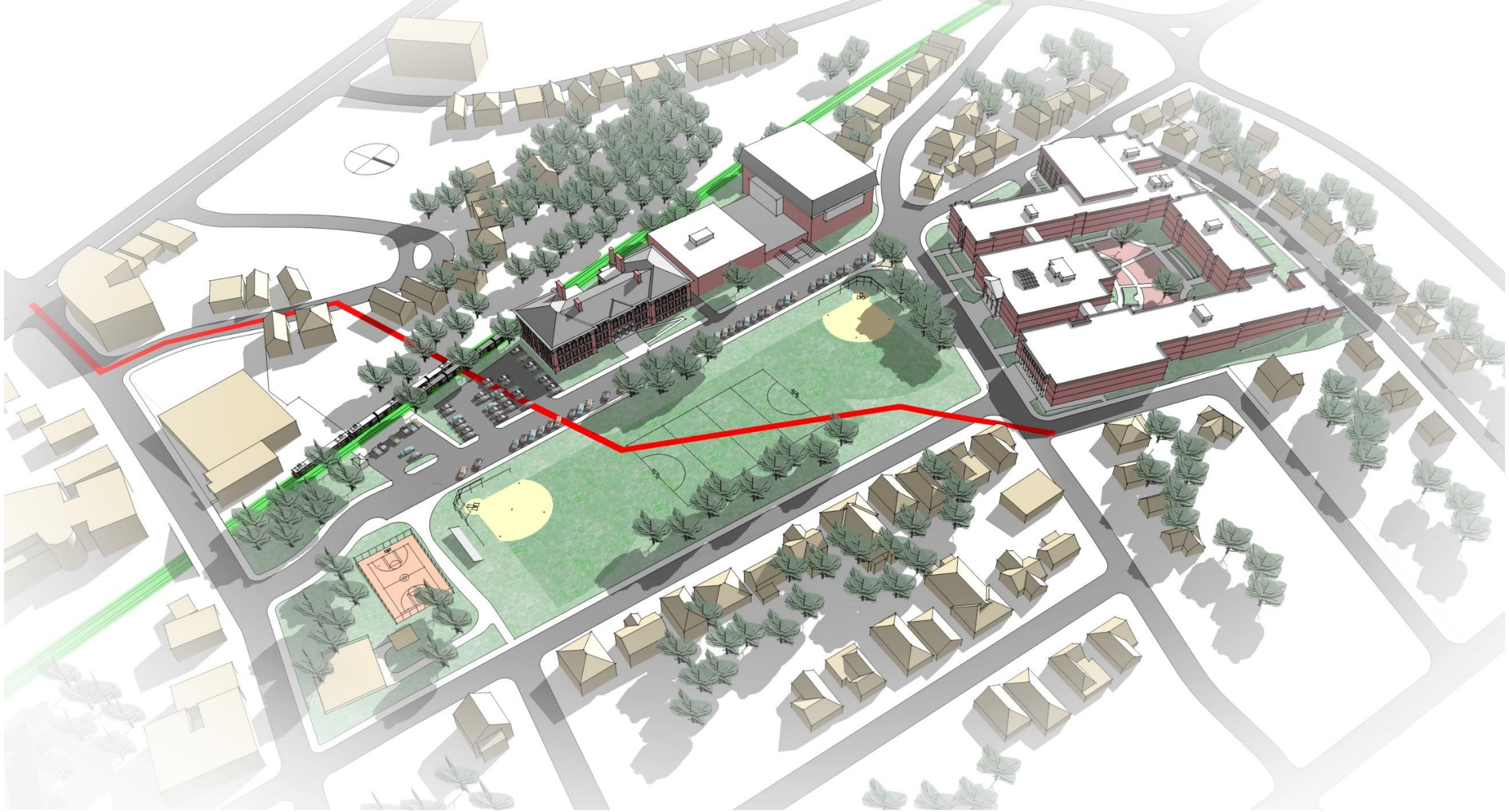
SMMA



Existing Site

Public Schools of Brookline

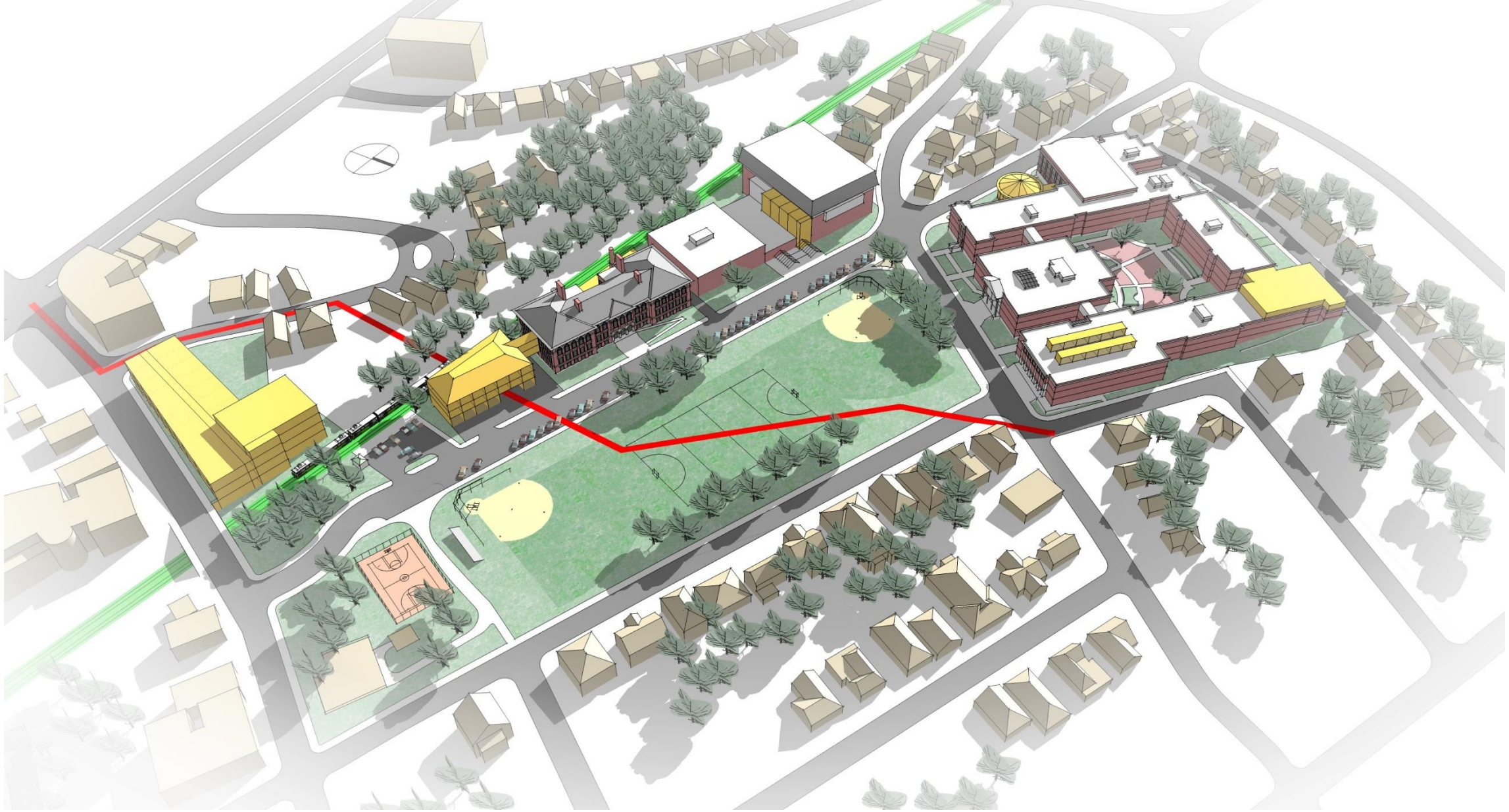
SMMA



Existing Site

Public Schools of Brookline

SMMA



Potential Build-Out

Public Schools of Brookline

SMMA

Existing Site

Public Schools of Brookline

SMMA

Existing Site

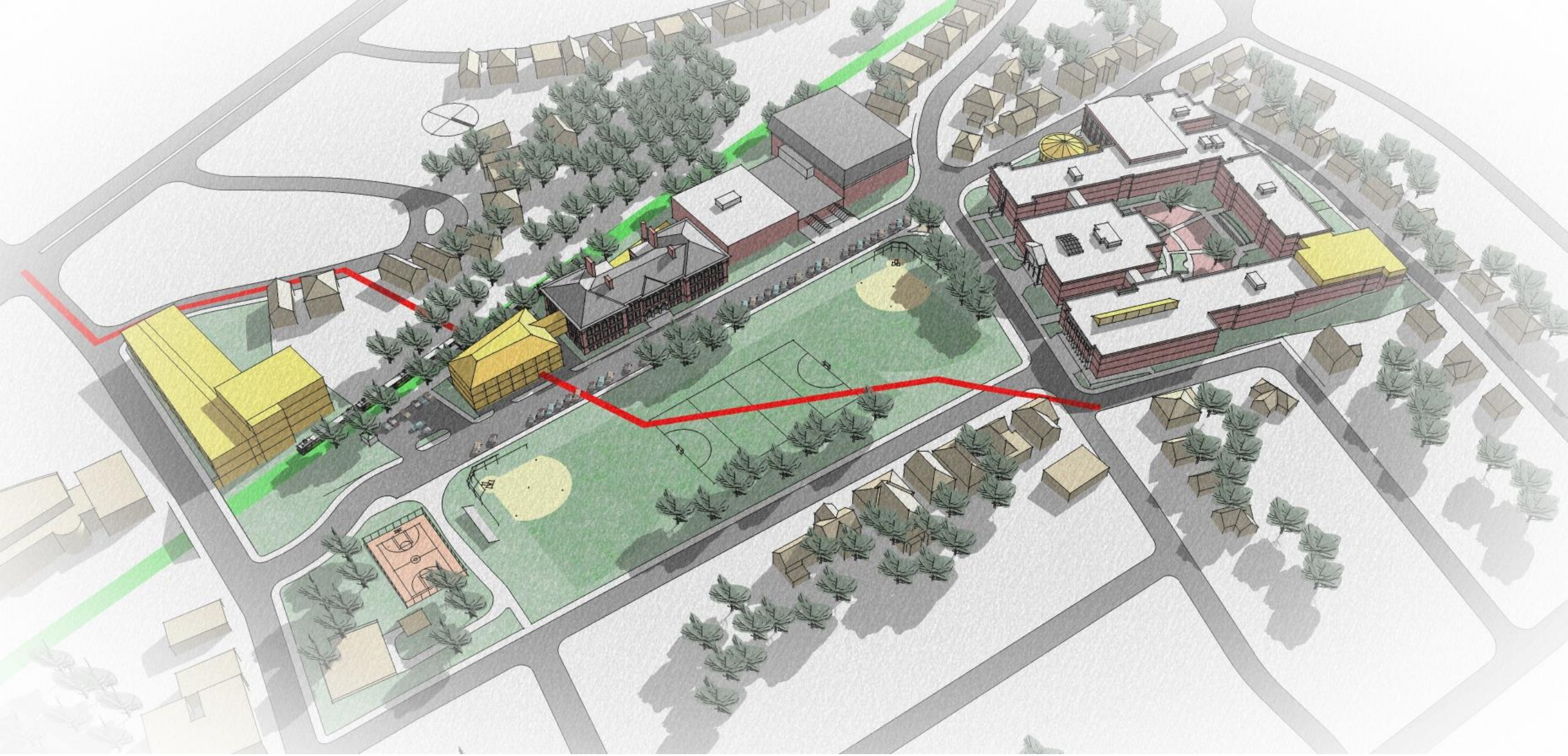
Public Schools of Brookline

SMMA

Potential Build-Out

Public Schools of Brookline

SMMA



Potential Campus Expansion

Public Schools of Brookline

SMMA

Next Steps

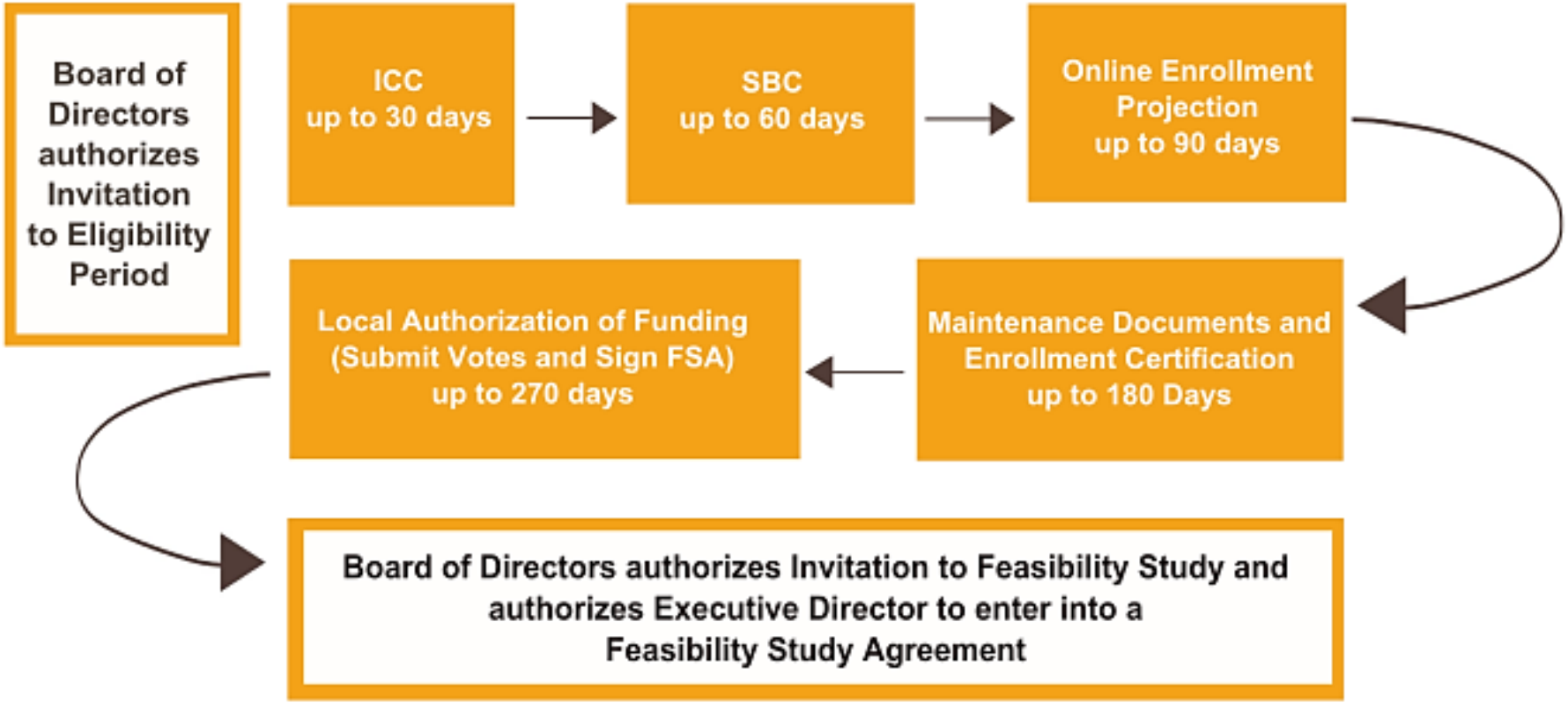
- Select Approach
  (for planning/moving forward purpose)
- Traffic Study & Conceptual Estimate(s)
- Preparation of SOI (school dept.)

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

MSBA Process

- The SOI Process is to Identify That There is a Problem.
- "Elimination of Existing Severe Overcrowding" (Item 2)
- "Prevention of Severe Overcrowding Expected to Result from Increased Enrollments" (Item 4)
- 2015 SOI Applications –
  Opening Mid January 2015 thru April 2015
- Minimum 5 Years

Eligibility Period Up to 270 Days

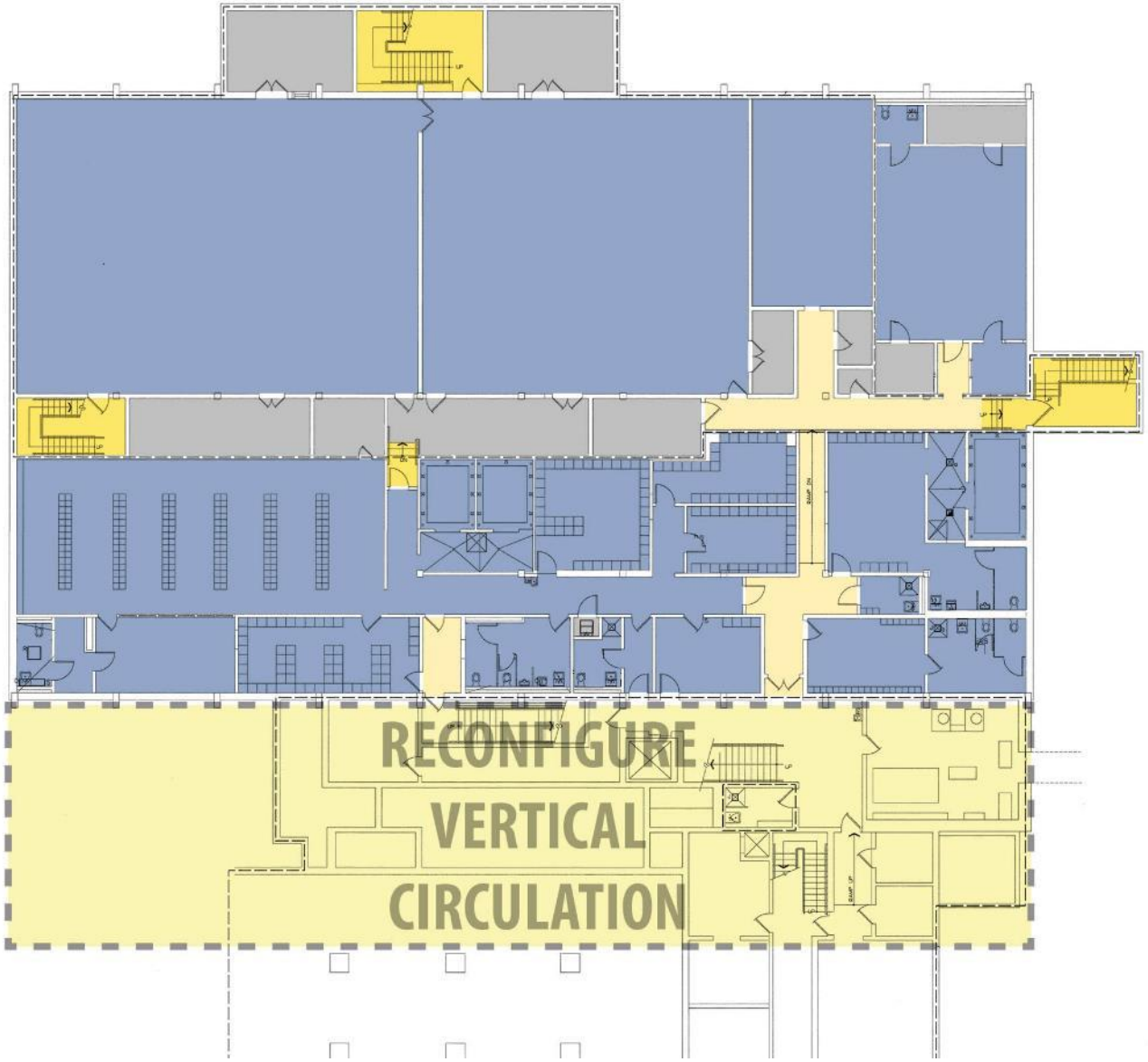


Upon Invite to Eligibility Period, Districts complete defined requirements within the timeframes listed above

Tappan: Existing Basement Plan

Public Schools of Brookline

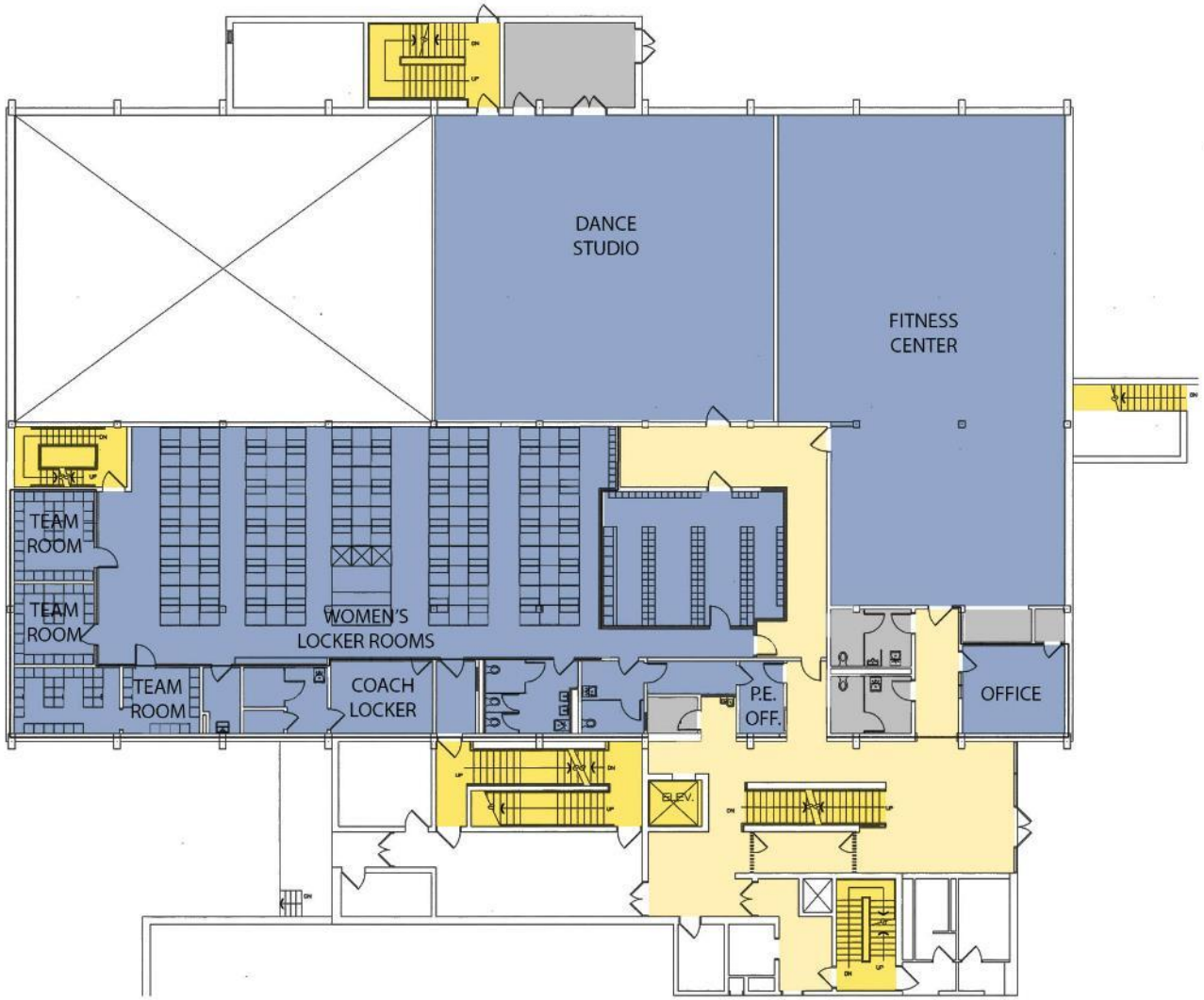
SMMA



Tappan: Proposed Basement Plan

Public Schools of Brookline

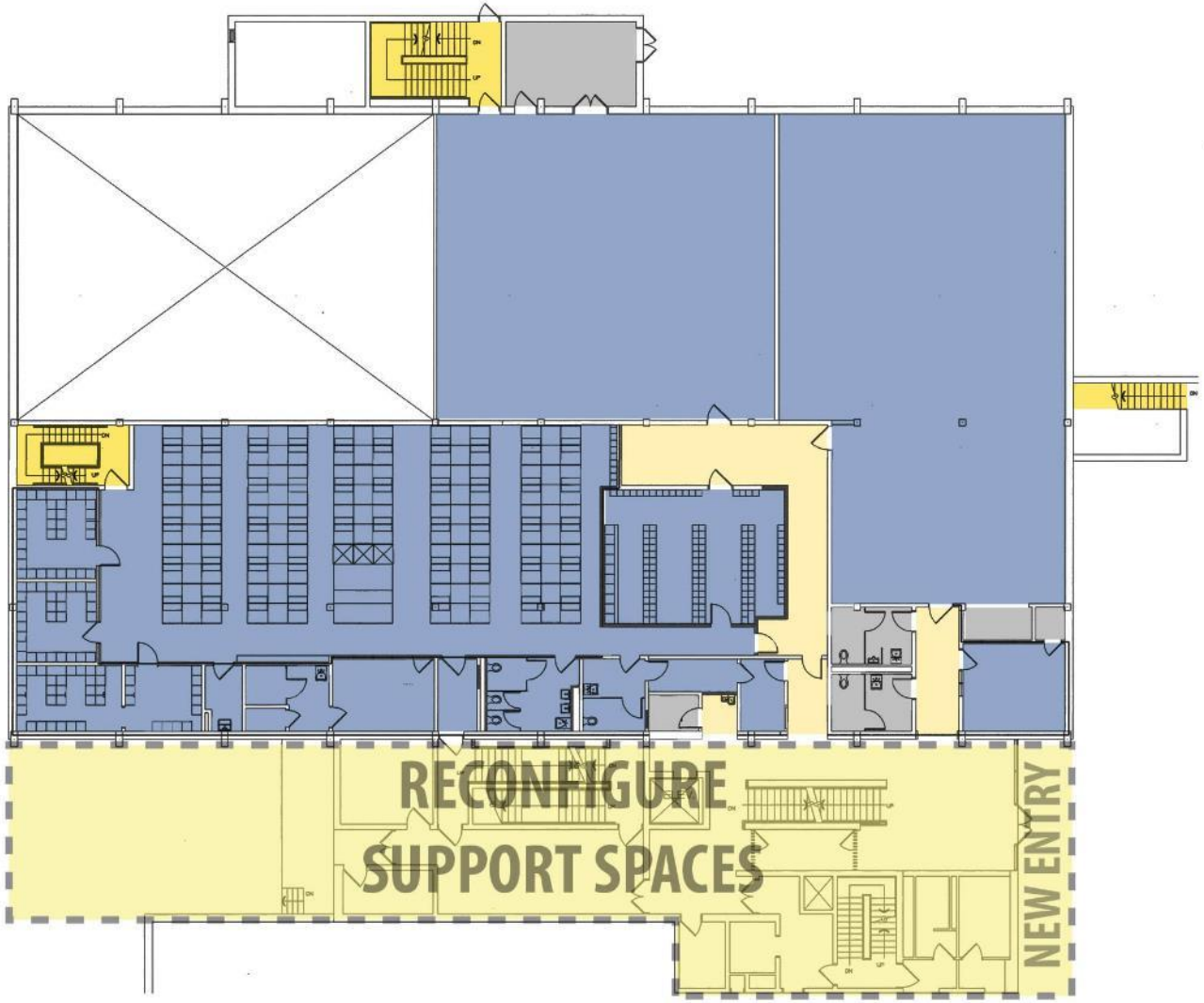
SMMA



Tappan: Existing 1st Floor Plan

Public Schools of Brookline

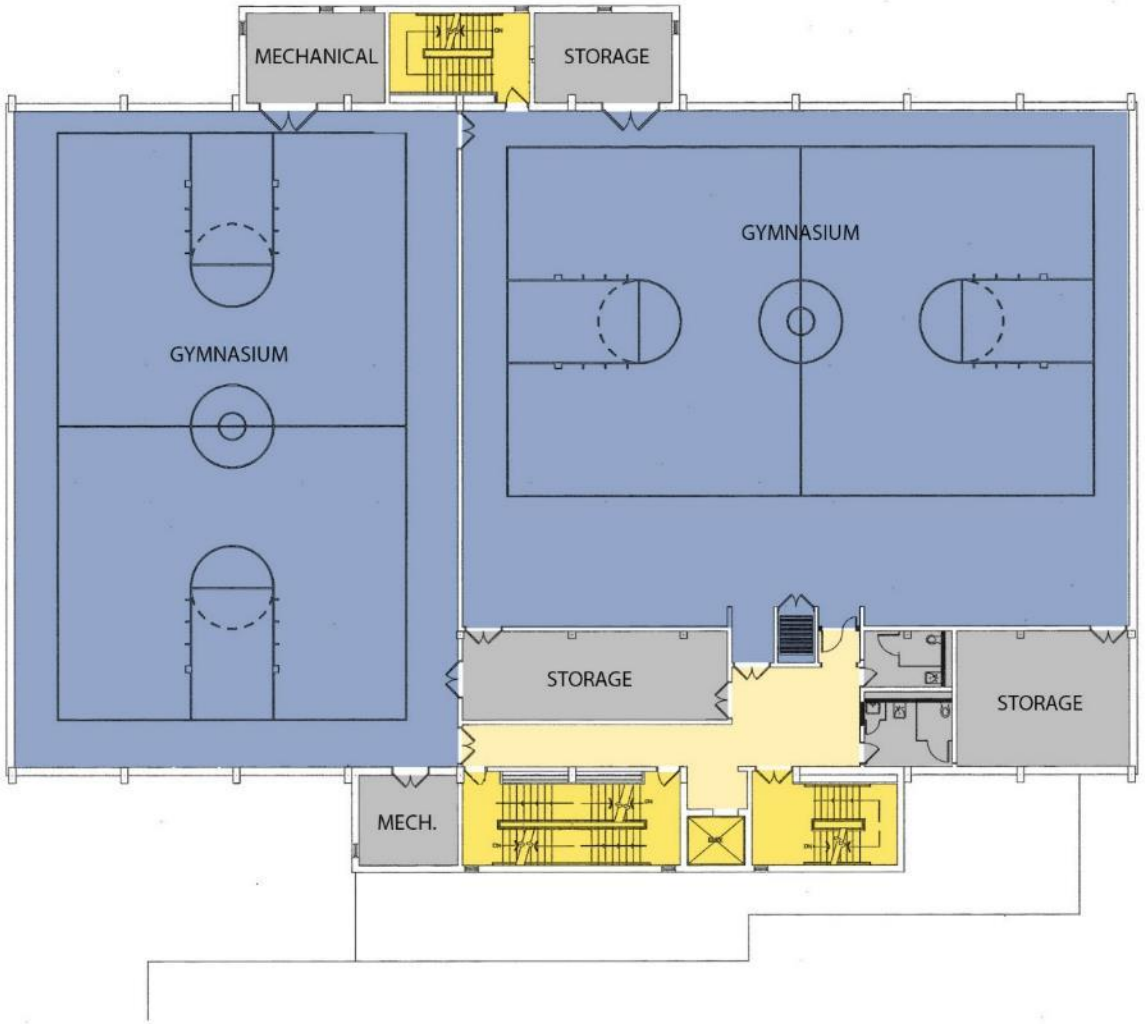
SMMA



Tappan: Proposed 1st Floor Plan

Public Schools of Brookline

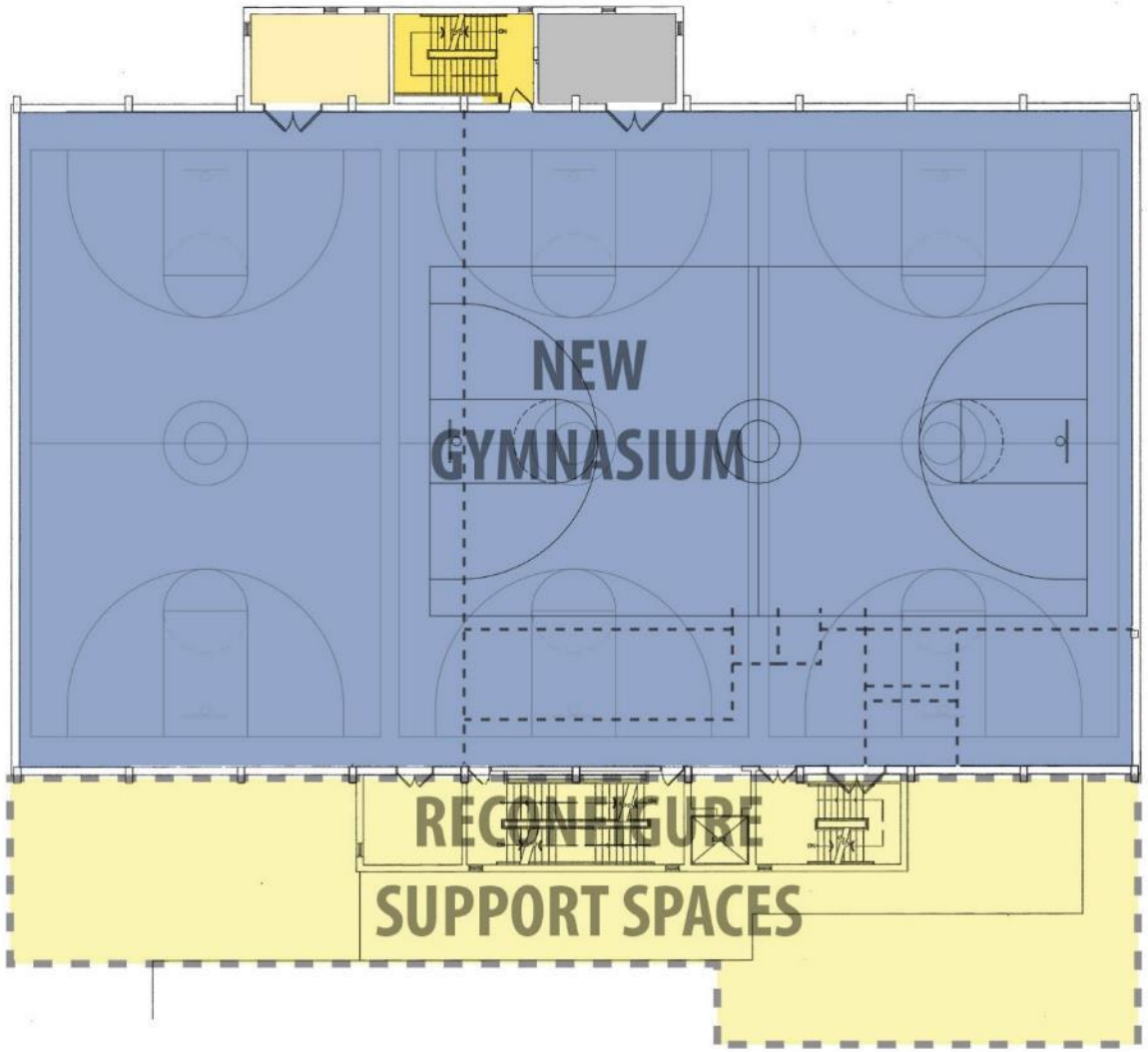
SMMA



Tappan: Existing 2nd Floor Plan

Public Schools of Brookline

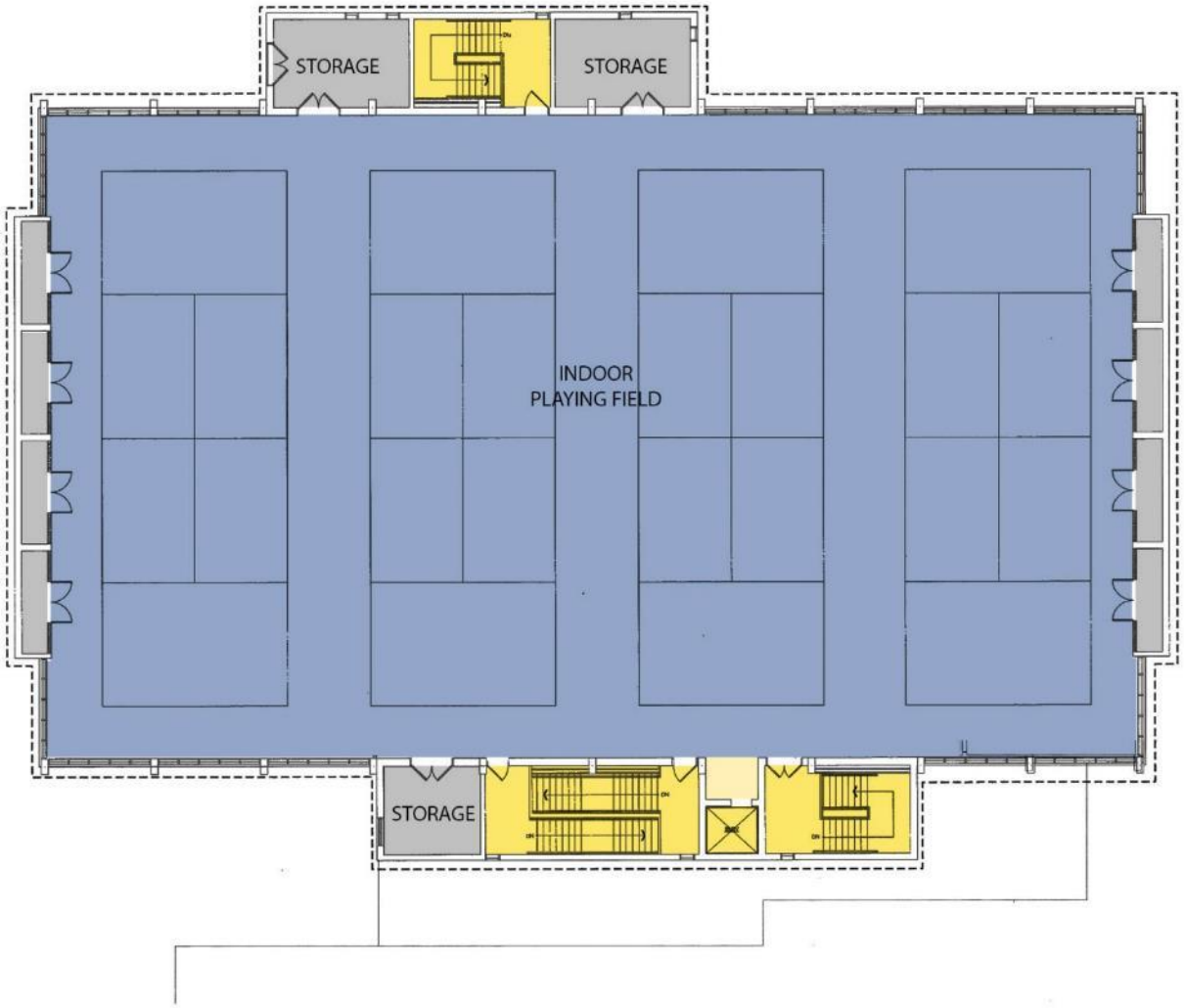
SMMA



Tappan: Proposed 2nd Floor Plan

Public Schools of Brookline

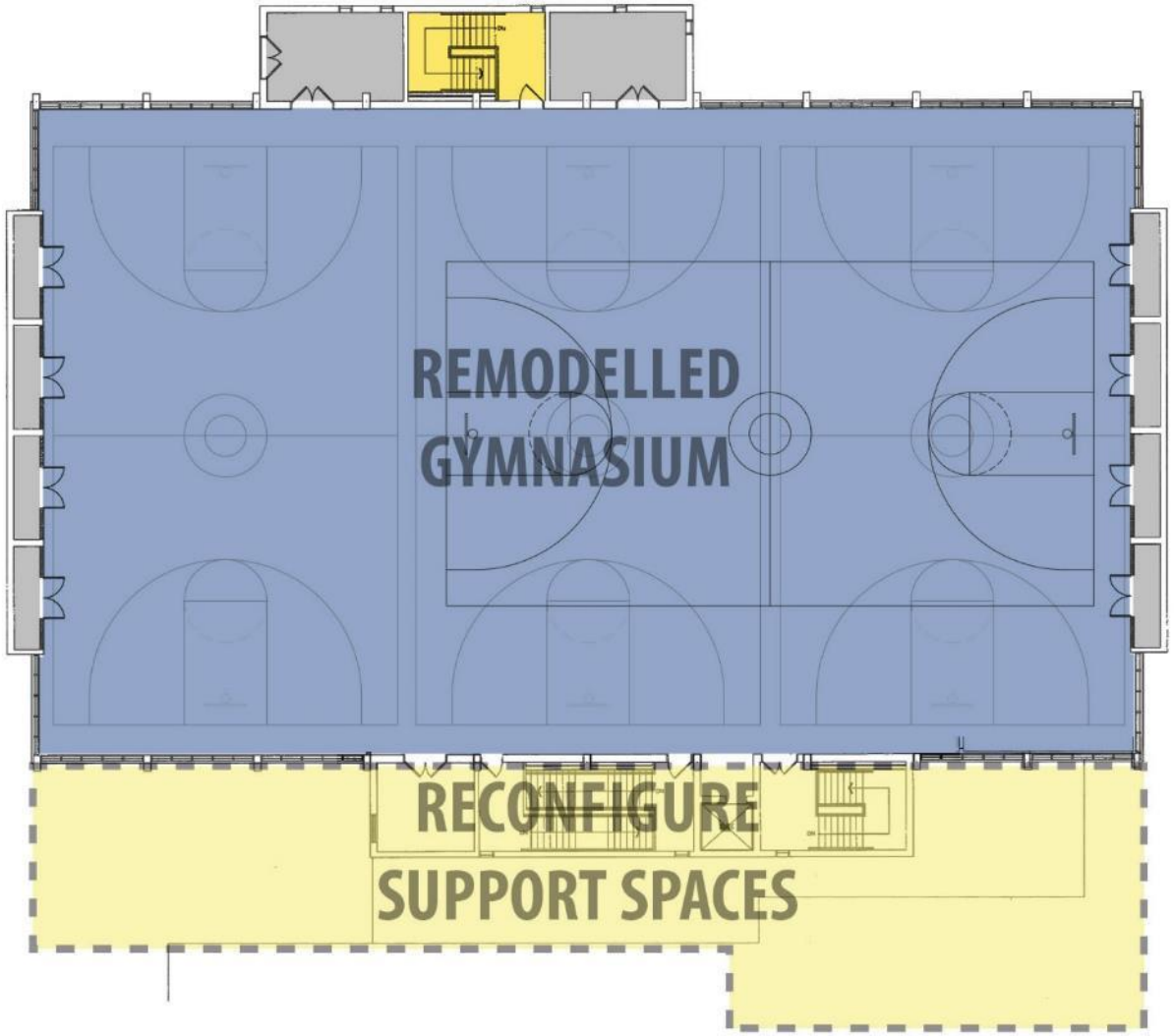
SMMA



Tappan: Existing 3rd Floor Plan

Public Schools of Brookline

SMMA



Tappan: Proposed 3rd Floor Plan

Public Schools of Brookline

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Potential Temporary Modular Classroom Location for construction

Public Schools of Brookline

SMMA

Cypress Park Looking North East

Public Schools of Brookline

SMMA

Existing Cypress Park and Playground

Public Schools of Brookline

SMMA

New Underground Parking - Two Levels: ±200 Spaces

Public Schools of Brookline

SMMA

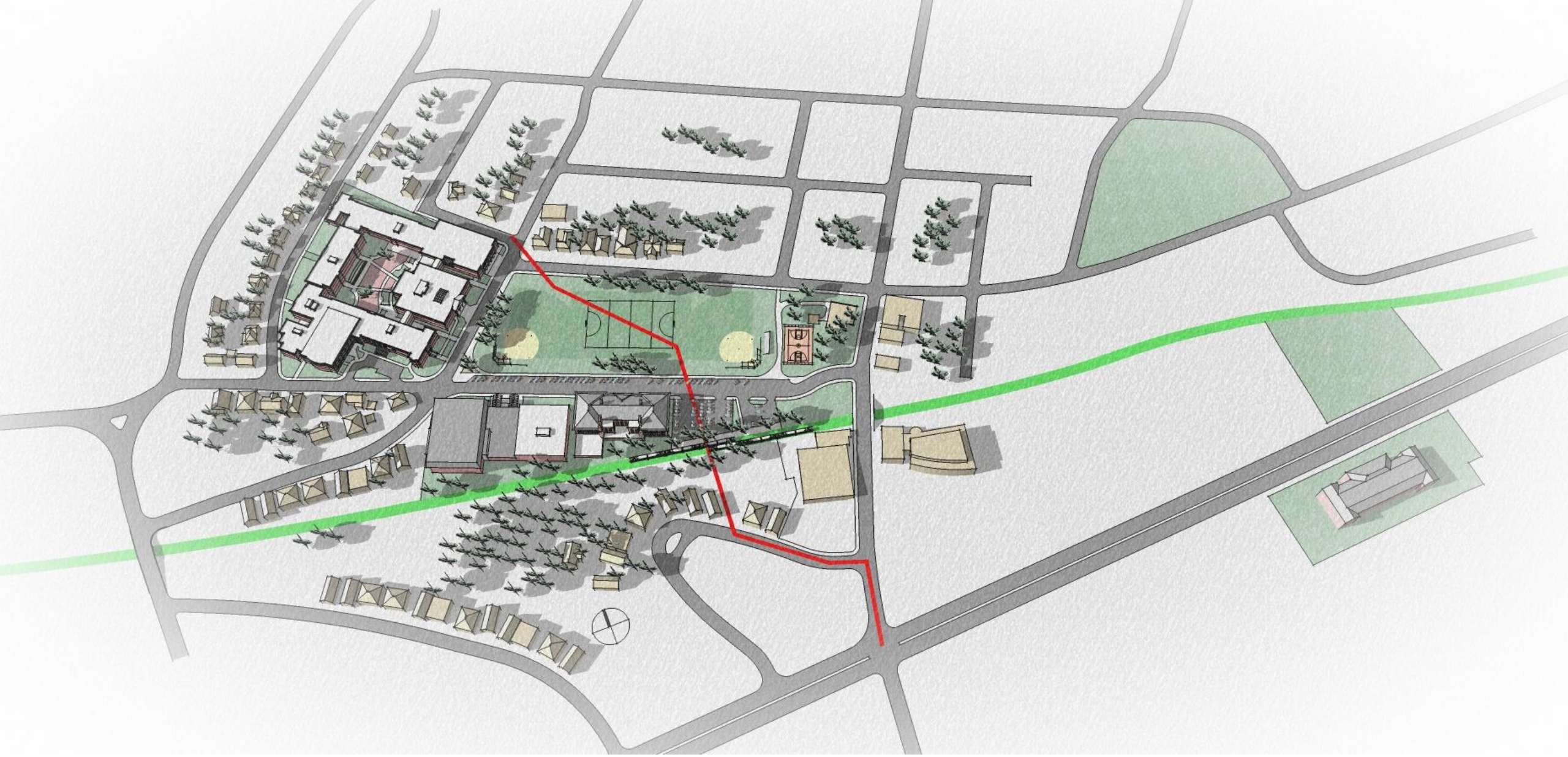
Fields Over Structured Parking

Public Schools of Brookline

SMMA

Next Steps

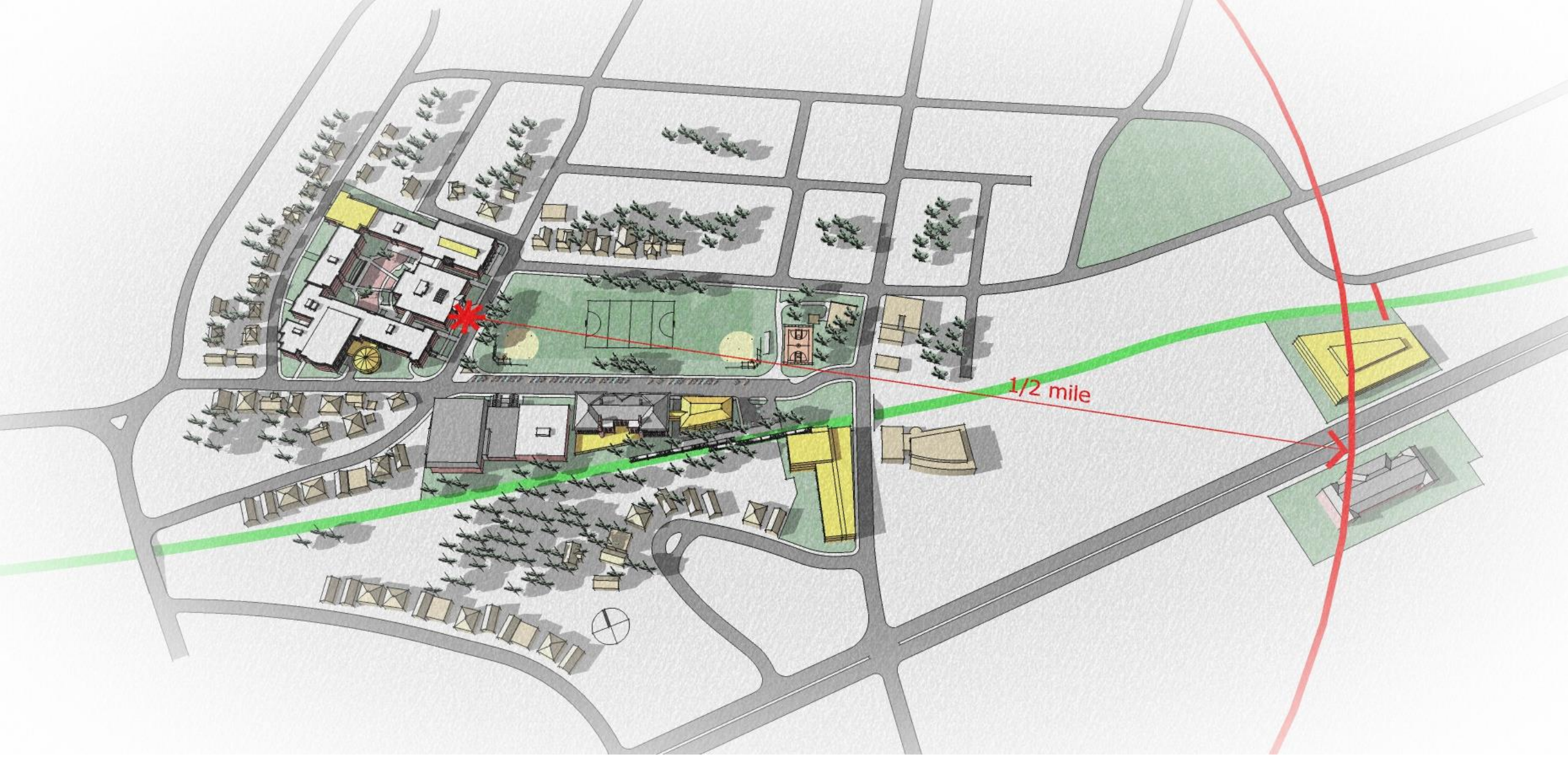
- Select Approach
  (for planning/moving forward purpose)
- Traffic Study
- Conceptual Estimate
- Preparation of SOI (school dept.)
  - Signatures from:
    Superintendent, School Committee,
    Board of Selectman



Potential Campus Expansion

Public Schools of Brookline

SMMA



Potential Campus Expansion

Public Schools of Brookline

SMMA

Brookline High School Further Study

Brookline High School

School Committee Presentation & Discussion

SMMA | SYMMES MAINI & McKEE ASSOCIATES

March 26, 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

SMMA

Philip Poinelli, Educational Planner

Alex Pitkin, Design Architect

Visioning – David Stephen, New Vista Design

AGENDA:

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

Define the Problem

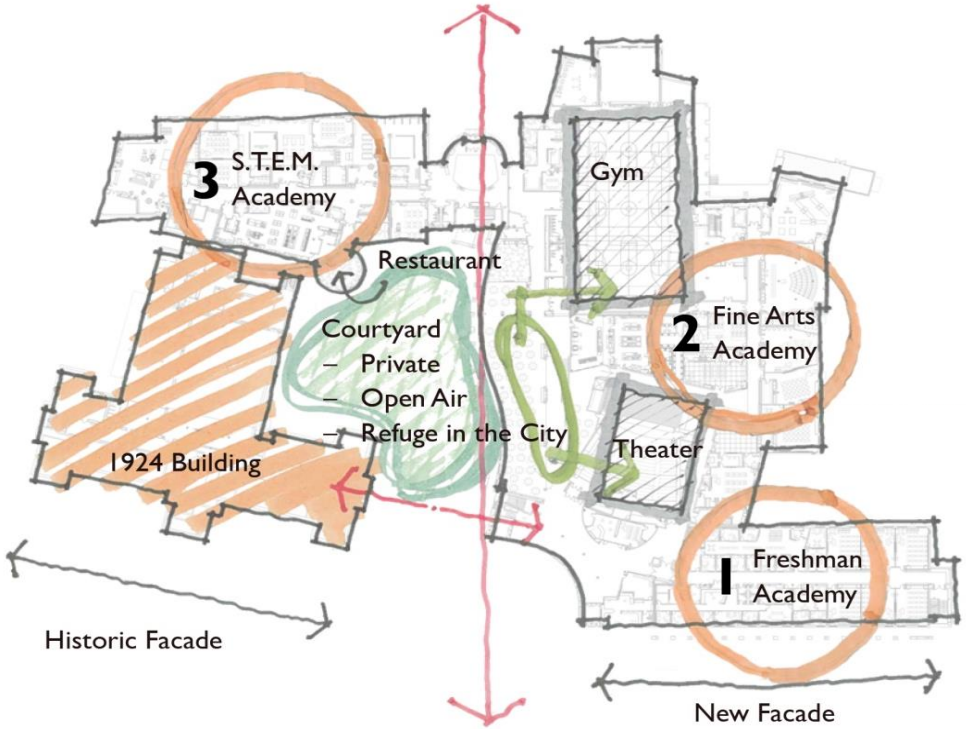
- Population Growth (students are here now at lower grades)
- Need for Additional Classrooms, Labs, Support Spaces
- Provide Appropriate Size Teaching Spaces
- Provide Flexibility to Accommodate Current and Future Educational Delivery Methodologies
- Develop 21st Century Teaching and Learning Environments

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

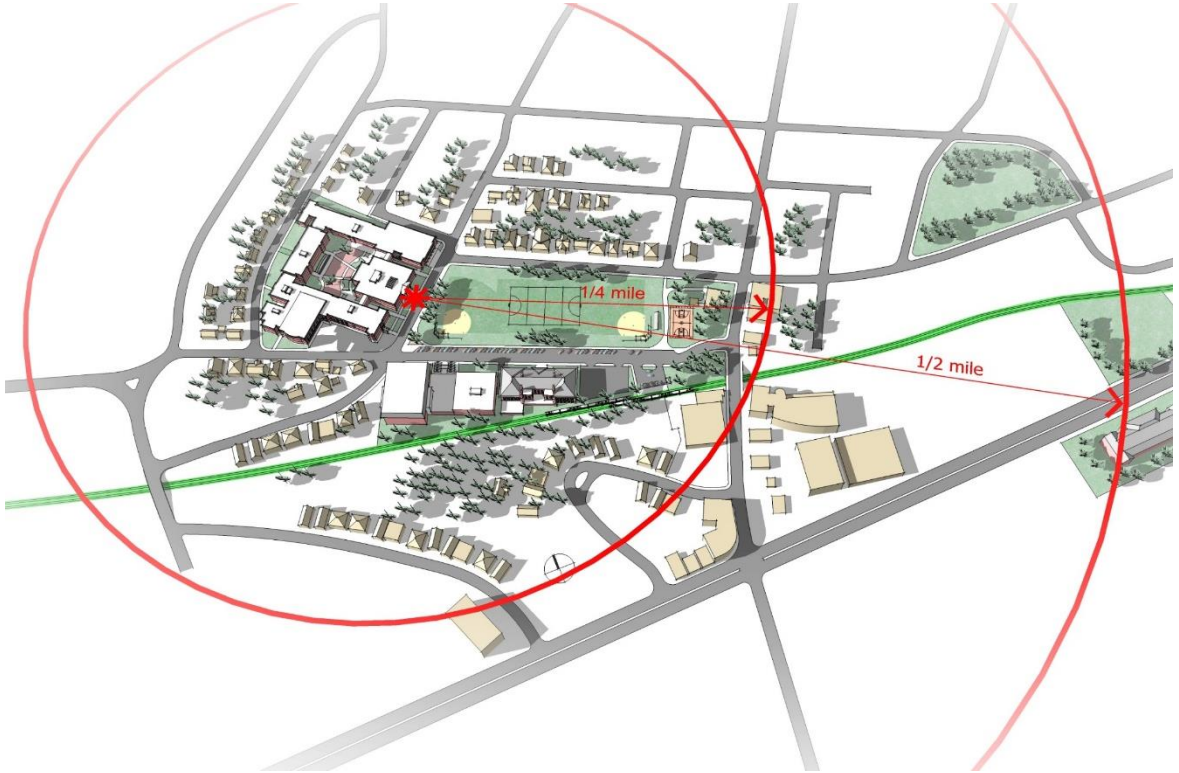
Conceptual Options - Educational

- 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



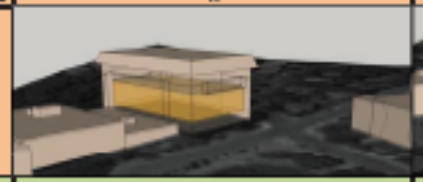
Conceptual Options- Physical

- 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	K	L
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 18 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 18 classrooms, relocation of BEEP and Adult Ed, and temporary suspension of Culinary Arts and the restaurant.

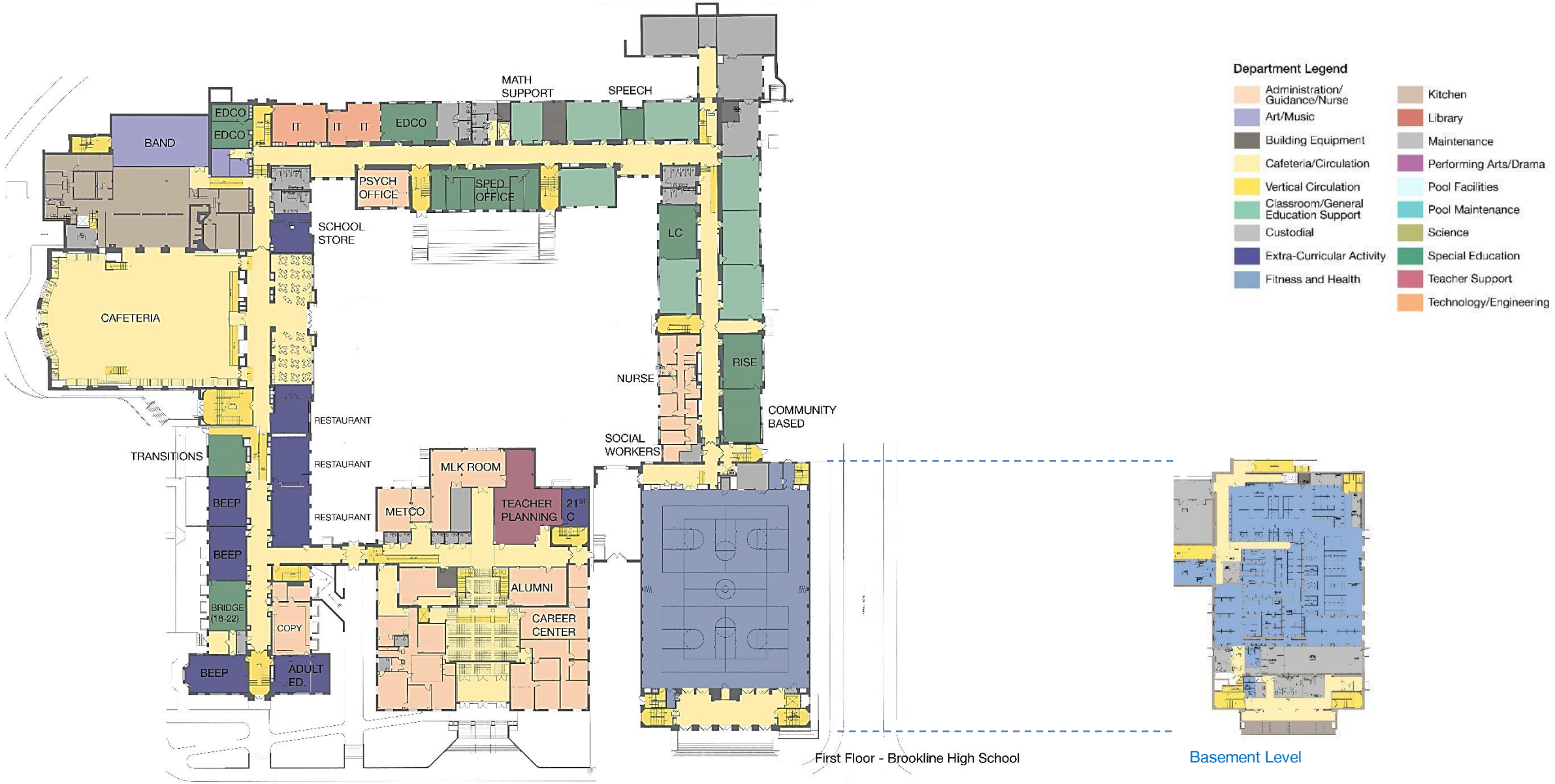
- 15 Options Reviewed
- Remains a valid source of ideas

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

Public Schools of Brookline

SMMA

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

Public Schools of Brookline

SMMA

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
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- Pool Maintenance
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Existing Second Floor Plan: Current Program

Public Schools of Brookline

SMMA

Second Floor - Brookline High School

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Public Schools of Brookline

SMMA

Third Floor - Brookline High School

Department Legend

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Existing Third Floor Plan: Current Program

Public Schools of Brookline

SMMA

Third Floor - Brookline High School

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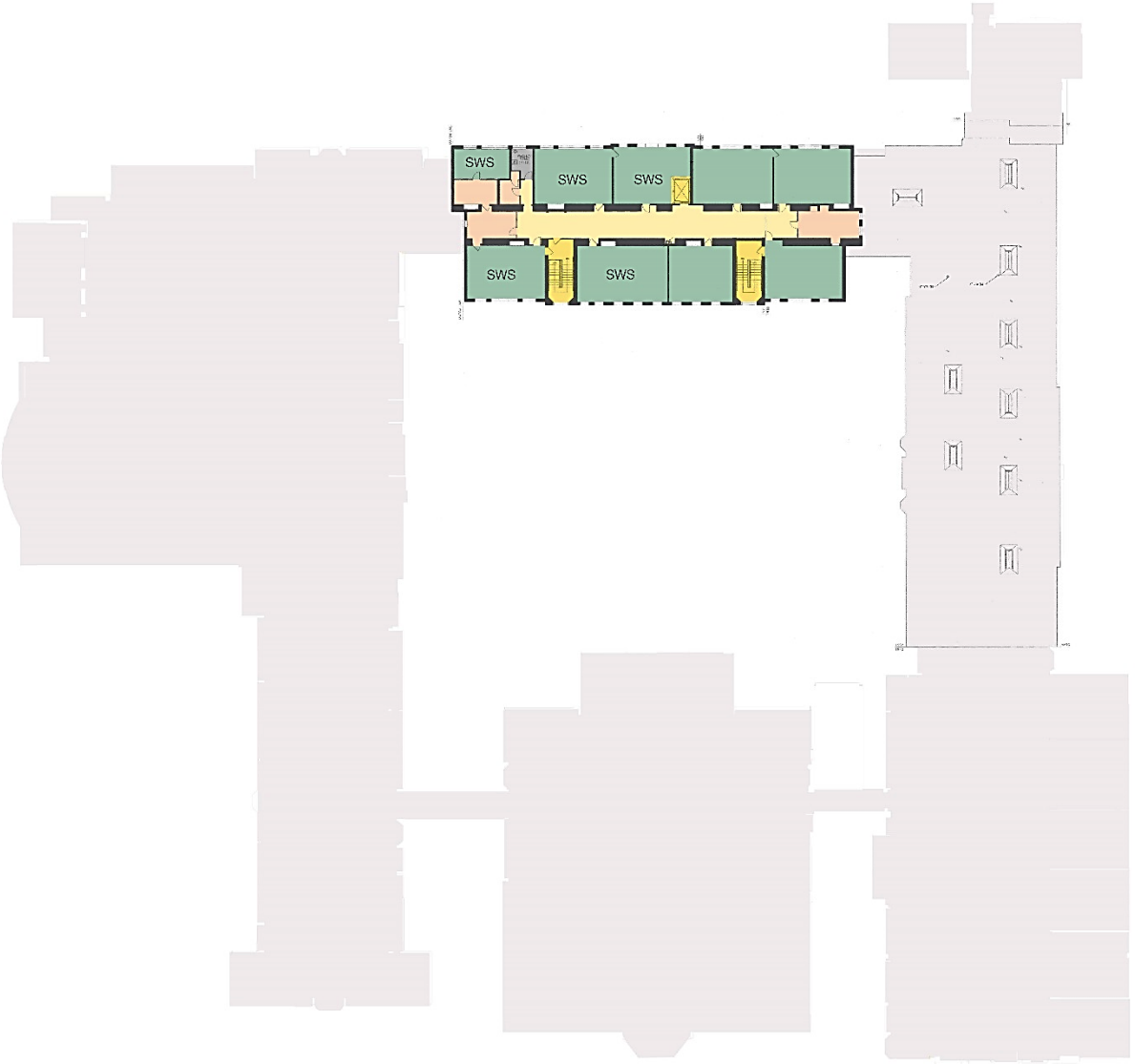
Existing Third Floor Plan: MSBA Deficiency Plan

Public Schools of Brookline

SMMA



Fourth 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
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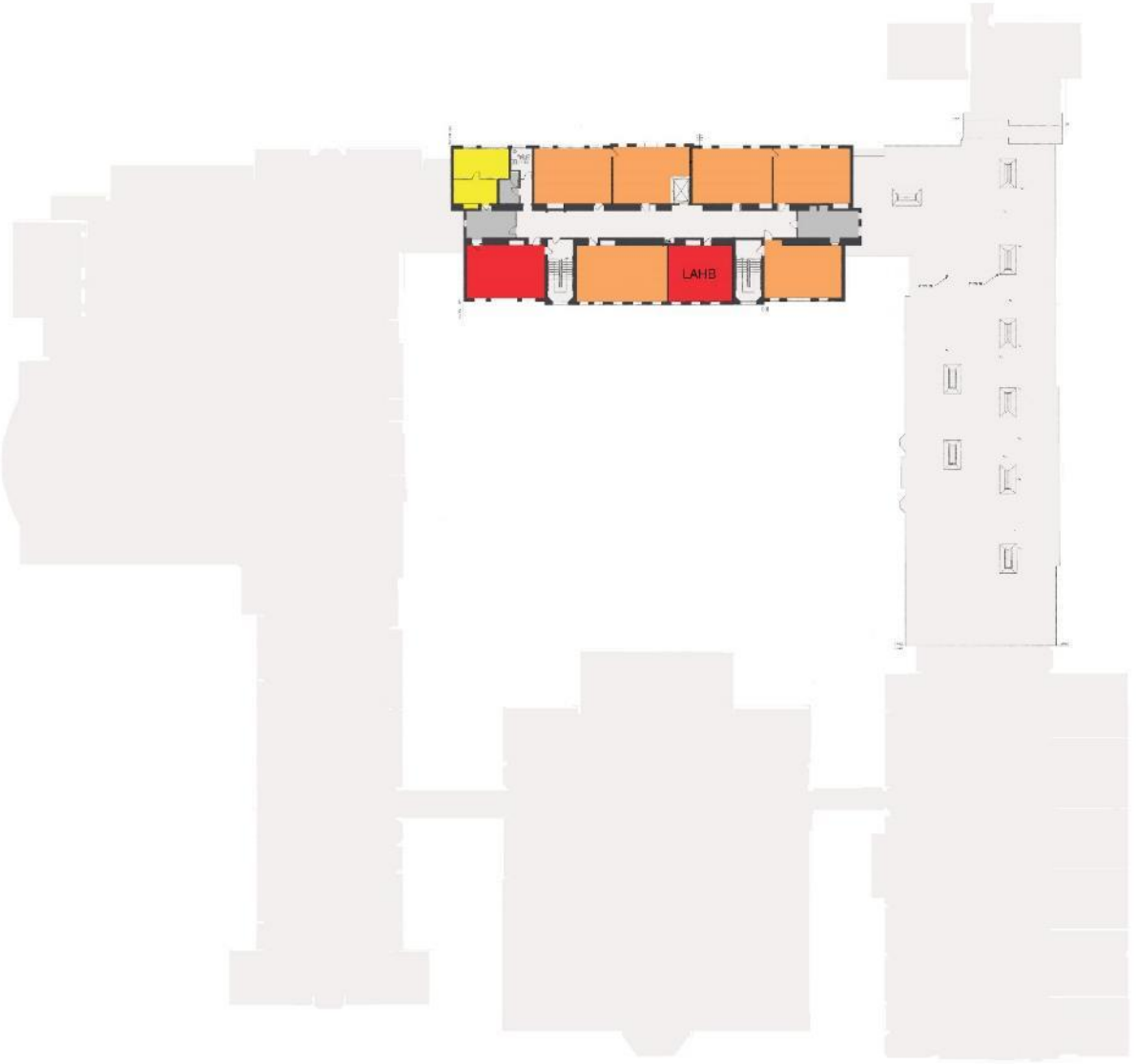
- Pool Maintenance
- Science
- Special Education
- Teacher Support
- Technology/Engineering

Existing Fourth Floor Plan: Current Program

Public Schools of Brookline

SMMA



Fourth Floor - Brookline High School

LEGEND

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- 25% or More < MSBA
- 10% or More > MSBA
- Not Part of MSBA Project

*Based on 2015 Population

Existing Fourth Floor Plan: MSBA Deficiency Plan

Public Schools of Brookline

SMMA

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

Public Schools of Brookline

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Learning Commons

Public Schools of Brookline

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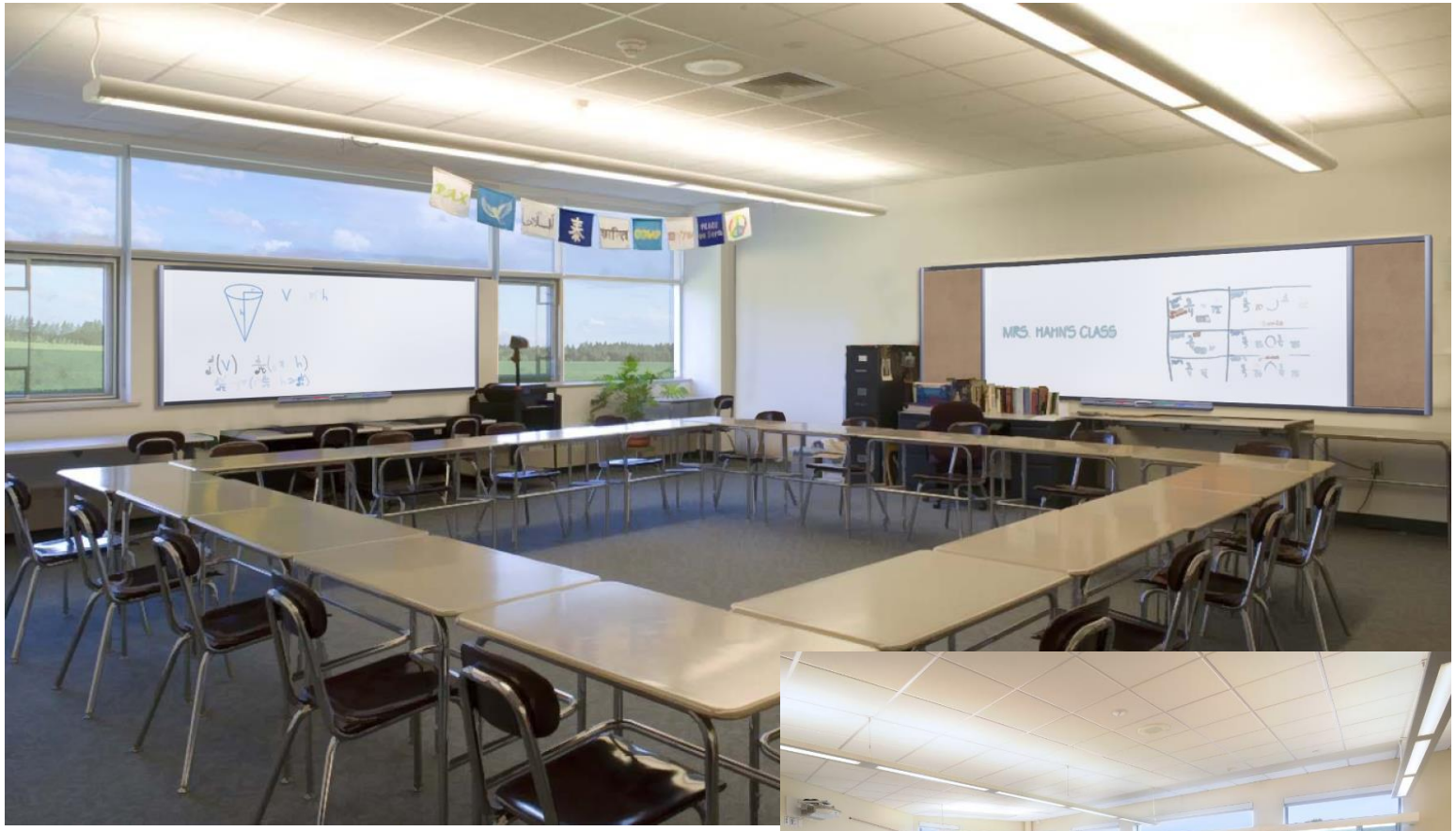
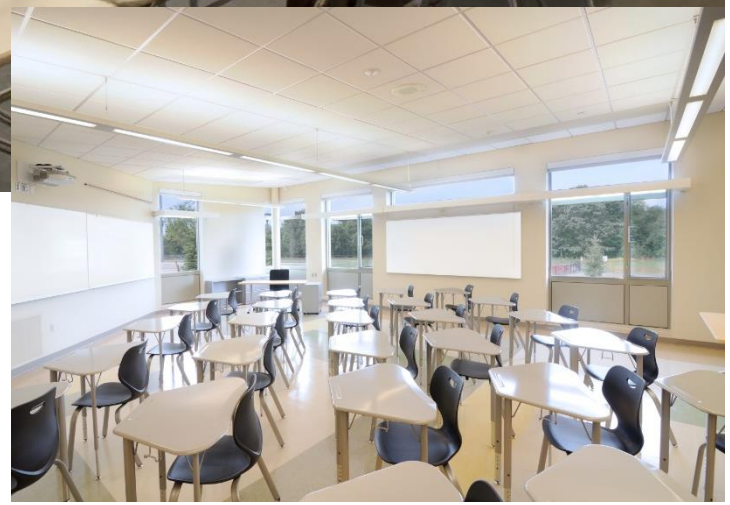
Existing Typical Classroom

Public Schools of Brookline

SMMA





21st Century Classrooms

Public Schools of Brookline

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Spaces for 21st Century Learning

Existing Corridors

Spaces for 21st Century Learning

Corridors of Power
Self Directed Learning

Critical Adjacencies

Math Classroom (825 SF)

Service Learning Program (250 SF)

CADD Lab (1,000 SF)

Machine Shop (1,000 SF)

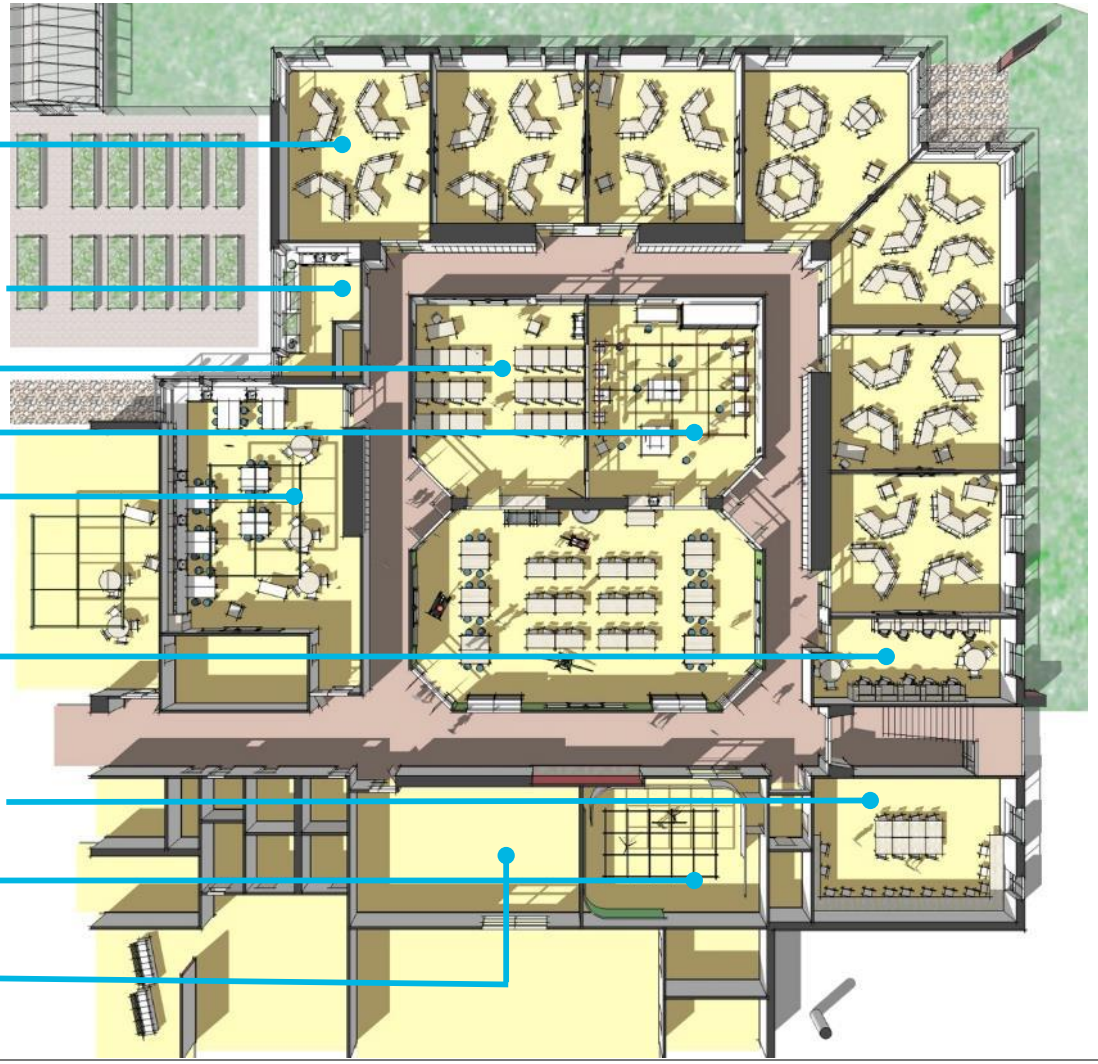
Physics Labs (2 @ 1,440 SF)

Teacher Planning (750 SF)

Editing Suite/MAC Lab (1,250 SF)

TV Studio (850)

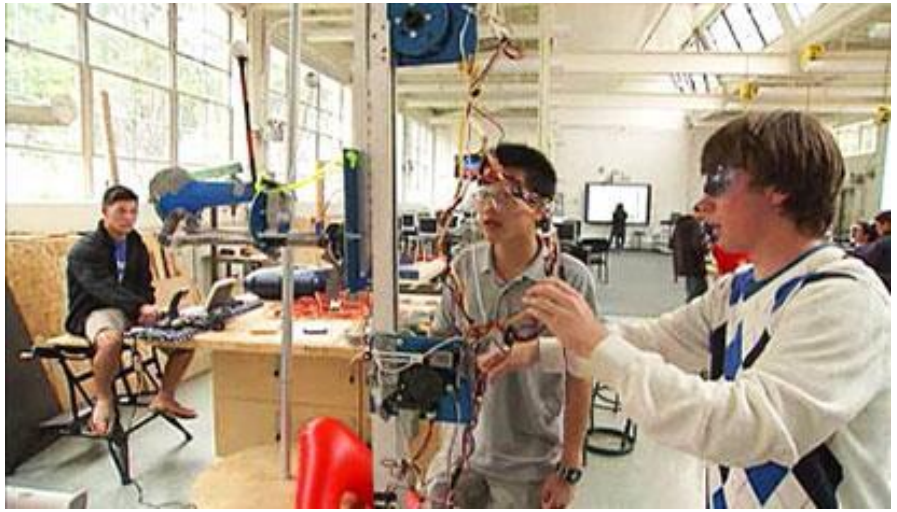
Robotics Lab (1,200 SF)



Visioning Reflected – Fab Lab

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

Fab Lab

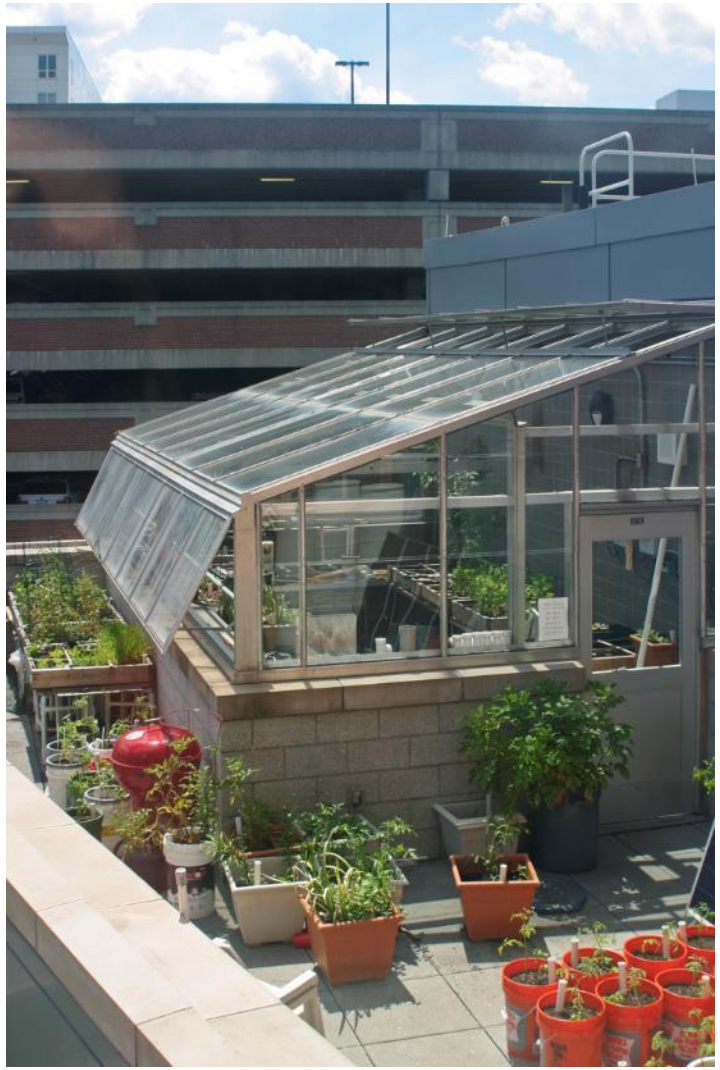


Visioning Reflected

Learn by Doing: Project-Based Learning and Display

Visioning Reflected

Green/Sustainability: School as a Teaching Tool



Student Restaurant and Bakery Example

Public Schools of Brookline

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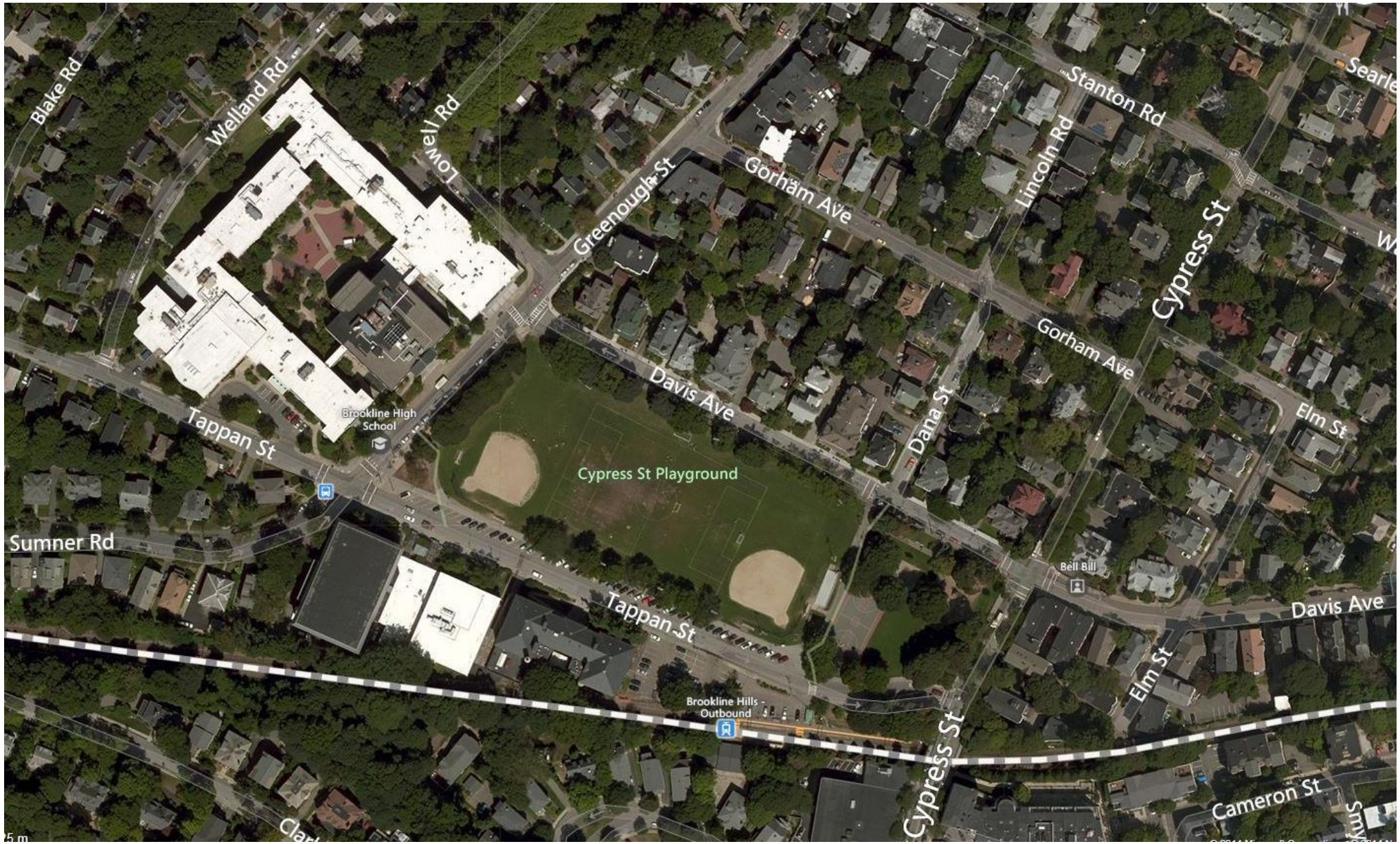
Conceptual Options: Physical

Expansion within Existing Building

Expansion of Main Campus

New School on One Campus or Two Campuses

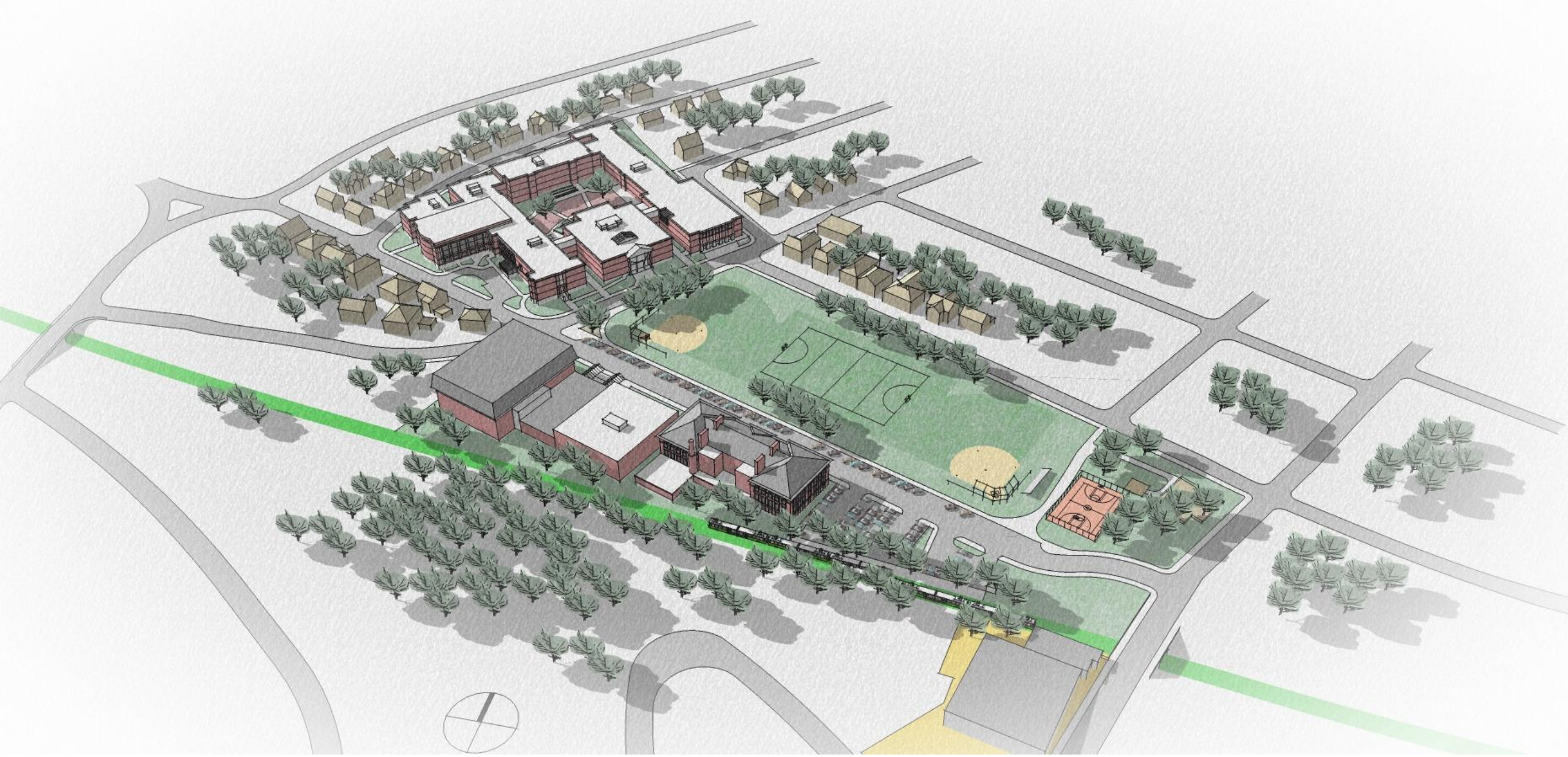


N

Existing Campus Aerial

Public Schools of Brookline

SMMA



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

First 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
- Technology/Engineering

Existing First Floor Plan: Current Program

Public Schools of Brookline

SMMA

- 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

Public Schools of Brookline

SMMA

Second Floor - Brookline High School

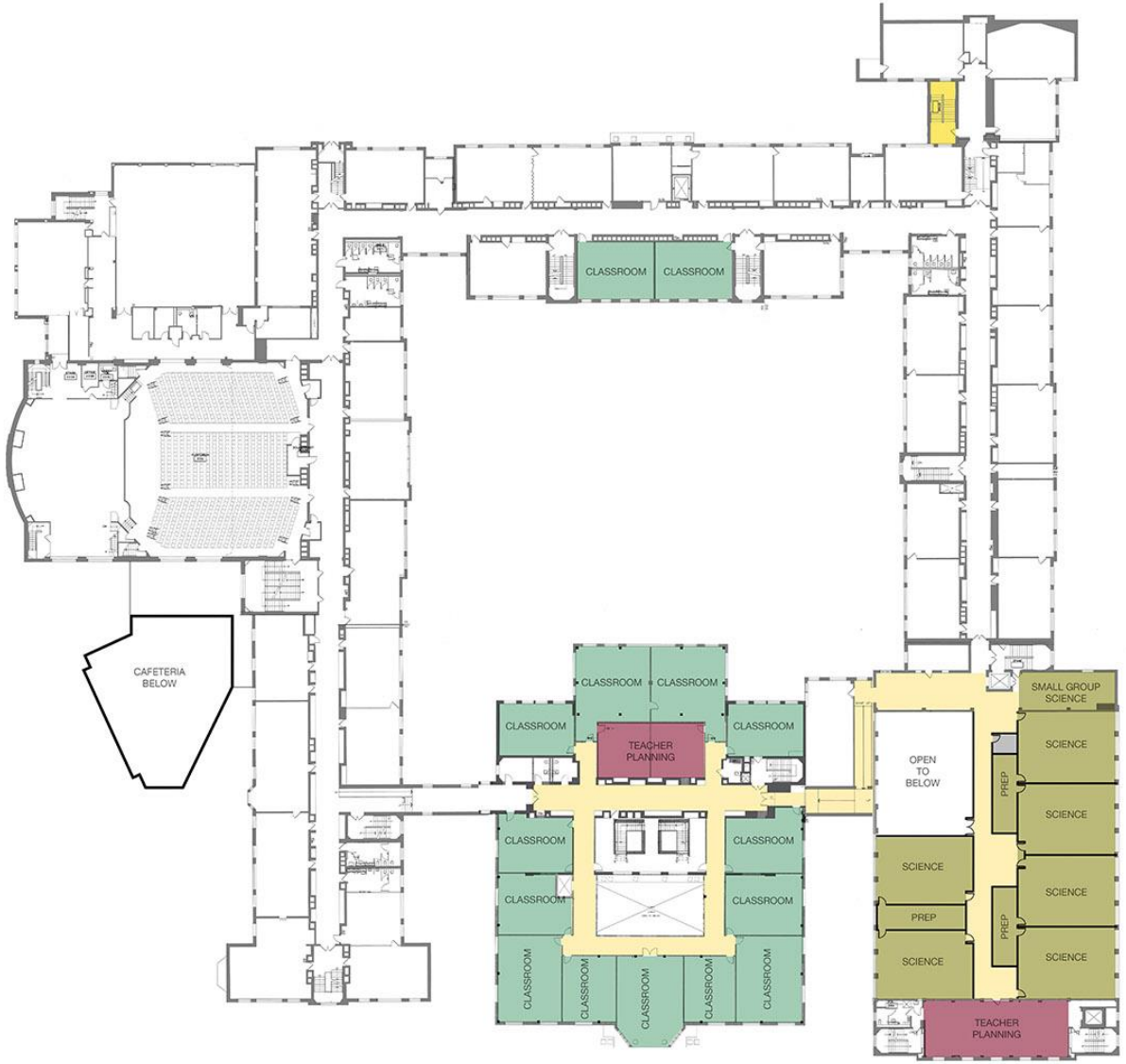
Department Legend

- 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
- Technology/Engineering

Existing Second Floor Plan: Current Program

Public Schools of Brookline

SMMA



- 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

Public Schools of Brookline

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Third 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
- Technology/Engineering

Existing Third Floor Plan: Current Program

Public Schools of Brookline

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Department Legend

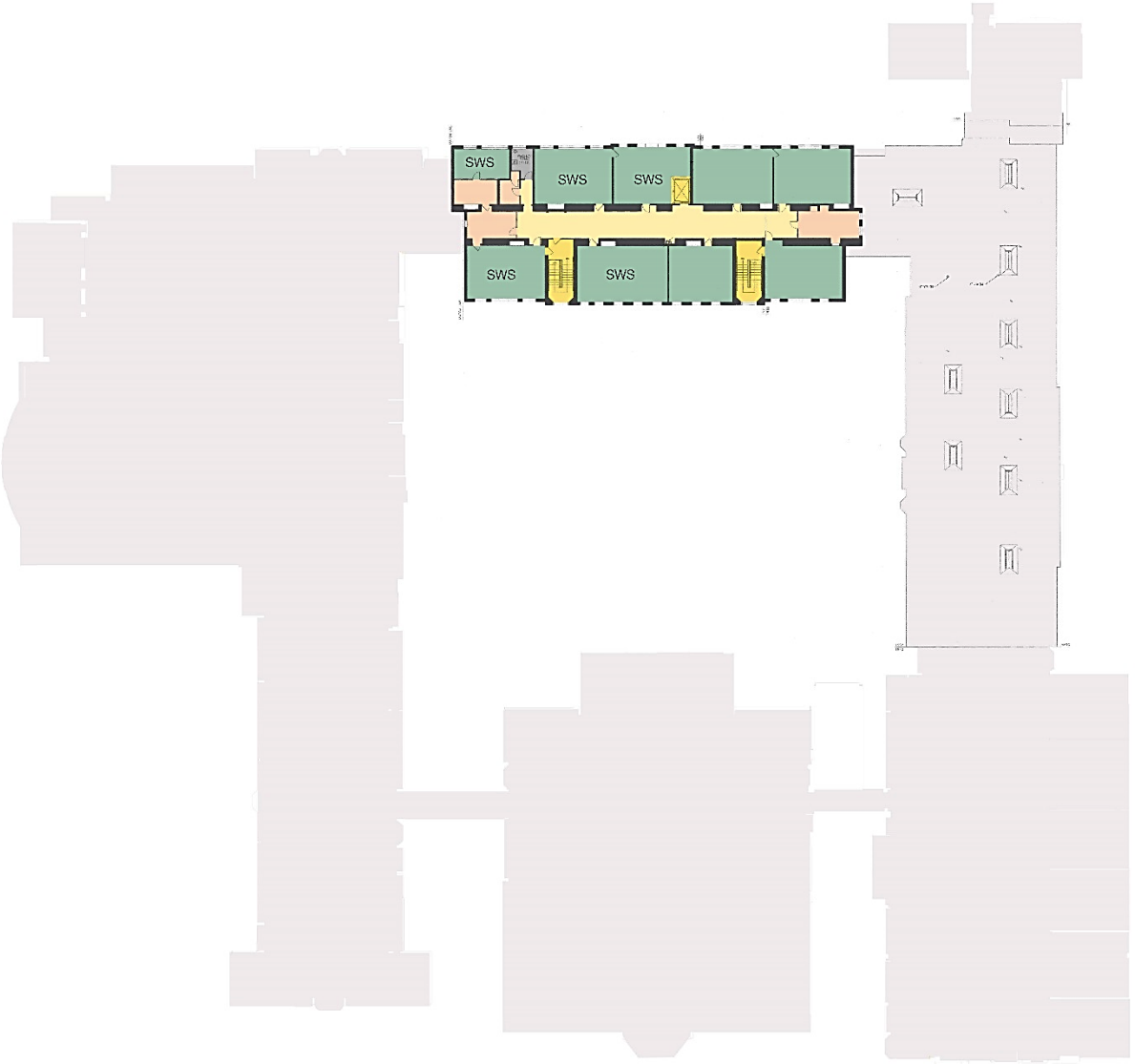
- Administration/ Guidance/Nurse
- Art/Music
- Building Equipment
- Cafeteria/Circulation
- Vertical Circulation
- Classroom/General Education Support
- Custodial
- Extra-Curricular Activity
- Fitness and Health
- Kitchen
- Library
- Maintenance
- Performing Arts/Drama
- Pool Facilities
- Pool Maintenance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

- 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

Public Schools of Brookline

SMMA



Fourth 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
- Technology/Engineering

Existing Fourth Floor Plan: Current Program

Public Schools of Brookline

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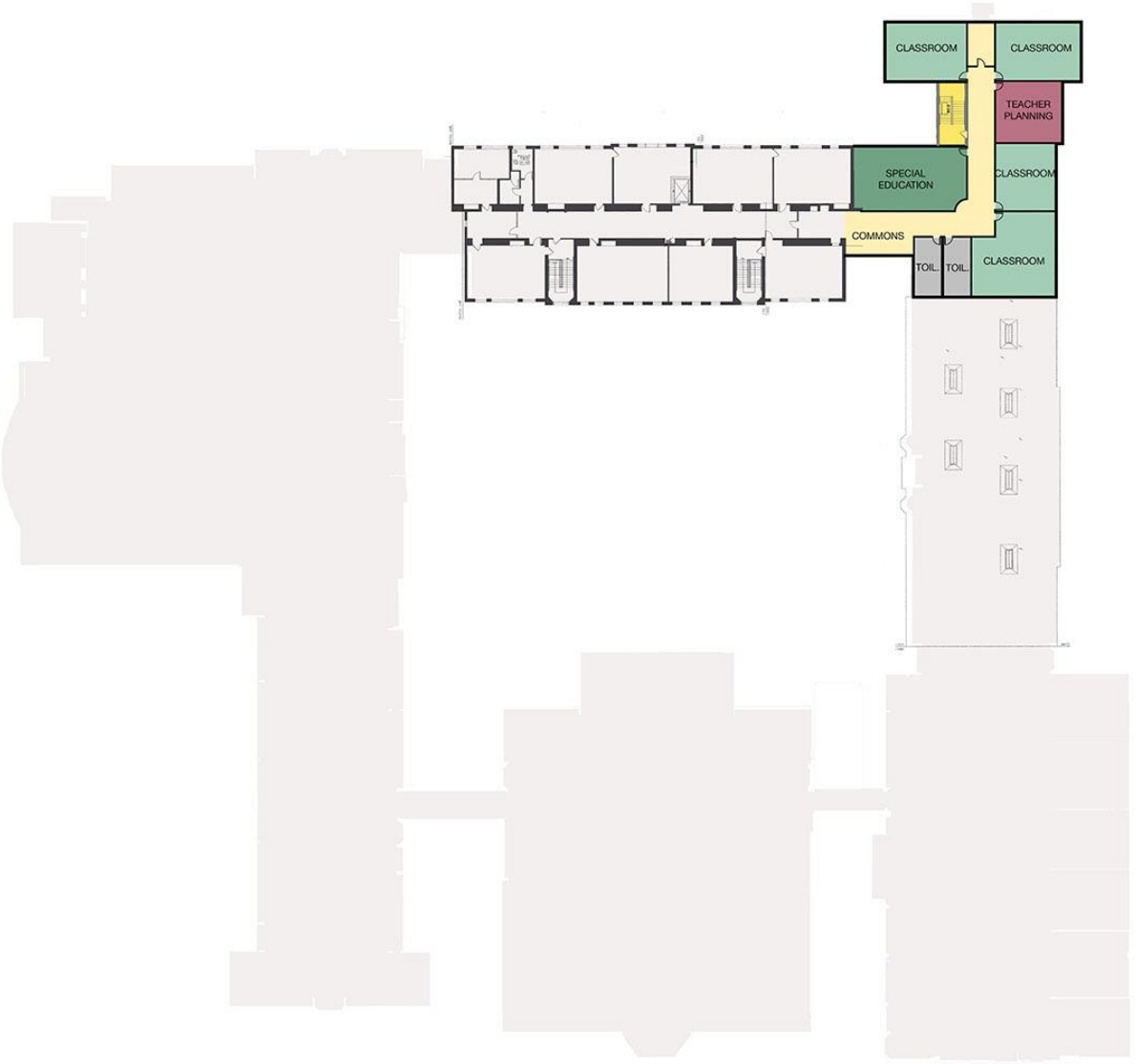

Department Legend

- 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
- Technology/Engineering

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

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

Public Schools of Brookline

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Rethinking “Egg Crate” Corridors

Public Schools of Brookline

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Rethinking “Egg Crate” Corridors

Public Schools of Brookline

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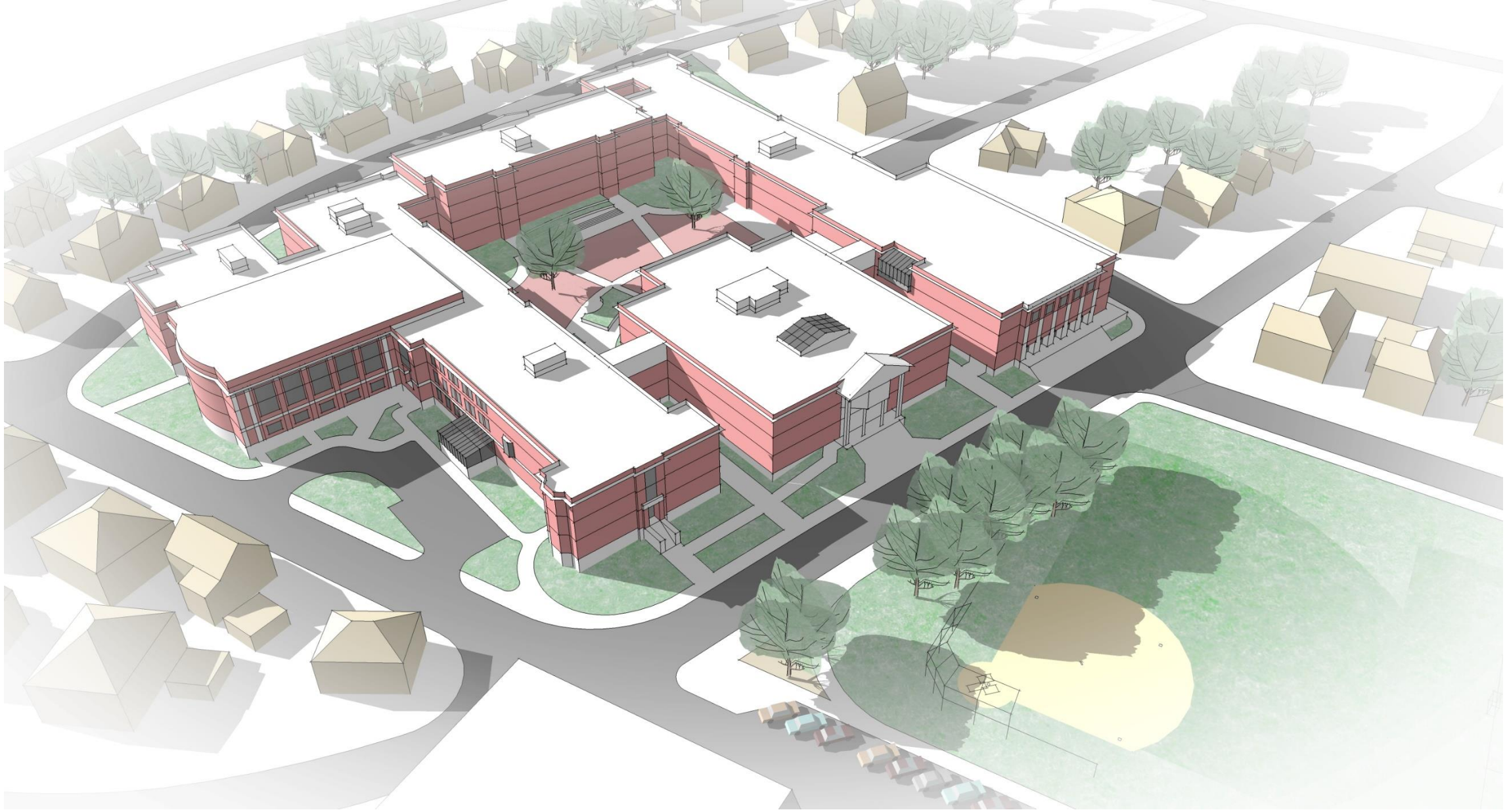

Existing Building: Option 1 Space Opportunities

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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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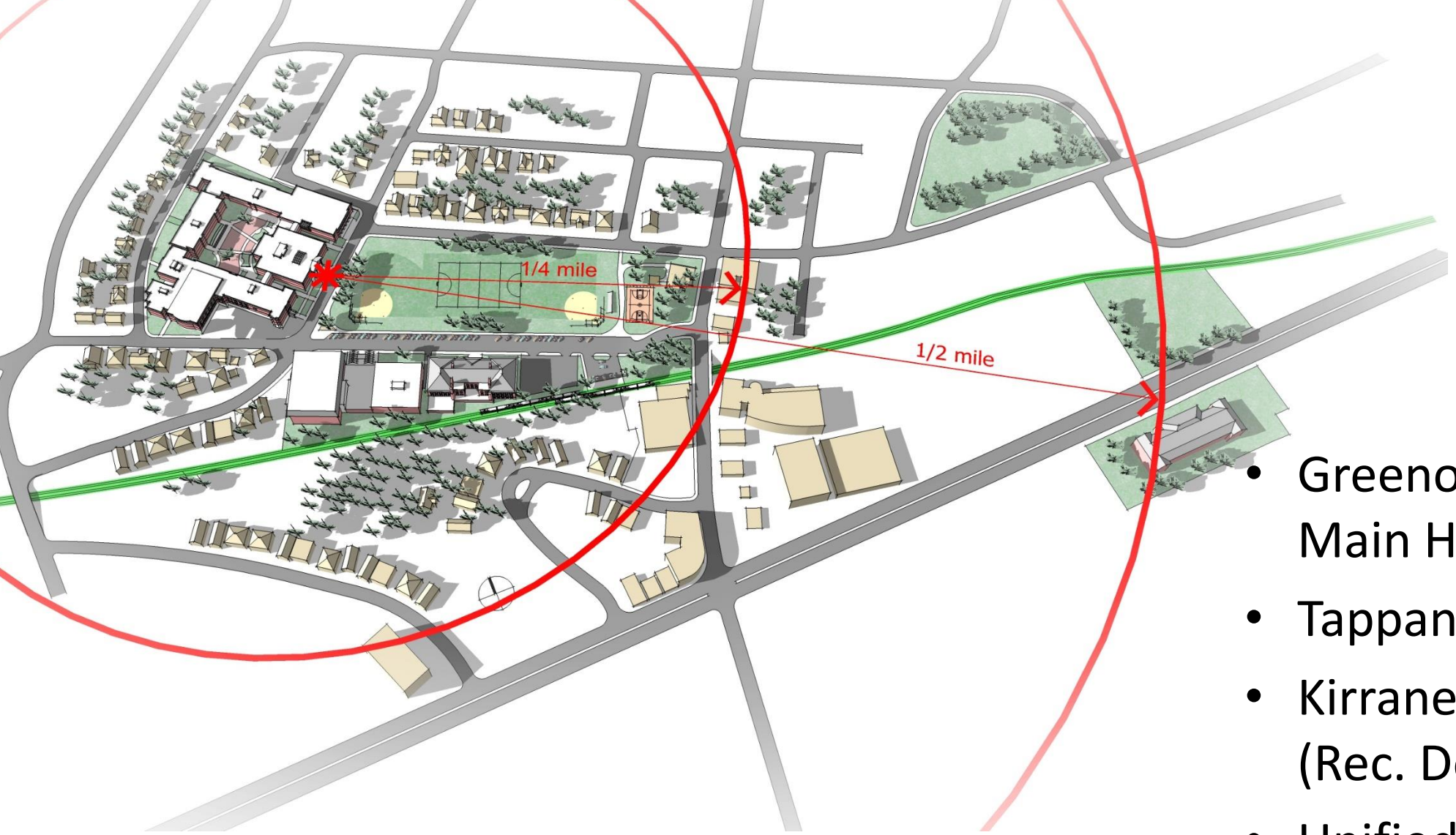
February 3, 2014



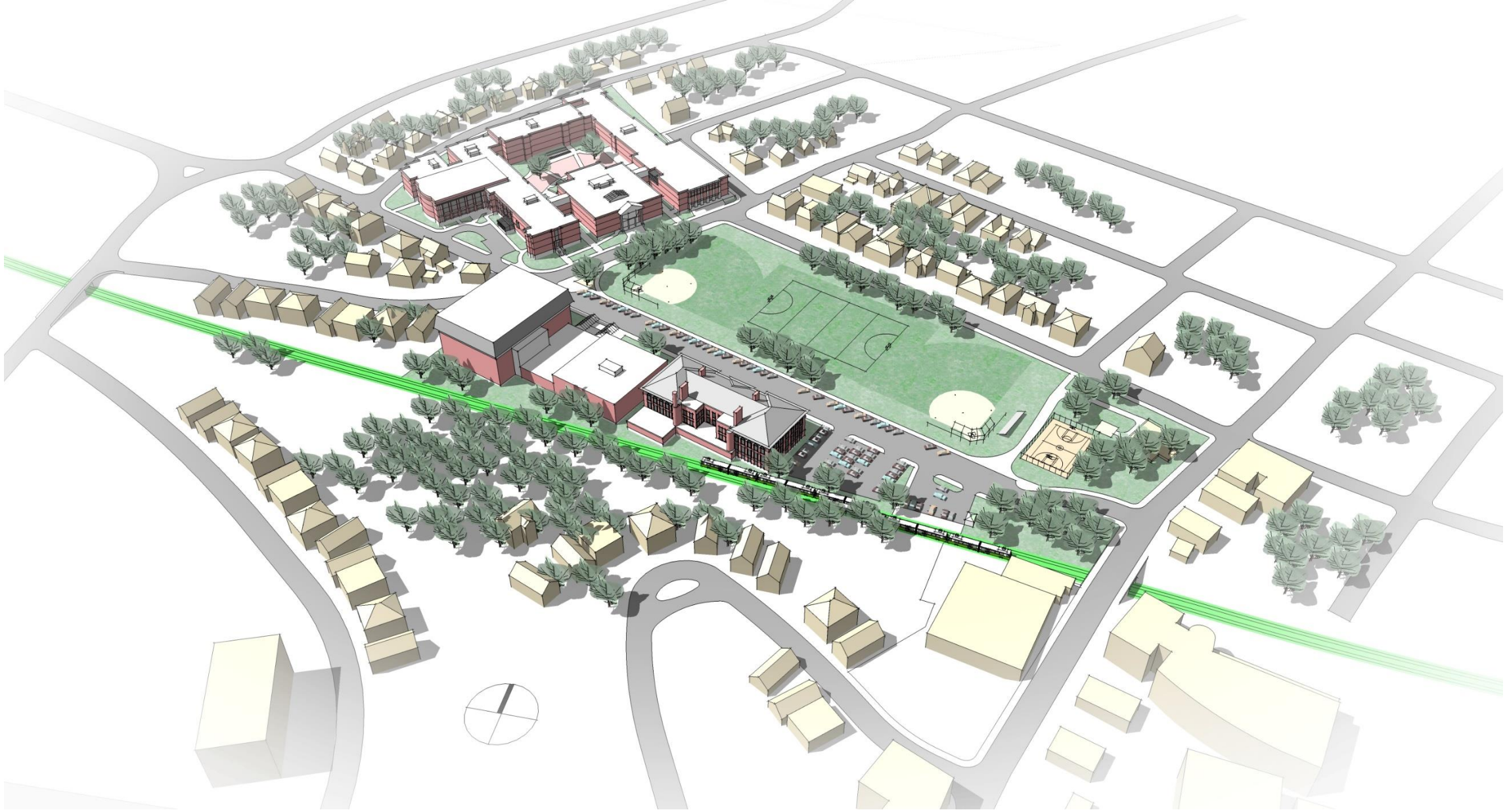
- Greenough Street Main HS Building
- Tappan Gym Building
- Kirrane Aquatics Center (Rec. Department)
- Unified Arts Building

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

Public Schools of Brookline

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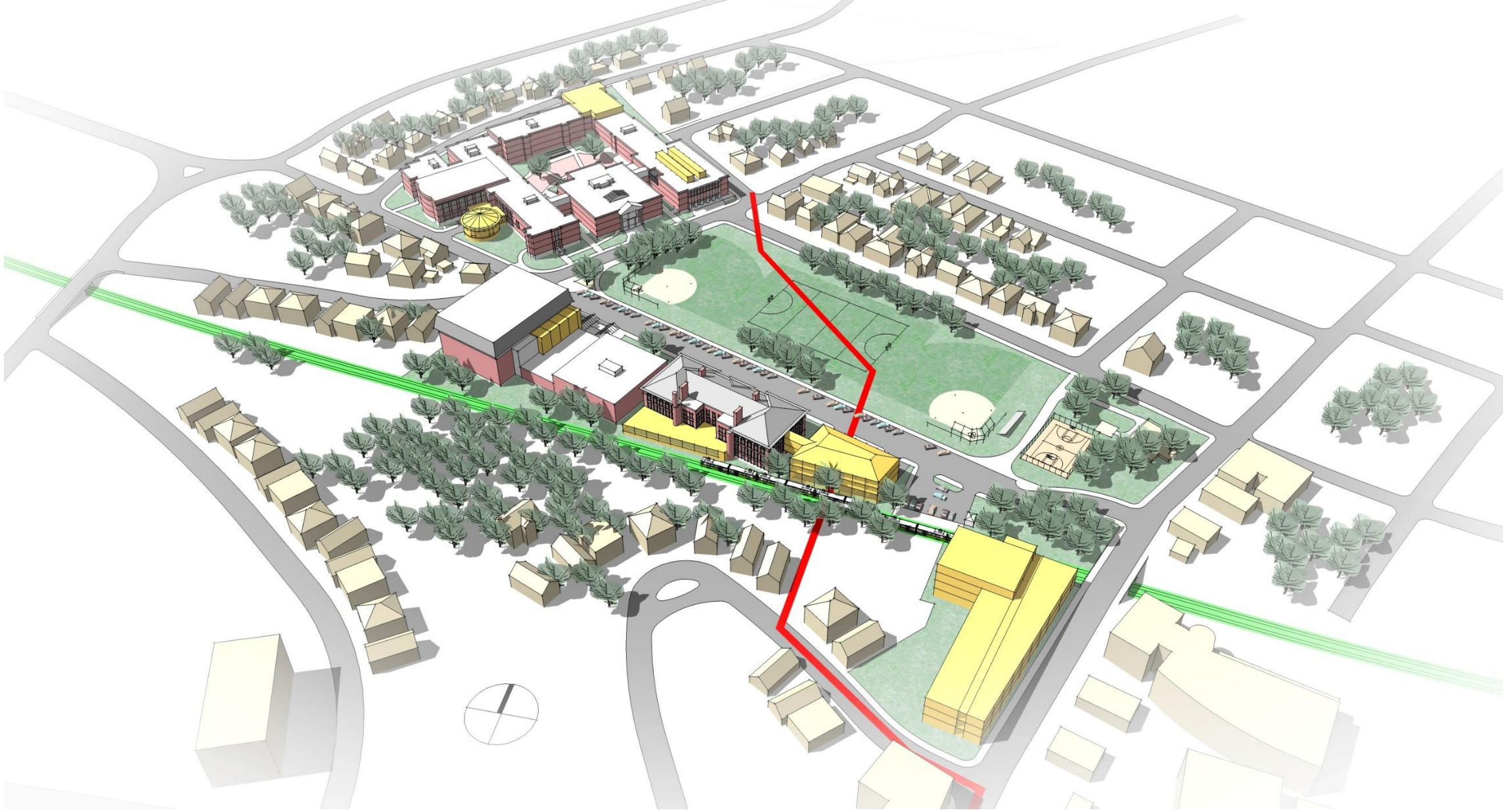

Potential Campus Build-Out

Public Schools of Brookline

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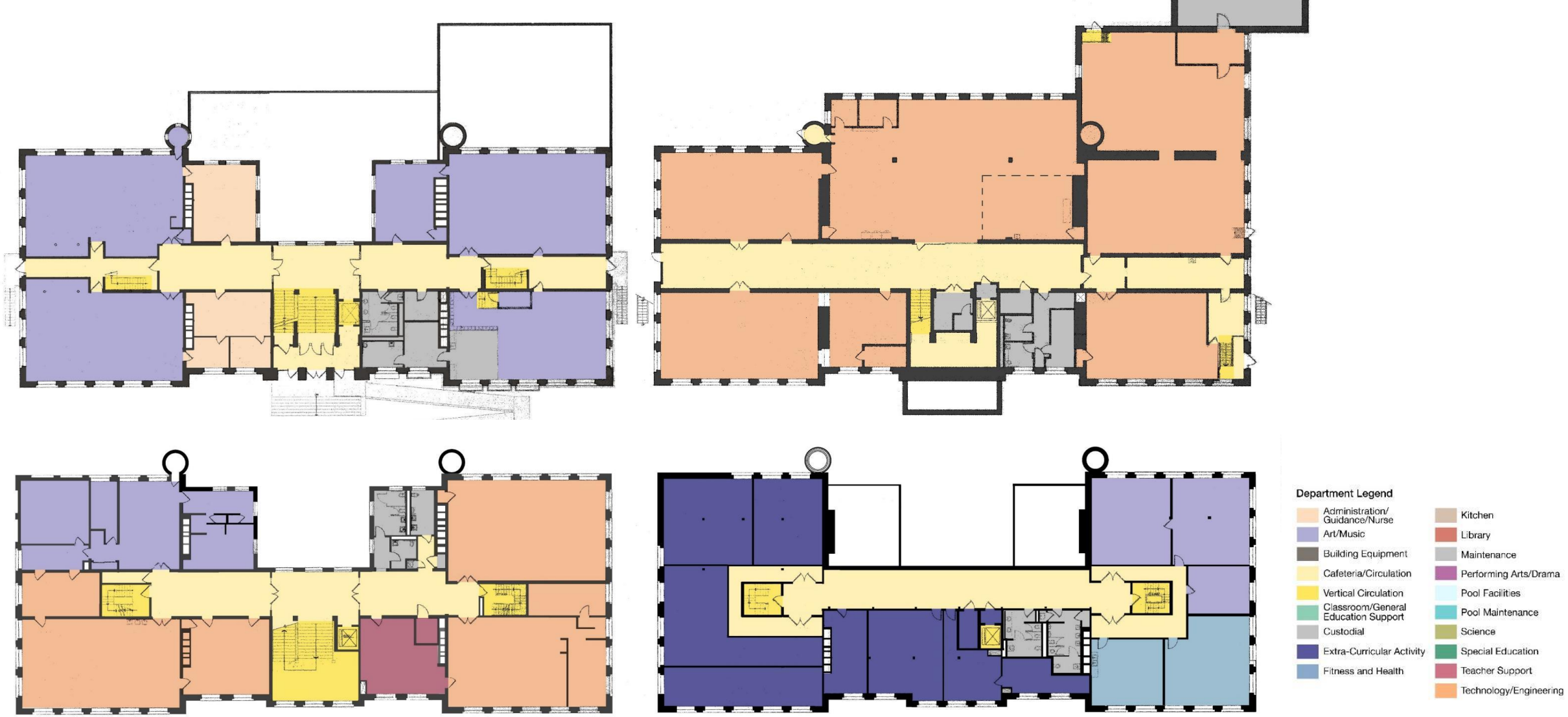
111 Cypress Street: Medical Office Building

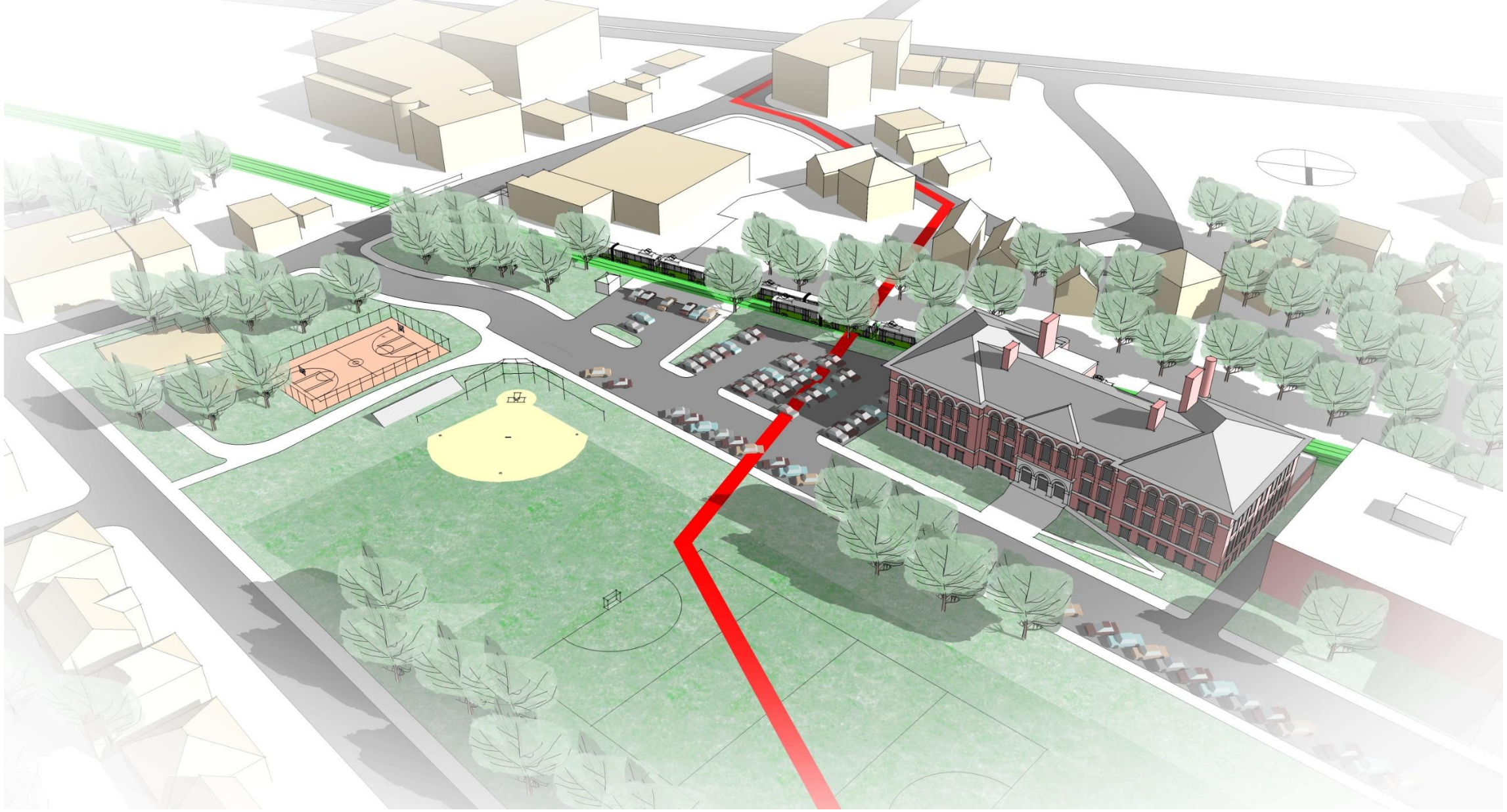
Site



Unified Arts Building: Existing Floor Plans

Public Schools of Brookline

SMMA



Existing Unified Arts Building

Public Schools of Brookline

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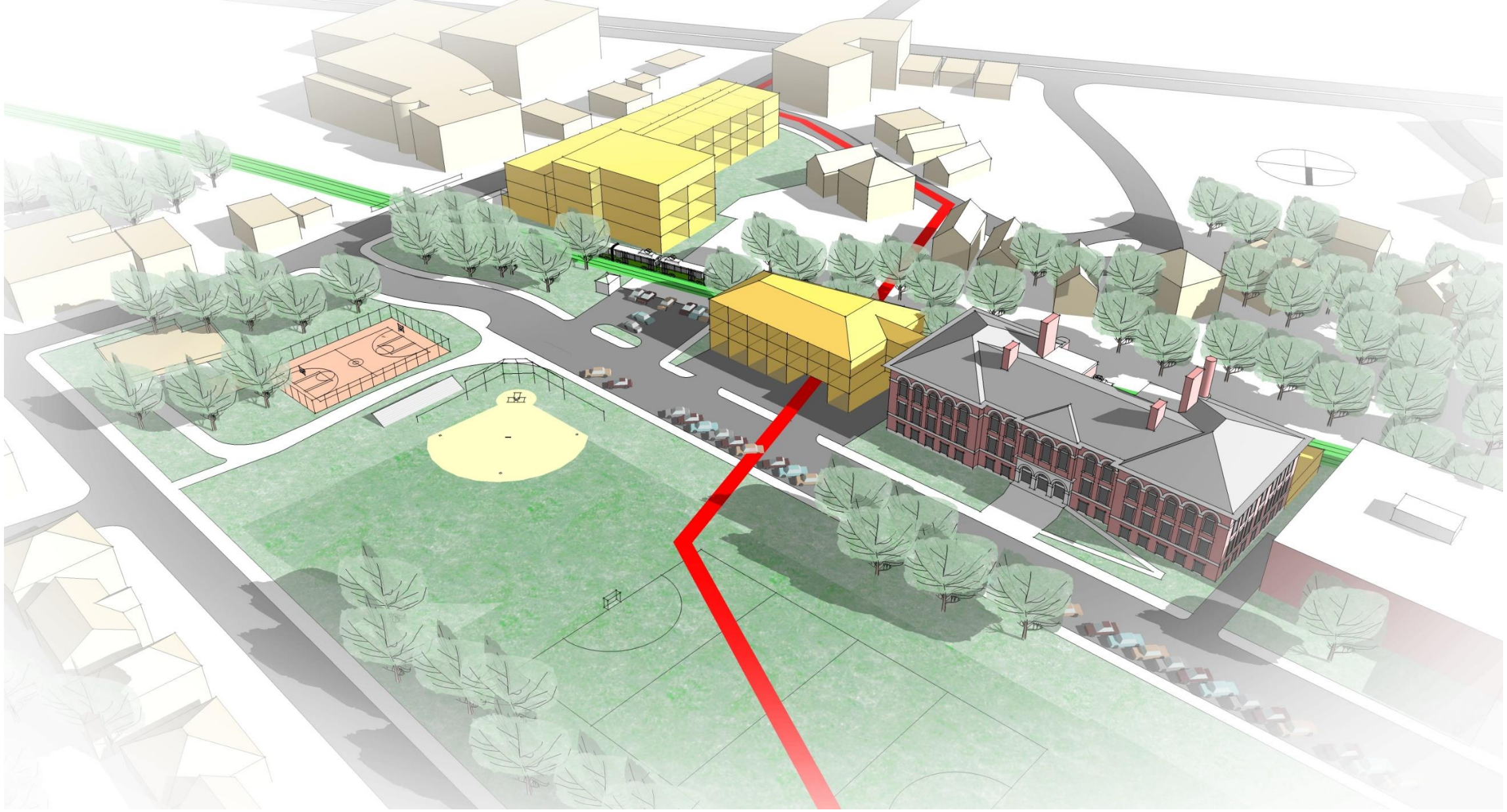

Potential UAB Build-Out

Public Schools of Brookline

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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

Appendix

6.3 Curriculum Space Worksheets

- Worksheets for 1,800 Students
- Worksheets for 2,100 Students
- Worksheets for 2,300 Students
- Worksheets for 2,600 Students

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	Business Finance & IT Pathways									
CE1100	Introduction to Business Management S1	24	24	23	1	2	2	28	0.07	Semester
CE1100	Introduction to Business Management S2	39	39	23	2	2	4	28	0.14	Semester
CE1200	World of Money S1	39	39	23	2	2	4	28	0.14	Semester
CE1200	World of Money S2	46	46	23	2	2	4	28	0.14	Semester
CE1400	Psychology of Marketing	21	21	23	1	2	2	28	0.07	Semester
CE1500	Comm for Engineers	0	0	23	0	4	0	28	0.00	
CE4100	Computer Science Engineering S1	35	35	23	2	4	8	28	0.29	
CE4100	Computer Science Engineering S2	17	17	23	1	4	4	28	0.14	
CE4200	CE Computer Programming QVB	17	17	23	1	4	4	28	0.14	
CE4800	Computer Programming Java	8	8	23	1	4	4	28	0.14	
CE4900	Web Site Design	18	18	23	1	4	4	28	0.14	
									1.43	
							1.4	**/ .85 =**	**1.7**	
CE5200	Early Childhood	16	16	23	1	4	4	28	0.14	
CE5500	Medical Careers	18	18	18	1	4	4	28	0.14	
CE5700	Early Childhood Childrens Lit	9	9	23	1	4	4	28	0.14	
									0.43	
CE6100	Culinary CR 1X	65	65	12	6	4	24	28	0.86	
CE6100S	Culinary CR Semester S1	21	21	6	4	2	8	28	0.29	Semester
CE6100S	Culinary CR Semester S2	21	21	6	4	2	8	28	0.29	Semester
CE6400	Reastaurant & Cul Sci/Theory	5	5	12	1	8	8	28	0.29	
FP2000	Italy / China S1	58	58	23	3	2	6	28	0.21	Semester

FP2000	Italy / China S2	54	54	23	3	2	6	28	0.21	Semester
FP3000	American Cuisine S1	47	47	23	2	2	4	28	0.14	Semester
FP3000	American Cuisine S2	24	24	23	1	2	2	28	0.07	Semester
FP4000	Foods of France	23	23	23	1	2	2	28	0.07	Semester
FP5000	International Baking S1	92	92	23	4	2	8	28	0.29	Semester
FP5000	International Baking S2	114	114	23	5	2	10	28	0.36	Semester
FP7000	Vegitarian Cuisine	15	15	23	1	2	2	28	0.07	
	CE SUBTOTAL	846	846						3.14	
							3.14	**/ .85 =**	**3.7**	**Say 4 Culinary Spaces**
TE1001	Creative Woodworking I S1	32	32	16	2	2	4	28	0.14	Semester
TE1001	Creative Woodworking I S2	31	31	16	2	2	4	28	0.14	Semester
TE1002	Creative Woodworking II	8	8	8	1	2	2	28	0.07	Semester
TE1003	Furniture Design & Construction	8	8	8	1	2	2	28	0.07	Semester
									0.4	
TE1101	Auto Tech S1	16	16	16	1	2	2	28	0.07	Semester
TE1102	Auto Tech S2	16	16	16	1	2	2	28	0.07	Semester
									0.1	
TE3200	Technical Drawing	10	10	10	1	2	2	28	0.07	Semester
TE3300	Architectural Design/Drafting CAD	6	6	10	1	2	2	28	0.07	Semester
TE4501	Engineering Future I S1	31	31	15	2	2	4	28	0.14	
TE4501	Engineering Future I S2	24	24	15	2	2	4	28	0.14	
									0.4	
TE4200	Graphic Arts/Copy Center Lab	4	4	5	1	2	2	28	0.07	
	Business Finance & IT Pathways Subtotals									
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	ENGLISH									
EN1020	Points of View	130	130	18	8	4	32	28	1.14	
EN1030	Respond'g to Literature	318	318	23	14	4	56	28	2.00	
EN2020 EN2022	World Lit: Living The Questions	47	47	18	3	4	12.0	28	0.43	
EN2030	World Literature Honors, Identity, Culture and Meaning	118	118	23	5	4	20.0	28	0.71	
EN2120 EN2130	Future World Literature + Honors	146	146	18	8	4	32.0	28	1.14	
EN2220 EN2230	Real World Literature + Honors	85	85	23	4	4	16.0	28	0.57	
EN3020 EN3022	American Literature	110	110	23	5	4	20.0	28	0.71	
EN3030	American Literature Honors	243	243	23	11	4	44.0	28	1.57	
EN4020	Stranger in Literature (Land)	17	17	23	1	4	4.0	28	0.14	
EN4030	Stranger in Literature Honors	50	50	23	3	4	12.0	28	0.43	
EN4220 EN4222	Biography and Autobiography	40	40	23	2	4	8.0	28	0.29	
EN4430	English Literature Honors (British?)	50	50	23	3	4	12.0	28	0.43	
EN4530	European Literature	14	14	23	1	4	4.0	28	0.14	
EN4600	Craft of Writing	65	65	23	3	4	12.0	28	0.43	

EN4700	Public Speaking	66	66	23	3	4	12.0	28	0.43	
EN4800	Fiction and Film	46	46	23	2	4	8.0	28	0.29	
EN4900	Communication for Entrepreneurs	30	30	30	1	4	4.0	28	0.14	
IDO100	Journalism I	28	28	23	2	4	8.0	28	0.29	
IDO 130	Journalism Honors	26	26	23	2	4	8.0	28	0.29	
	ENGLISH SUBTOTAL	1629	1,629						11.57	
							11.57	**/ .85 =**	**13.6**	**Say 14 English Classrooms**
									ASSUME 14 ENGLISH CLASSROOMS	
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

Basic Educational Space
for Planned Program

ELL

1800 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	ELL									
EL1000	ELL I:US Civics and History	6	6	20	1	4	4	28	0.14	
EL1100	ELL I Reading / Writing	6	6	20	1	4	4	28	0.14	
EL1200	ELL I: List/Speaking	6	6	20	1	4	4	28	0.14	
EL2000	ELL II Reading / Writing	14	14	20	1	4	4	28	0.14	
EL2100	ELL II: List/Speaking	14	14	20	1	4	4	28	0.14	
EL3000	ELL III: Composition	21	21	20	1	4	4	28	0.14	
EL3100	ELL III: Literature	20	20	20	1	4	4	28	0.14	
	ELL SUBTOTAL	87	87						1.00	
							1.00	**/ .85 =**	**1.2**	**Say 2 ELL Classrooms**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

Basic Educational Space
for Planned Program

HEALTH FITNESS

1800 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	HEALTH & FITNESS									
HF0900 HF1000	Health and Fitness S1	252	252	23	11	4	44	35	1.26	Semester
HF0900 HF1000	Health and Fitness S2	275	275	23	12	4	48	35	1.37	Semester
HF1100	Lifetime Activities S1	96	96	20	5	4	20.0	35	0.57	Semester
HF1100	Lifetime Activities S2	75	75	23	4	4	16.0	35	0.46	Semester
HF2100	Tennis Spec	25	25	23	1	4	4.0	35	0.11	Semester
HF2200	Swim-Aquadics Aero	15	15	15	1	4	4.0	35	0.11	Semester
HF2300	Weight Training / Cardio S1	25	25	25	1	4	4.0	35	0.11	Semester
HF2300	Weight Training / Cardio S2	20	20	25	1	4	4.0	35	0.11	Semester
HF2400	Rock Climbing Advances S1	28	28	15	2	4	8.0	35	0.23	Semester
HF2400	Rock Climbing Advances S2	28	28	15	2	4	8.0	35	0.23	Semester
HF2500	Basketball Spec	11	11	25	1	4	4.0	35	0.11	Semester
HF2600	The Revolution	23	23	25	1	4	4.0	35	0.11	Semester
HF2610	Excel Lifetime S1	0	0	23	0	4	0.0	35	0.00	Semester
HF2610	Excel Lifetime S2	0	0	23	0	4	0.0	35	0.00	Semester
HF2800	Yoga S1	100	100	25	4	4	16.0	35	0.46	Semester
HF2800	Yoga S2	100	100	25	4	4	16.0	35	0.46	Semester
	HEALTH & FITNESS SUBTOTAL	1073	1,073						5.71	
							5.71	**/ .85 =**	**6.7**	**Say 7 Teaching Stations**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

Brookline High School
SMMA No. 14030

7/31/2015

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Basic Educational Space
for Planned Program

MATH

1800 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course	Subject	Current	Projected	Class	Sections	Sessions	Total	Periods	Total	
No.		Students,	Students,	Size		Per Week	Sessions	Per Week	Stations	
		per Subject	per Subject						Required	Comments
	MATH									
MA1000	Algebra I	19	19	18	1	4	4	28	0.14	
MA1006	Algebra I	12	12	18	1	4	4	28	0.14	
MA1020 MA1022	Geometry	112	112	18	7	4	28.0	28	1.00	
MA1030	Geometry Honors	247	247	23	11	4	44.0	28	1.57	
MA1040	AdvancedGeometry	101	101	23	5	4	20.0	28	0.71	
MA2020 MA 2022	Intro Algebra 2	122	122	18	7	4	28.0	28	1.00	
MA2030	Algebra 2 & Trig Honors	175	175	23	8	4	32.0	28	1.14	
MA2040	Algebra 2 & Advanced	68	68	23	3	4	12.0	28	0.43	
MA3010 MA3012	Algebra Topics & Technology	27	27	23	2	4	8.0	28	0.29	
MA3020	Algebra 2 & Trig	137	137	23	6	4	24.0	28	0.86	
MA3030	PreCalculus Honors	136	136	23	6	4	24.0	28	0.86	
MA3040	PreCalculus Advanced	79	79	23	4	4	16.0	28	0.57	
MA4010	College Algebra Topics	24	24	23	1	4	4.0	28	0.14	
MA4020	PreCalculus	134	134	23	6	4	24.0	28	0.86	
MA4025	Interactive Math Program IV	8	8	23	1	4	4.0	28	0.14	
MA4030	Foundations in Calculus	40	40	23	2	4	8.0	28	0.29	
MA4035	Interactive Math Program IV Honors	6	6	23	1	4	4.0	28	0.14	
MA4040	AP Calculus AB	114	114	23	5	4	20.0	28	0.71	
MA4041	AP Calculus BC	68	68	23	3	4	12.0	28	0.43	
MA4120	Statistics	65	65	23	3	4	12.0	28	0.43	
MA4140	AP Statistics	34	34	23	2	4	8.0	28	0.29	
MA4200	Perspectives of the Math Mind	25	25	23	1	4	4.0	28	0.14	
	MATH SUBTOTAL	1753	1,753						12.29	
							12.29	**/ .85 =**	**14.5**	**Say 15 Math Classrooms**
									ASSUME __	**MATH CLASSROOMS**

	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an								
	equivalent year classroom requirement.								

Basic Educational Space for Planned Program

PERFORMING ARTS

1800 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	PERFORMING ARTS									
PA1000	Concert Choir	40	40	60	1	4	4	28	0.14	
PA1200	Camerata Honors	50	50	50	1	4	4	28	0.14	
PA1500	A-Cappella Choir	26	26	60	1	4	4	28	0.14	
PA2000	Concert Band	65	65	90	1	4	4	28	0.14	
PA2201	Digital Music Production	26	26	15	2	2	4	28	0.14	Semester
PA2201	Digital Music Production	27	27	15	2	2	4	28	0.14	Semester
PA2300	Jazz Band	13	13	23	1	4	4	28	0.14	
PA2350	Jazz / Rock Ensemble	11	11	23	1	2	2	28	0.07	Semester
PA2500	Orchestra	58	58	100	1	4	4	28	0.14	
PA2700	AP Music Theory	22	22	23	1	4	4	28	0.14	
PA2801	Intro to World Music	15	15	23	1	4	4	28	0.14	Semester
PA2900	Piano	14	14	15	1	4	4	28	0.14	Semester
PA2900	Piano	14	14	23	1	4	4	28	0.14	Semester
									1.79	
							1.79	**/ .85 =**	**2.1**	
PA3000	Begin Dance	25	25	23	2	4	8	28	0.29	
PA3100	Intermediate Dance	21	21	23	1	4	4	28	0.14	
PA3200	Advanced Modern/Jazz Dance	25	25	23	1	4	4	28	0.14	
PA3600	Choreography	12	12	23	1	4	4	28	0.14	
PA3700	African Latin Hip Hop Dance	48	48	23	2	4	8	28	0.29	
									1.00	
							1	**/ .85 =**	**1.2**	
PA4000	Drama I	49	49	23	3	4	12	28	0.43	Auditorium
PA4100	Drama II	30	30	23	2	4	8	28	0.29	Auditorium
PA4300	Brookline Educational Theater Co, BETCO	17	17	23	1	4	4	28	0.14	Auditorium
PA4602	Need Improvement	10	10	23	1	4	4	28	0.14	Auditorium
									1.00	

							1	**/ .85 =**	**1.2**	
PA4400	Backstage: Power Tools	14	14	23	1	2	2	28	0.07	Semester
PA4400	Backstage: Power Tools	11	11	23	1	2	2	28	0.07	Semester
PA4501	Drama I-A	15	15	23	1	2	2	28	0.07	Semester
PA4501	Drama I-A	17	17	23	1	2	2	28	0.07	Semester
PA4501	Drama I-A	16	16	23	1	2	2	28	0.07	Semester
									0.36	
							0.36	**/ .85 =**	**0.4**	
	PERFORMING ARTS SUBTOTAL	691	691							**Say 5 Spaces**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

Basic Educational Space
for Planned Program

SCHOOL WITHIN A SCHOOL

1800 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	SCHOOL WITHIN A SCHOOL									
SW1000	Contemporary Literature Honors	9	9	12	1	2	2	28	0.07	
SW1100	Creative Non-Fiction Honors	14	14	21	1	2	2	28	0.07	
SW1200	Creative Writing Honors	9	9	21		2	0	28	0.00	
SW1300	Humanities in Literature Honors	5	5	21	1	2	2	28	0.07	
SW1400	Race & Identity in Lit Honors	12	12	21	1	2	2	28	0.07	
SW1410	Friendship in Literature Honors	11	11	21		2	0	28	0.00	
SW1500	Individual & Institutional Lit Honors	10	10	21	1	2	2	28	0.07	
SW1510	Memoir in Literature Honors	5	5	21	1	2	2	28	0.07	
SW1600	Spirit in Literature Honors	12	12	21	1	2	2	28	0.07	
SW1900	Dark Literature Honors	22	22	21	1	2	2	28	0.07	
SW2500	Feminism in Literature Honors	11	11	21	1	2	2	28	0.07	
SW2600	Psychology in Literature Honors	13	13	21	1	2	2	28	0.07	
SW4120 SW4130	SWS World History + Honors	20	20	23	1	4	4	28	0.14	
SW4120 SW4130	SWS US History + Honors	21	21	23	1	4	4	28	0.14	
SW4232	Contemporary World History Honors	15	15	23	1	2	2	28	0.07	
SW4321	Senior Capstone	14	14	23	1	2	2	28	0.07	
SW4331	Educational Seminar Honors	18	18	23	1	2	2	28	0.07	
SW6000	Town Meeting	118	118	130	1	4	4	28		once per week

SC3031	SWS Biology I Honors	0	0	0	0	0	0.0	0	0.00	listed with Science
	SWS SUBTOTAL	206	206						1.21	
							1.21	**/ .85 =**	**1.4**	**Say __ SWS Classrooms**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

Basic Educational Space
for Planned Program

SPED

1800 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	Special Education									
EN1050	English I	15	15	20	1	4	4.0	28	0.14	
EN1060	LAHB English	3	3	23	1	4	4.0	28	0.14	
EN2050	English II	6	6	23	1	4	4.0	28	0.14	
EN2160	LAHB English II	7	7	18	1	4	4.0	28	0.14	
EN3050	English III	7	7	23	1	4	4.0	28	0.14	
EN4050	Senior English	20	20	23	1	4	4.0	28	0.14	
MA1050	Geometry I	17	17	23	1	4	4.0	28	0.14	
MA2050	Algebra 1 / Geometry	8	8	23	1	4	4.0	28	0.14	
MA3050	Essential Math for Life I	7	7	23	1	4	4.0	28	0.14	
MA4050	Essential Math for Life II	6	6	23	1	4	4.0	28	0.14	
SO1050	World History I	12	12	23	1	4	4.0	35	0.11	
SO2050	World History II	12	12	23	1	4	4.0	35	0.11	
TU2109	Comprehensive Learning Center	22	22	7	3	4	12	28	0.43	
TU2200	Learning Support	9	9	6	2	4	8	28	0.29	
TU2300	Learning Center OFC		0				0	28	0.00	
TU2309	LAHB Learing Center	10	10	15	1	4	4	28	0.14	
TU3000	Study Skills & Tutorial	15	15	4	4	4	16	28	0.57	
EN 8301 EN8304	Functional English I - IV	9	9	23	1	4	4.0	28	0.14	
MA8201 MA8204	Functional Math 1 - 4	5	5	23	1	4	4.0	28	0.14	
SO8501 SO8502	Functional Social Studies I, II, III & IV	8	8	23	1	4	4.0	35	0.11	
									3.49	
							3	**/ .85 =**	**4.1**	Say 4 SPED shared classrooms

	Dedicated Classrooms									
TU2009	Learning Center 9	35	35	7	5	4	20	28	0.71	
TU2010	Learning Center 10	30	30	7	5	4	20	28	0.71	
TU2011	Learning Center 11	32	32	7	5	4	20	28	0.71	
TU2012	Learning Center 12	34	34	7	5	4	20	28	0.71	
TU2909	Small Group Learning Center 9	7	7	10	1	4	4	28	0.14	
TU2910	Small Group Learn'g Center 10	3	3	10	1	4	4	28	0.14	
TU2911	Small Group Learn'g Center 11	4	4	10	1	4	4	28	0.14	
TU2912	Small Group Learn'g Center 12	6	6	10	1	4	4	28	0.14	
TU4000	RISE Tutorial	8	8	12	2	4	8	28	0.29	
TU4001	CBC Tutorial	4	4	7	2	2	4	28	0.14	
									3.86	**8 Dedicated prgram classrooms**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	SCIENCE									
	Physics									
SC1020 SC1022 SC1026	Physics I	139	139	18	8	4	32	28	1.14	
SC1030	Physics I Honors	330	330	23	15	4	60	28	2.14	
SC4140	AP Physics 1&2	24	24	23	1	4	4.0	28	0.14	
SC4141	AP Physics C	45	45	23	2	4	8.0	28	0.29	
									3.71	
							3.71	**/ .85 =**	**4.4**	Say 5 Physics
SC1300	Draw for Understanding in Field Science	0	0	23	0	4	0.0	28	0.00	see unified arts
	Chemistry									
SC2020 SC2022	Chemistry I	130	130	18	8	4	32.0	28	1.14	
SC2030	Chemistry I Honors	174	174	23	8	4	32.0	28	1.14	
SC2035	Chem I (LBC) Honors	114	114	23	5	4	20.0	28	0.71	
SC2100	SWS Chem I Honors	18	18	23	1	4	4.0	28	0.14	
SC4240	AP Chemistry	94	94	23	4	4	16.0	28	0.57	
SC6200	Chemistry I ELL	15	15	23	1	2	2.0	28	0.07	
SC5820 SC5830	Forensic Science S1	24	24	23	1	2	2.0	28	0.07	Semester
SC5820 SC5830	Forensic Science S2	32	32	23	2	2	2.0	28	0.07	Semester
									3.93	
							3.93	**/ .85 =**	**4.6**	Say 5 Chemistry
	Biology									
SC3020 SC3022	Biology I	71	71	18	3	4	12.0	28	0.43	

SC3025	Biology I BSCS	0	0	23	0	4	0.0	28	0.00	
SC3027	SWS Biology BSCS	0	0	23	0	4	0.0	28	0.00	
SC3030	Biology I Honors	186	186	23	8	4	32.0	28	1.14	
SC3031	SWS Biology IH	24	24	23	1	4	4.0	28	0.14	SWS
SC3035	Biology BSCS H	94	94	23	4	4	16.0	28	0.57	SWS
SC4320	Anatomy / Physiology	13	13	23	1	4	4.0	28	0.14	
SC4330	Anatomy / Physiology Honors	35	35	23	2	4	8.0	28	0.29	
SC4430	Biology II Honors	24	24	23	1	4	4.0	28	0.14	
SC4440	AP Biology	71	71	23	3	4	12.0	28	0.43	
SC5620	Marine Biology	8	8	23	1		0.0	28	0.00	
SC5630	Marine Biology Honors	16	16	23	1		0.0	28	0.00	
SC5920	Genetics	17	17	23	1	2	2.0	28	0.07	Semester
									3.36	
							3.36	**/ .85 =**	**3.9**	Say 4 Biology
	Applied Science									
SC1050	Applied Science I	13	13	23	1	4	4.0	28	0.14	
SC3035	Applied Science III	8	8	23	1	4	4.0	28	0.14	
SC8401 SC8404	Functional Science I thru IV	4	4	23	1	4	4.0	28	0.14	
SC4540	AP Environmental Science	24	24	23	1	4	4.0	28	0.14	
SC5130	Body / Mind Honors	24	24	23	1	4	4.0	28	0.14	
SC5530	Engineering by Design Honors	60	60	20	3	4	12.0	28	0.43	
									1.14	
	SCIENCE SUBTOTAL	1831	1,831				**1.14**	**/ .85 =**	**1.3**	
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

Basic Educational Space
for Planned Program

SOCIAL STUDIES

1800 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	SOCIAL STUDIES									
SO1020 SO1022	World History 9	121	121	18	7	4	28	35	0.80	
SO1030	World History 9 Honors	340	340	23	15	4	60	35	1.71	
SO1400	US History ELL II	14	14	23	1	4	4.0	35	0.11	
SO2020 SO2022	World History S	98	98	18	6	4	24.0	35	0.69	
SO2030	World History Honors	297	297	23	13	4	52.0	35	1.49	
SO3020 SO3022	US History S	88	88	23	4	4	16.0	35	0.46	
SO3030	US History Honors	186	186	23	8	4	32.0	35	0.91	
SO3040	US History AP	100	100	23	5	4	20.0	35	0.57	
SO 3300	US History 2 ELL III	19	19	23	1	4	4.0	35	0.11	
SO4040	American Government Pol AP	25	25	23	1	4	4.0	35	0.11	
SO4140	European History AP	20	20	23	1	4	4.0	35	0.11	
SO4220	African / American Sem	16	16	23	1	4	4.0	35	0.11	
SO4320	Legal Studies	50	50	23	2	4	8.0	35	0.23	
SO4420 SO4430	Psychology + Honors	99	99	23	5	4	20.0	35	0.57	
SO4500	Social Justice Leadership	52	52	23	3	4	12.0	35	0.34	
SO4600	Global Leadership	24	24	23	1	4	4.0	35	0.11	
SO4720	I/S Mock Trial	6	6	23	1	4	4.0	35	0.11	
SO5030	Philosophy Honors	25	25	23	1	2	2.0	35	0.06	
SO5420	Economics	25	25	23	1	2	2.0	35	0.06	
SO5600	Gender & Society	17	17	23	1	2	2.0	35	0.06	
SO5700 SO5730	Asian / American Studies + Honors	14	14	23	1	4	4.0	35	0.11	
									8.86	
	SOCIAL STUDIES SUBTOTAL	1515	1,515				**8.86**	**/ .85 =**	**10.4**	**Say 11 Social Studies Classrooms**

	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an								
	equivalent year classroom requirement.								

	A		B	C	D	E	F	G	H	
Course	Subject	Current	Projected	Class	Sections	Sessions	Total	Periods	Total	
No.		Students,	Students,	Size		Per Week	Sessions	Per Week	Stations	
		per Subject	per Subject						Required	Comments
	VISUAL ARTS									
VA0101	Art Studio	16	16	20	1	2	2	28	0.07	Semester
VA1001	Drawing I S1	85	85	22	4	2	8	28	0.29	Semester
VA1001	Drawing I S2	22	22	22	1	2	2.0	28	0.07	Semester
VA1201 SC1300	Drawing II S1, Draw for Understanding in Field Science	15	15	20	1	2	2.0	28	0.07	Semester
VA1201	Drawing II S2	16	16	20	1	2	2.0	28	0.07	Semester
VA2001	Painting I S1	31	31	20	2	2	4.0	28	0.14	Semester
VA2001	Painting I S2	11	11	20	1	2	2.0	28	0.07	Semester
VA2101	Painting II S1	4	4	20	1	2	2.0	28	0.07	Semester
VA2101	Painting II S2	4	4	20	1	2	2.0	28	0.07	Semester
VA6100	Drawing for Understanding S1	11	11	25	1	2	2.0	28	0.07	Semester
VA6100	Drawing for Understanding S2	10	10	25	1	2	2.0	28	0.07	Semester
VA9300	Advanced Drawing, Painting	15	15	20	1	4	4.0	28	0.14	Semester
									1.21	
							1.2	**/ .85 =**	**1.4**	
VA3001	Sculpture I S1	11	11	15	1	2	2.0	28	0.07	Semester
VA3001	Sculpture I S2	13	13	15	1	2	2.0	28	0.07	Semester
VA3101	Sculpture II	0	0	23	0	2	0.0	28	0.00	Semester
VA4001 VA4201	Print Making	31	31	18	2	2	4.0	28	0.14	Semester
VA5001	Ceramics I S1	59	59	20	3	2	6.0	28	0.21	Semester
VA5001	Ceramics I S2	59	59	20	3	2	6.0	28	0.21	Semester
VA5101 VA2201 VA5301	Ceramics II S1, III, IV	21	21	22	1	2	2.0	28	0.07	Semester
VA5101 VA5202 VA5301	Ceramics II S2, III, IV	16	16	22	1	2	2.0	28	0.07	Semester
									0.86	
							0.9	**/ .85 =**	**1.0**	
VA6001	Jewelry Making I S1	32	32	16	2	2	4.0	28	0.14	Semester

VA6001	Jewelry Making I S2	16	16	16	1	2	2.0	28	0.07	Semester
VA6101	Jewelry Making II S2	8	8	16	1	2	2.0	28	0.07	Semester
									0.29	
							0.3	**/ .85 =**	**0.3**	
VA7001	Photography I S1 + Digital	70	70	18	4	2	8.0	28	0.29	Semester
VA7001 VA 7210 VA7301	Photography I S2 + Digital	53	53	18	3	2	6.0	28	0.21	Semester
VA7101 VA7210 VA7301	Photography II S1 + Digital	13	13	18	1	2	2.0	28	0.07	Semester
VA7101 VA7301	Photography II S2 + Digital	22	22	18	2	2	4.0	28	0.14	Semester
VA8101 VA8201	Animation I, II	16	16	16	1	2	2.0	28	0.07	Semester
VA8301	3D Animation	15	15	16	1	2	2.0	28	0.07	Semester
VA9000	Portfolio AP	17	17	20	1	4	4.0	28	0.14	Semester
VA9101 VA9201	Digital Design Studio I, II S1	6	6	16	1	2	2.0	28	0.07	Semester
VA9201 VA9321	Digital Design Studio I, II S2	4	4	16	1	2	2.0	28	0.07	Semester
VA9310 VA9320	Digital Video I, II S1	9	9	16	1	2	2.0	28	0.07	Semester
VA9310 VA9320	Digital Video I, II S2	10	10	16	1	2	2.0	28	0.07	Semester
VA9401 VA9411	Comic Books 101, 102	13	13	16	1	2	2.0	28	0.07	Semester
VA9600	Documentary S1	8	8	16	1	2	2.0	28	0.07	Semester
VA9600	Documentary S2	9	9	16	1	2	2.0	28	0.07	Semester
VA9800 VA9900	TV Production 101, 102 S1	8	8	15	1	2	2.0	28	0.07	Semester
VA9800 VA9900	TV Production 101, 102 S2	7	7	15	1	2	2.0	28	0.07	Semester
									1.64	
	VISUAL ARTS SUBTOTAL	786	786				**1.64**	**/ .85 =**	**1.9**	
										Say 5 Art Classrooms
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	WORLD LANGUAGES									
WL0100	Chinese I	28	28	23	2	4	8	28	0.29	
WL0200 WL0230	Chinese II + Honors	45	45	23	2	4	8	28	0.29	
WL0300 WL0330	Chinese III + Honors	44	44	23	2	4	8.0	28	0.29	
WL0400 WL0430	Chinese IV + Honors	32	32	23	2	4	8.0	28	0.29	
WL0500 WL0530 WL0540	Chinese V + Honors + AP	20	20	23	1	4	4.0	28	0.14	
WL0600 WL0530 WL0640	Chinese VI + Honors + AP	4	4	23	1	4	4.0	28	0.14	
									1.43	
							1.4	**/ .85 =**	**1.7**	Chinese
WL1100	French I	33	33	23	2	4	8.0	28	0.29	
WL1220	French II	29	29	23	2	4	8.0	28	0.29	
WL1230	French II Honors	43	43	23	2	4	8.0	28	0.29	
WL1240	French II Advanced	25	25	23	1	4	4.0	28	0.14	
WL1320	French III	27	27	23	2	4	8.0	28	0.29	
WL1330	French III Honors	35	35	23	2	4	8.0	28	0.29	

WL1340	French III Advanced	17	17	23	1	4	4.0	28	0.14	
WL1420 WL1520	French IV Through Film	29	29	23	2	4	8.0	28	0.29	
WL1430	French IV Honors	32	32	23	2	4	8.0	28	0.29	
WL1440	French IV Advanced	20	20	23	1	4	4.0	28	0.14	
WL1530	French V Honors	21	21	23	1	4	4.0	28	0.14	
WL1540	AP French	25	25	23	1	4	4.0	28	0.14	
									2.71	
							2.7	**/ .85 =**	**3.2**	French
WL3100	Latin I	77	77	23	4	4	16.0	28	0.57	
WL3220 WL3330	Latin II + Honors	48	48	23	2	4	8.0	28	0.29	
WL3320 WL3330	Latin III + Honors	38	38	23	2	4	8.0	28	0.29	
WL3420 WL3430 WL3530 WL3540	Latin IV, V, + Honors + AP Latin Vergil	23	23	23	1	4	4.0	28	0.14	
									1.29	
							1.3	**/ .85 =**	**1.5**	Latin
WL4101	Beginner Spanish I	57	57	23	3	4	12.0	28	0.43	
WL4102 WL4130	Beginner Spanish II + Honors	42	42	23	2	4	8.0	28	0.29	
WL4220	Intermediate Spanish II	73	73	23	4	4	16.0	28	0.57	
WL4230	Honors	106	106	23	5	4	20.0	28	0.71	

WL4240	Spanish II Advanced	97	97	23	5	4	20.0	28	0.71	
WL4320	Spanish III	36	36	23	2	4	8.0	28	0.29	
WL4330	Spanish III Honors	86	86	23	4	4	16.0	28	0.57	
WL4340	Spanish III Advanced	87	87	23	4	4	16.0	28	0.57	
WL4420	Spanish IV Through Film	16	16	23	1	4	4.0	28	0.14	
WL4430	Spanish IV Honors	67	67	23	3	4	12.0	28	0.43	
WL4440	Spanish IV Advanced	78	78	23	4	4	16.0	28	0.57	
WL4520	Spanish V Through Film	10	10	23	1	4	4.0	28	0.14	
WL4530	Spanish V Honors	50	50	23	3	4	12.0	28	0.43	
WL4540	AP Spanish V Language & Culture	56	56	23	3	4	12.0	28	0.43	
WL4630	Medical Interpretation & Translation Spanish	7	7	23	1	4	4.0	28	0.14	
									6.43	
							6.4	**/ .85 =**	**7.6**	Spanish
WL5100	Japanese I	30	30	23	2	4	8.0	28	0.29	
WL5200 WL5230	Japanese II + Honors	25	25	23	1	4	4.0	28	0.14	
WL5300 WL5330	Japanese III + Honors	8	8	23	1	4	4.0	28	0.14	
WL5400 WL5430 WL5440	Japanese IV + Honors + AP	16	16	23	1	4	4.0	28	0.14	
									0.71	
							0.7	**/ .85 =**	**0.8**	Japanese

WL6630	Medical Interpretation & Translation Portugese	0	0	23	0	4	0.0	28	0.00	
	WORLD LANGUAGES SUBTOTAL	1642	1,642						12.57	
							12.57	**/ .85 =**	**14.8**	**Say 15 World Languages Classrooms (assumes shared across languages)**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

Basic Educational Space
for Planned Program

WINTHROP HOUSE

1800 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	WINTHROP HOUSE									30 students (off site)
			0	23		4	0	28	0.00	
			0	23		4	0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
	WINTHROP HOUSE SUBTOTAL	0	0						0.00	
							0.00	**/ .85 =**	**0.0**	**Say__ Winthrop House Classrooms**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

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	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	TUTORIAL									
TU1000	BHS Tutorial 9	67	67	23	3	4	12	28	0.43	???
TU1100	METCO Academic Center	8	8	10	?	4	#VALUE!	28	#VALUE!	Dedicated room
TU1209S	African American Sch Sem 9 S1	7	7	23	?	2	#VALUE!	28	#VALUE!	Semester
TU1209S	African American Sch Sem 9 S2	8	8	23	?	2	#VALUE!	28	#VALUE!	Semester
TU1210 S	African American Sch Sem 10 S2	16	16	23		4	0.0	28	0.00	Semester
TU1210S	African American Sch Sem 10 S1	17	17	23		4	0.0	28	0.00	Semester
TU1212S	African American Sch Sem 12	18	18	23		4	0.0	28	0.00	
TU2000	BHS Tutorial 10	93	93	11	?	4	#VALUE!	28	#VALUE!	
	TUTORIAL HOUSE SUBTOTAL	234	234							
							0.00	**/ .85 =**	**0.0**	**Say__ Tutorial Classrooms**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

TUTORIAL

Basic Educational Space
for Planned Program

SUMMARY

1800 STUDENTS
23 target / class size

		Classrooms Required for 1800 Students	Classrooms Required for 2600 Students	Current Classrooms	Comments
Core Academic					
EN	English	14			
WL	World Languages	15			
WL	Language Lab	1			
SO	Social Studies	11			
MA	Math	15			
HF	Wellness	1			needs review
	Classroom total	**57**			
Science					
SC	Physics	5			
SC	Chemistry	5			
SC	Biology	4			
SC	Applied Science	2			
	Science Total	**16**			
	STEM?				
Special Education					
EN, MA, SO, TU	Shared SPED Classrooms	4			
TU	Dedicated Classrooms	8			Learning Centers, Small Group, Special Programs
EL	ELL	2			small classrooms
Performing Arts					
PA	Choir / Choral	1			
PA	Band/Orchestra/Jazz	1			
PA	Piano	1			
PA	Dance	2			
PA	Drama	Aud			

PA	Back Stage	Scene Shop			not driven by curriculum
PA	Black Box	1			not driven by curriculum
PA	White Box	1			not driven by curriculum
School Within a School					
SW	Classrooms	3			2 classrooms if shared
SW	Lounge	1			
Visual Arts					
VA	Art 2D	2			
VA	Art 3D	1			
VA	Photo / Graphics Lab	1			
VA	Jewlery	1			
VA	TV Production	1			
		6			
Business Finance IT Technology					
CE	Business Classroom	2			
CE	Early Childhood	0.5			
CE	Culinary	4			
CE	Wood	0.4			one lab, one classroom
CE	Auto	0.1			
CE	Technical Drawing / Engineering	0.4			
Health and Physical Education		Gym			7 teaching Stations
	Alternate PE	?			
Tutorial					
TU	Small Rooms	?			

Basic Educational Space for Planned Program

Business Finance IT Technology

2100 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	Business Finance & IT Pathways		1.17							
CE1100	Introduction to Business Management S1	24	28	23	2	2	4	28	0.14	Semester
CE1100	Introduction to Business Management S2	39	46	23	2	2	4	28	0.14	Semester
CE1200	World of Money S1	39	46	23	2	2	4	28	0.14	Semester
CE1200	World of Money S2	46	54	23	3	2	6	28	0.21	Semester
CE1400	Psychology of Marketing	21	25	23	1	2	2	28	0.07	Semester
CE1500	Comm for Engineers	0	0	23	0	4	0	28	0.00	
CE4100	Computer Science Engineering S1	35	41	23	2	4	8	28	0.29	
CE4100	Computer Science Engineering S2	17	20	23	1	4	4	28	0.14	
CE4200	CE Computer Programming QVB	17	20	23	1	4	4	28	0.14	
CE4800	Computer Programming Java	8	9	23	1	4	4	28	0.14	
CE4900	Web Site Design	18	21	23	1	4	4	28	0.14	
									1.57	
							1.6	**/ .85 =**	**1.8**	
CE5200	Early Childhood	16	19	23	2	4	8	28	0.29	
CE5500	Medical Careers	18	21	18	1	4	4	28	0.14	
CE5700	Early Childhood Childrens Lit	9	11	23	1	4	4	28	0.14	
									0.57	
CE6100	Culinary CR 1X	65	76	12	7	4	28	28	1.00	
CE6100S	Culinary CR Semester S1	21	25	6	4	2	8	28	0.29	Semester
CE6100S	Culinary CR Semester S2	21	25	6	4	2	8	28	0.29	Semester
CE6400	Reastaurant & Cul Sci/Theory	5	6	12	1	8	8	28	0.29	
FP2000	Italy / China S1	58	68	23	3	2	6	28	0.21	Semester

FP2000	Italy / China S2	54	63	23	3	2	6	28	0.21	Semester
FP3000	American Cuisine S1	47	55	23	3	2	6	28	0.21	Semester
FP3000	American Cuisine S2	24	28	23	2	2	4	28	0.14	Semester
FP4000	Foods of France	23	27	23	2	2	4	28	0.14	Semester
FP5000	International Baking S1	92	108	23	5	2	10	28	0.36	Semester
FP5000	International Baking S2	114	133	23	6	2	12	28	0.43	Semester
FP7000	Vegitarian Cuisine	15	18	23	1	2	2	28	0.07	
	CE SUBTOTAL	846	990						3.64	
							3.64	**/ .85 =**	**4.3**	**Say 4 Culinary Spaces**
TE1001	Creative Woodworking I S1	32	37	16	3	2	6	28	0.21	Semester
TE1001	Creative Woodworking I S2	31	36	16	3	2	6	28	0.21	Semester
TE1002	Creative Woodworking II	8	9	8	1	2	2	28	0.07	Semester
TE1003	Furniture Design & Construction	8	9	8	1	2	2	28	0.07	Semester
									0.6	
TE1101	Auto Tech S1	16	19	16	2	2	4	28	0.14	Semester
TE1102	Auto Tech S2	16	19	16	2	2	4	28	0.14	Semester
									0.3	
TE3200	Technical Drawing	10	12	10	1	2	2	28	0.07	Semester
TE3300	Architectural Design/Drafting CAD	6	7	10	1	2	2	28	0.07	Semester
TE4501	Engineering Future I S1	31	36	15	3	2	6	28	0.21	
TE4501	Engineering Future I S2	24	28	15	2	2	4	28	0.14	
									0.5	
TE4200	Graphic Arts/Copy Center Lab	4	5	5	1	2	2	28	0.07	
	Business Finance & IT Pathways Subtotals									
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

Basic Educational Space
for Planned Program

ENGLISH

2100 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	ENGLISH		1.17							
EN1020	Points of View	130	152	18	9	4	36	28	1.29	
EN1030	Respond'g to Literature	318	372	23	16	4	64	28	2.29	
EN2020 EN2022	World Lit: Living The Questions	47	55	18	3	4	12.0	28	0.43	
EN2030	World Literature Honors, Identity, Culture and Meaning	118	138	23	6	4	24.0	28	0.86	
EN2120 EN2130	Future World Literature + Honors	146	171	18	10	4	40.0	28	1.43	
EN2220 EN2230	Real World Literature + Honors	85	99	23	5	4	20.0	28	0.71	
EN3020 EN3022	American Literature	110	129	23	6	4	24.0	28	0.86	
EN3030	American Literature Honors	243	284	23	13	4	52.0	28	1.86	
EN4020	Stranger in Literature (Land)	17	20	23	1	4	4.0	28	0.14	
EN4030	Stranger in Literature Honors	50	59	23	3	4	12.0	28	0.43	
EN4220 EN4222	Biography and Autobiography	40	47	23	2	4	8.0	28	0.29	
EN4430	English Literature Honors (British?)	50	59	23	3	4	12.0	28	0.43	
EN4530	European Literature	14	16	23	1	4	4.0	28	0.14	
EN4600	Craft of Writing	65	76	23	4	4	16.0	28	0.57	

EN4700	Public Speaking	66	77	23	4	4	16.0	28	0.57	
EN4800	Fiction and Film	46	54	23	3	4	12.0	28	0.43	
EN4900	Communication for Entrepreneurs	30	35	30	2	4	8.0	28	0.29	
IDO100	Journalism I	28	33	23	2	4	8.0	28	0.29	
IDO 130	Journalism Honors	26	30	23	2	4	8.0	28	0.29	
	ENGLISH SUBTOTAL	1629	1,906						13.57	
							13.57	**/ .85 =**	**16.0**	**Say 16 English Classrooms**
									ASSUME 16 ENGLISH CLASSROOMS	
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

Basic Educational Space
for Planned Program

ELL

2100 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	ELL		1.17							
EL1000	ELL I:US Civics and History	6	7	20	1	4	4	28	0.14	
EL1100	ELL I Reading / Writing	6	7	20	1	4	4	28	0.14	
EL1200	ELL I: List/Speaking	6	7	20	1	4	4	28	0.14	
EL2000	ELL II Reading / Writing	14	16	20	1	4	4	28	0.14	
EL2100	ELL II: List/Speaking	14	16	20	1	4	4	28	0.14	
EL3000	ELL III: Composition	21	25	20	2	4	8	28	0.29	
EL3100	ELL III: Literature	20	23	20	2	4	8	28	0.29	
	ELL SUBTOTAL	87	102						1.29	
							1.29	**/ .85 =**	**1.5**	**Say 2 ELL Classrooms**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

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Basic Educational Space
for Planned Program

HEALTH FITNESS

2100 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	HEALTH & FITNESS		1.17							
HF0900 HF1000	Health and Fitness S1	252	295	23	13	4	52	35	1.49	Semester
HF0900 HF1000	Health and Fitness S2	275	322	23	14	4	56	35	1.60	Semester
HF1100	Lifetime Activities S1	96	112	20	5	4	20.0	35	0.57	Semester
HF1100	Lifetime Activities S2	75	88	23	4	4	16.0	35	0.46	Semester
HF2100	Tennis Spec	25	29	23	2	4	8.0	35	0.23	Semester
HF2200	Swim-Aquadics Aero	15	18	15	2	4	8.0	35	0.23	Semester
HF2300	Weight Training / Cardio S1	25	29	25	2	4	8.0	35	0.23	Semester
HF2300	Weight Training / Cardio S2	20	23	25	1	4	4.0	35	0.11	Semester
HF2400	Rock Climbing Advances S1	28	33	15	2	4	8.0	35	0.23	Semester
HF2400	Rock Climbing Advances S2	28	33	15	2	4	8.0	35	0.23	Semester
HF2500	Basketball Spec	11	13	25	1	4	4.0	35	0.11	Semester
HF2600	The Revolution	23	27	25	1	4	4.0	35	0.11	Semester
HF2610	Excel Lifetime S1	0	0	23	0	4	0.0	35	0.00	Semester
HF2610	Excel Lifetime S2	0	0	23	0	4	0.0	35	0.00	Semester
HF2800	Yoga S1	100	117	25	5	4	20.0	35	0.57	Semester
HF2800	Yoga S2	100	117	25	5	4	20.0	35	0.57	Semester
	HEALTH & FITNESS SUBTOTAL	1073	1,255						6.74	
							6.74	**/ .85 =**	**7.9**	**Say 8 Teaching Stations**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

Brookline High School
SMMA No. 14030

7/31/2015

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Basic Educational Space
for Planned Program

MATH

2100 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course	Subject	Current	Projected	Class	Sections	Sessions	Total	Periods	Total	
No.		Students,	Students,	Size		Per Week	Sessions	Per Week	Stations	
		per Subject	per Subject						Required	Comments
	MATH		1.17							
MA1000	Algebra I	19	22	18	2	4	8	28	0.29	
MA1006	Algebra I	12	14	18	1	4	4	28	0.14	
MA1020 MA1022	Geometry	112	131	18	8	4	32.0	28	1.14	
MA1030	Geometry Honors	247	289	23	13	4	52.0	28	1.86	
MA1040	AdvancedGeometry	101	118	23	5	4	20.0	28	0.71	
MA2020 MA 2022	Intro Algebra 2	122	143	18	8	4	32.0	28	1.14	
MA2030	Algebra 2 & Trig Honors	175	205	23	9	4	36.0	28	1.29	
MA2040	Algebra 2 & Advanced	68	80	23	4	4	16.0	28	0.57	
MA3010 MA3012	Algebra Topics & Technology	27	32	23	2	4	8.0	28	0.29	
MA3020	Algebra 2 & Trig	137	160	23	7	4	28.0	28	1.00	
MA3030	PreCalculus Honors	136	159	23	7	4	28.0	28	1.00	
MA3040	PreCalculus Advanced	79	92	23	4	4	16.0	28	0.57	
MA4010	College Algebra Topics	24	28	23	2	4	8.0	28	0.29	
MA4020	PreCalculus	134	157	23	7	4	28.0	28	1.00	
MA4025	Interactive Math Program IV	8	9	23	1	4	4.0	28	0.14	
MA4030	Foundations in Calculus	40	47	23	2	4	8.0	28	0.29	
MA4035	Interactive Math Program IV Honors	6	7	23	1	4	4.0	28	0.14	
MA4040	AP Calculus AB	114	133	23	6	4	24.0	28	0.86	
MA4041	AP Calculus BC	68	80	23	3	4	12.0	28	0.43	
MA4120	Statistics	65	76	23	4	4	16.0	28	0.57	
MA4140	AP Statistics	34	40	23	2	4	8.0	28	0.29	
MA4200	Perspectives of the Math Mind	25	29	23	2	4	8.0	28	0.29	
	MATH SUBTOTAL	1753	2,051						14.29	
							14.29	**/ .85 =**	**16.8**	**Say 17 Math Classrooms**
									ASSUME 17 MATH CLASSROOMS	

	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an								
	equivalent year classroom requirement.								

Basic Educational Space
for Planned Program

PERFORMING ARTS

2100 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course	Subject	Current	Projected	Class	Sections	Sessions	Total	Periods	Total	
No.		Students,	Students,	Size		Per Week	Sessions	Per Week	Stations	
		per Subject	per Subject						Required	Comments
	PERFORMING ARTS		1.17							
PA1000	Concert Choir	40	47	60	1	4	4	28	0.14	
PA1200	Camerata Honors	50	59	50	2	4	8	28	0.29	
PA1500	A-Cappella Choir	26	30	60	1	4	4	28	0.14	
PA2000	Concert Band	65	76	90	1	4	4	28	0.14	
PA2201	Digital Music Production	26	30	15	2	2	4	28	0.14	Semester
PA2201	Digital Music Production	27	32	15	2	2	4	28	0.14	Semester
PA2300	Jazz Band	13	15	23	1	4	4	28	0.14	
PA2350	Jazz / Rock Ensemble	11	13	23	1	2	2	28	0.07	Semester
PA2500	Orchestra	58	68	100	1	4	4	28	0.14	
PA2700	AP Music Theory	22	26	23	1	4	4	28	0.14	
PA2801	Intro to World Music	15	18	23	1	4	4	28	0.14	Semester
PA2900	Piano	14	16	15	1	4	4	28	0.14	Semester
PA2900	Piano	14	16	23	1	4	4	28	0.14	Semester
									1.93	
							1.93	**/ .85 =**	**2.3**	
PA3000	Begin Dance	25	29	23	2	4	8	28	0.29	
PA3100	Intermediate Dance	21	25	23	1	4	4	28	0.14	
PA3200	Advanced Modern/Jazz Dance	25	29	23	2	4	8	28	0.29	
PA3600	Choreography	12	14	23	1	4	4	28	0.14	
PA3700	African Latin Hip Hop Dance	48	56	23	3	4	12	28	0.43	
									1.29	
							1	**/ .85 =**	**1.5**	
PA4000	Drama I	49	57	23	3	4	12	28	0.43	Auditorium
PA4100	Drama II	30	35	23	2	4	8	28	0.29	Auditorium
PA4300	Brookline Educational Theater Co, BETCO	17	20	23	1	4	4	28	0.14	Auditorium
PA4602	Need Improvement	10	12	23	1	4	4	28	0.14	Auditorium
									1.00	

							1	**/ .85 =**	**1.2**	
PA4400	Backstage: Power Tools	14	16	23	1	2	2	28	0.07	Semester
PA4400	Backstage: Power Tools	11	13	23	1	2	2	28	0.07	Semester
PA4501	Drama I-A	15	18	23	1	2	2	28	0.07	Semester
PA4501	Drama I-A	17	20	23	1	2	2	28	0.07	Semester
PA4501	Drama I-A	16	19	23	1	2	2	28	0.07	Semester
									0.36	
							0.36	**/ .85 =**	**0.4**	
	PERFORMING ARTS SUBTOTAL	691	808							**Say 5 Spaces**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

Basic Educational Space
for Planned Program

SCHOOL WITHIN A SCHOOL

2100 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	SCHOOL WITHIN A SCHOOL		1.17							
SW1000	Contemporary Literature Honors	9	11	12	1	2	2	28	0.07	
SW1100	Creative Non-Fiction Honors	14	16	21	1	2	2	28	0.07	
SW1200	Creative Writing Honors	9	11	21	1	2	2	28	0.07	
SW1300	Humanities in Literature Honors	5	6	21	1	2	2	28	0.07	
SW1400	Race & Identity in Lit Honors	12	14	21	1	2	2	28	0.07	
SW1410	Friendship in Literature Honors	11	13	21	1	2	2	28	0.07	
SW1500	Individual & Institutional Lit Honors	10	12	21	1	2	2	28	0.07	
SW1510	Memoir in Literature Honors	5	6	21	1	2	2	28	0.07	
SW1600	Spirit in Literature Honors	12	14	21	1	2	2	28	0.07	
SW1900	Dark Literature Honors	22	26	21	2	2	4	28	0.14	
SW2500	Feminism in Literature Honors	11	13	21	1	2	2	28	0.07	
SW2600	Psychology in Literature Honors	13	15	21	1	2	2	28	0.07	
SW4120 SW4130	SWS World History + Honors	20	23	23	1	4	4	28	0.14	
SW4120 SW4130	SWS US History + Honors	21	25	23	1	4	4	28	0.14	
SW4232	Contemporary World History Honors	15	18	23	1	2	2	28	0.07	
SW4321	Senior Capstone	14	16	23	1	2	2	28	0.07	
SW4331	Educational Seminar Honors	18	21	23	1	2	2	28	0.07	
SW6000	Town Meeting	118	138	130	1	4	4	28		once per week

SC3031	SWS Biology I Honors	0	0	0	0	0	0.0	0	0.00	listed with Science
	SWS SUBTOTAL	206	241						1.43	
							1.43	**/ .85 =**	**1.7**	**Say 2 SWS Classrooms**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

Basic Educational Space
for Planned Program

SPED

2100 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	Special Education		1.17							
EN1050	English I	15	18	20	1	4	4.0	28	0.14	
EN1060	LAHB English	3	4	23	1	4	4.0	28	0.14	
EN2050	English II	6	7	23	1	4	4.0	28	0.14	
EN2160	LAHB English II	7	8	18	1	4	4.0	28	0.14	
EN3050	English III	7	8	23	1	4	4.0	28	0.14	
EN4050	Senior English	20	23	23	1	4	4.0	28	0.14	
MA1050	Geometry I	17	20	23	1	4	4.0	28	0.14	
MA2050	Algebra 1 / Geometry	8	9	23	1	4	4.0	28	0.14	
MA3050	Essential Math for Life I	7	8	23	1	4	4.0	28	0.14	
MA4050	Essential Math for Life II	6	7	23	1	4	4.0	28	0.14	
SO1050	World History I	12	14	23	1	4	4.0	35	0.11	
SO2050	World History II	12	14	23	1	4	4.0	35	0.11	
TU2109	Comprehensive Learning Center	22	26	7	4	4	16	28	0.57	
TU2200	Learning Support	9	11	6	2	4	8	28	0.29	
TU2300	Learning Center OFC		0				0	28	0.00	
TU2309	LAHB Learing Center	10	12	15	2	4	8	28	0.29	
TU3000	Study Skills & Tutorial	15	18	4	5	4	20	28	0.71	
EN 8301 EN8304	Functional English I - IV	9	11	23	1	4	4.0	28	0.14	
MA8201 MA8204	Functional Math 1 - 4	5	6	23	1	4	4.0	28	0.14	
SO8501 SO8502	Functional Social Studies I, II, III & IV	8	9	23	1	4	4.0	35	0.11	
									3.91	
							4	**/ .85 =**	**4.6**	Say 5 SPED shared classrooms

	Dedicated Classrooms									
TU2009	Learning Center 9	35	41	7	6	4	24	28	0.86	
TU2010	Learning Center 10	30	35	7	5	4	20	28	0.71	
TU2011	Learning Center 11	32	37	7	6	4	24	28	0.86	
TU2012	Learning Center 12	34	40	7	6	4	24	28	0.86	
TU2909	Small Group Learning Center 9	7	8	10	1	4	4	28	0.14	
TU2910	Small Group Learn'g Center 10	3	4	10	1	4	4	28	0.14	
TU2911	Small Group Learn'g Center 11	4	5	10	1	4	4	28	0.14	
TU2912	Small Group Learn'g Center 12	6	7	10	1	4	4	28	0.14	
TU4000	RISE Tutorial	8	9	12	2	4	8	28	0.29	
TU4001	CBC Tutorial	4	5	7	2	2	4	28	0.14	
									4.29	**8 Dedicated prgram classrooms**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	SCIENCE		1.17							
	Physics									
SC1020 SC1022 SC1026	Physics I	139	163	18	9	4	36	28	1.29	
SC1030	Physics I Honors	330	386	23	17	4	68	28	2.43	
SC4140	AP Physics 1&2	24	28	23	2	4	8.0	28	0.29	
SC4141	AP Physics C	45	53	23	3	4	12.0	28	0.43	
									4.43	
							4.43	**/ .85 =**	**5.2**	Say 5 Physics
SC1300	Draw for Understanding in Field Science	0	0	23	0	4	0.0	28	0.00	see unified arts
	Chemistry									
SC2020 SC2022	Chemistry I	130	152	18	9	4	36.0	28	1.29	
SC2030	Chemistry I Honors	174	204	23	9	4	36.0	28	1.29	
SC2035	Chem I (LBC) Honors	114	133	23	6	4	24.0	28	0.86	
SC2100	SWS Chem I Honors	18	21	23	1	4	4.0	28	0.14	
SC4240	AP Chemistry	94	110	23	5	4	20.0	28	0.71	
SC6200	Chemistry I ELL	15	18	23	1	2	2.0	28	0.07	
SC5820 SC5830	Forensic Science S1	24	28	23	2	2	4.0	28	0.14	Semester
SC5820 SC5830	Forensic Science S2	32	37	23	2	2	2.0	28	0.07	Semester
									4.57	
							4.57	**/ .85 =**	**5.4**	Say 5 Chemistry
	Biology									
SC3020 SC3022	Biology I	71	83	18	5	4	20.0	28	0.71	

SC3025	Biology I BSCS	0	0	23	0	4	0.0	28	0.00	
SC3027	SWS Biology BSCS	0	0	23	0	4	0.0	28	0.00	
SC3030	Biology I Honors	186	218	23	10	4	40.0	28	1.43	
SC3031	SWS Biology IH	24	28	23	2	4	8.0	28	0.29	SWS
SC3035	Biology BSCS H	94	110	23	5	4	20.0	28	0.71	SWS
SC4320	Anatomy / Physiology	13	15	23	1	4	4.0	28	0.14	
SC4330	Anatomy / Physiology Honors	35	41	23	2	4	8.0	28	0.29	
SC4430	Biology II Honors	24	28	23	2	4	8.0	28	0.29	
SC4440	AP Biology	71	83	23	4	4	16.0	28	0.57	
SC5620	Marine Biology	8	9	23	1		0.0	28	0.00	
SC5630	Marine Biology Honors	16	19	23	1		0.0	28	0.00	
SC5920	Genetics	17	20	23	1	2	2.0	28	0.07	Semester
									4.50	
							4.50	**/ .85 =**	**5.3**	Say 4 Biology
	Applied Science									
SC1050	Applied Science I	13	15	23	1	4	4.0	28	0.14	
SC3035	Applied Science III	8	9	23	1	4	4.0	28	0.14	
SC8401 SC8404	Functional Science I thru IV	4	5	23	1	4	4.0	28	0.14	
SC4540	AP Environmental Science	24	28	23	2	4	8.0	28	0.29	
SC5130	Body / Mind Honors	24	28	23	2	4	8.0	28	0.29	
SC5530	Engineering by Design Honors	60	70	20	4	4	16.0	28	0.57	
									1.57	
	SCIENCE SUBTOTAL	1831	2,142				**1.57**	**/ .85 =**	**1.8**	Say 2 Applied Science
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

Basic Educational Space
for Planned Program

SOCIAL STUDIES

2100 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	SOCIAL STUDIES		1.17							
SO1020 SO1022	World History 9	121	142	18	8	4	32	35	0.91	
SO1030	World History 9 Honors	340	398	23	18	4	72	35	2.06	
SO1400	US History ELL II	14	16	23	1	4	4.0	35	0.11	
SO2020 SO2022	World History S	98	115	18	7	4	28.0	35	0.80	
SO2030	World History Honors	297	347	23	15	4	60.0	35	1.71	
SO3020 SO3022	US History S	88	103	23	5	4	20.0	35	0.57	
SO3030	US History Honors	186	218	23	10	4	40.0	35	1.14	
SO3040	US History AP	100	117	23	5	4	20.0	35	0.57	
SO 3300	US History 2 ELL III	19	22	23	1	4	4.0	35	0.11	
SO4040	American Government Pol AP	25	29	23	2	4	8.0	35	0.23	
SO4140	European History AP	20	23	23	1	4	4.0	35	0.11	
SO4220	African / American Sem	16	19	23	1	4	4.0	35	0.11	
SO4320	Legal Studies	50	59	23	3	4	12.0	35	0.34	
SO4420 SO4430	Psychology + Honors	99	116	23	5	4	20.0	35	0.57	
SO4500	Social Justice Leadership	52	61	23	3	4	12.0	35	0.34	
SO4600	Global Leadership	24	28	23	2	4	8.0	35	0.23	
SO4720	I/S Mock Trial	6	7	23	1	4	4.0	35	0.11	
SO5030	Philosophy Honors	25	29	23	2	2	4.0	35	0.11	
SO5420	Economics	25	29	23	2	2	4.0	35	0.11	
SO5600	Gender & Society	17	20	23	1	2	2.0	35	0.06	
SO5700 SO5730	Asian / American Studies + Honors	14	16	23	1	4	4.0	35	0.11	
									10.46	
	SOCIAL STUDIES SUBTOTAL	1515	1,773				**10.46**	**/ .85 =**	**12.3**	**Say 12 Social Studies Classrooms**

	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an								
	equivalent year classroom requirement.								

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	VISUAL ARTS		1.17							
VA0101	Art Studio	16	19	20	1	2	2	28	0.07	Semester
VA1001	Drawing I S1	85	99	22	4	2	8	28	0.29	Semester
VA1001	Drawing I S2	22	26	22	2	2	4.0	28	0.14	Semester
VA1201 SC1300	Drawing II S1, Draw for Understanding in Field Science	15	18	20	1	2	2.0	28	0.07	Semester
VA1201	Drawing II S2	16	19	20	1	2	2.0	28	0.07	Semester
VA2001	Painting I S1	31	36	20	2	2	4.0	28	0.14	Semester
VA2001	Painting I S2	11	13	20	1	2	2.0	28	0.07	Semester
VA2101	Painting II S1	4	5	20	1	2	2.0	28	0.07	Semester
VA2101	Painting II S2	4	5	20	1	2	2.0	28	0.07	Semester
VA6100	Drawing for Understanding S1	11	13	25	1	2	2.0	28	0.07	Semester
VA6100	Drawing for Understanding S2	10	12	25	1	2	2.0	28	0.07	Semester
VA9300	Advanced Drawing, Painting	15	18	20	1	4	4.0	28	0.14	Semester
									1.29	
							1.3	**/ .85 =**	**1.5**	
VA3001	Sculpture I S1	11	13	15	1	2	2.0	28	0.07	Semester
VA3001	Sculpture I S2	13	15	15	1	2	2.0	28	0.07	Semester
VA3101	Sculpture II	0	0	23	0	2	0.0	28	0.00	Semester
VA4001 VA4201	Print Making	31	36	18	2	2	4.0	28	0.14	Semester
VA5001	Ceramics I S1	59	69	20	3	2	6.0	28	0.21	Semester
VA5001	Ceramics I S2	59	69	20	3	2	6.0	28	0.21	Semester
VA5101 VA2201 VA5301	Ceramics II S1, III, IV	21	25	22	2	2	4.0	28	0.14	Semester
VA5101 VA5202 VA5301	Ceramics II S2, III, IV	16	19	22	1	2	2.0	28	0.07	Semester
									0.93	
							0.9	**/ .85 =**	**1.1**	
VA6001	Jewelry Making I S1	32	37	16	3	2	6.0	28	0.21	Semester

VA6001	Jewelry Making I S2	16	19	16	2	2	4.0	28	0.14	Semester
VA6101	Jewelry Making II S2	8	9	16	1	2	2.0	28	0.07	Semester
									0.43	
							0.4	**/ .85 =**	**0.5**	
VA7001	Photography I S1 + Digital	70	82	18	5	2	10.0	28	0.36	Semester
VA7001 VA 7210 VA7301	Photography I S2 + Digital	53	62	18	4	2	8.0	28	0.29	Semester
VA7101 VA7210 VA7301	Photography II S1 + Digital	13	15	18	1	2	2.0	28	0.07	Semester
VA7101 VA7301	Photography II S2 + Digital	22	26	18	2	2	4.0	28	0.14	Semester
VA8101 VA8201	Animation I, II	16	19	16	2	2	4.0	28	0.14	Semester
VA8301	3D Animation	15	18	16	2	2	4.0	28	0.14	Semester
VA9000	Portfolio AP	17	20	20	1	4	4.0	28	0.14	Semester
VA9101 VA9201	Digital Design Studio I, II S1	6	7	16	1	2	2.0	28	0.07	Semester
VA9201 VA9321	Digital Design Studio I, II S2	4	5	16	1	2	2.0	28	0.07	Semester
VA9310 VA9320	Digital Video I, II S1	9	11	16	1	2	2.0	28	0.07	Semester
VA9310 VA9320	Digital Video I, II S2	10	12	16	1	2	2.0	28	0.07	Semester
VA9401 VA9411	Comic Books 101, 102	13	15	16	1	2	2.0	28	0.07	Semester
VA9600	Documentary S1	8	9	16	1	2	2.0	28	0.07	Semester
VA9600	Documentary S2	9	11	16	1	2	2.0	28	0.07	Semester
VA9800 VA9900	TV Production 101, 102 S1	8	9	15	1	2	2.0	28	0.07	Semester
VA9800 VA9900	TV Production 101, 102 S2	7	8	15	1	2	2.0	28	0.07	Semester
									1.93	
	VISUAL ARTS SUBTOTAL	786	920				**1.93**	**/ .85 =**	**2.3**	
										Say 5 Art Classrooms
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	WORLD LANGUAGES		1.17							
WL0100	Chinese I	28	33	23	2	4	8	28	0.29	
WL0200 WL0230	Chinese II + Honors	45	53	23	3	4	12	28	0.43	
WL0300 WL0330	Chinese III + Honors	44	51	23	3	4	12.0	28	0.43	
WL0400 WL0430	Chinese IV + Honors	32	37	23	2	4	8.0	28	0.29	
WL0500 WL0530 WL0540	Chinese V + Honors + AP	20	23	23	1	4	4.0	28	0.14	
WL0600 WL0530 WL0640	Chinese VI + Honors + AP	4	5	23	1	4	4.0	28	0.14	
									1.71	
							1.7	**/ .85 =**	**2.0**	Chinese
WL1100	French I	33	39	23	2	4	8.0	28	0.29	
WL1220	French II	29	34	23	2	4	8.0	28	0.29	
WL1230	French II Honors	43	50	23	3	4	12.0	28	0.43	
WL1240	French II Advanced	25	29	23	2	4	8.0	28	0.29	
WL1320	French III	27	32	23	2	4	8.0	28	0.29	
WL1330	French III Honors	35	41	23	2	4	8.0	28	0.29	

WL1340	French III Advanced	17	20	23	1	4	4.0	28	0.14	
WL1420 WL1520	French IV Through Film	29	34	23	2	4	8.0	28	0.29	
WL1430	French IV Honors	32	37	23	2	4	8.0	28	0.29	
WL1440	French IV Advanced	20	23	23	1	4	4.0	28	0.14	
WL1530	French V Honors	21	25	23	2	4	8.0	28	0.29	
WL1540	AP French	25	29	23	2	4	8.0	28	0.29	
									3.29	
							3.3	**/ .85 =**	**3.9**	French
WL3100	Latin I	77	90	23	4	4	16.0	28	0.57	
WL3220 WL3330	Latin II + Honors	48	56	23	3	4	12.0	28	0.43	
WL3320 WL3330	Latin III + Honors	38	44	23	2	4	8.0	28	0.29	
WL3420 WL3430 WL3530 WL3540	Latin IV, V, + Honors + AP Latin Vergil	23	27	23	2	4	8.0	28	0.29	
									1.57	
							1.6	**/ .85 =**	**1.8**	Latin
WL4101	Beginner Spanish I	57	67	23	3	4	12.0	28	0.43	
WL4102 WL4130	Beginner Spanish II + Honors	42	49	23	3	4	12.0	28	0.43	
WL4220	Intermediate Spanish II	73	85	23	4	4	16.0	28	0.57	
WL4230	Intermediate Spanish II Honors	106	124	23	6	4	24.0	28	0.86	

WL4240	Spanish II Advanced	97	113	23	5	4	20.0	28	0.71	
WL4320	Spanish III	36	42	23	2	4	8.0	28	0.29	
WL4330	Spanish III Honors	86	101	23	5	4	20.0	28	0.71	
WL4340	Spanish III Advanced	87	102	23	5	4	20.0	28	0.71	
WL4420	Spanish IV Through Film	16	19	23	1	4	4.0	28	0.14	
WL4430	Spanish IV Honors	67	78	23	4	4	16.0	28	0.57	
WL4440	Spanish IV Advanced	78	91	23	4	4	16.0	28	0.57	
WL4520	Spanish V Through Film	10	12	23	1	4	4.0	28	0.14	
WL4530	Spanish V Honors	50	59	23	3	4	12.0	28	0.43	
WL4540	AP Spanish V Language & Culture	56	66	23	3	4	12.0	28	0.43	
WL4630	Medical Interpretation & Translation Spanish	7	8	23	1	4	4.0	28	0.14	
									7.14	
							7.1	**/ .85 =**	**8.4**	Spanish
WL5100	Japanese I	30	35	23	2	4	8.0	28	0.29	
WL5200 WL5230	Japanese II + Honors	25	29	23	2	4	8.0	28	0.29	
WL5300 WL5330	Japanese III + Honors	8	9	23	1	4	4.0	28	0.14	
WL5400 WL5430 WL5440	Japanese IV + Honors + AP	16	19	23	1	4	4.0	28	0.14	
									0.86	
							0.9	**/ .85 =**	**1.0**	Japanese

WL6630	Medical Interpretation & Translation Portugese	0	0	23	0	4	0.0	28	0.00	
	WORLD LANGUAGES SUBTOTAL	1642	1,921						14.57	
							14.57	**/ .85 =**	**17.1**	**Say 17 World Languages Classrooms (assumes shared across languages)**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

Basic Educational Space
for Planned Program

WINTHROP HOUSE

1800 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	WINTHROP HOUSE									30 students (off site)
			0	23		4	0	28	0.00	
			0	23		4	0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
	WINTHROP HOUSE SUBTOTAL	0	0						0.00	
							0.00	**/ .85 =**	**0.0**	**Say__ Winthrop House Classrooms**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

Brookline High School
SMMA No. 14030

7/31/2015

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	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	TUTORIAL		1.17							
TU1000	BHS Tutorial 9	67	78	23	4	4	16	28	0.57	???
TU1100	METCO Academic Center	8	9	10	1	4	4	28	0.14	Dedicated room
TU1209S	African American Sch Sem 9 S1	7	8	23	1	2	2.0	28	0.07	Semester
TU1209S	African American Sch Sem 9 S2	8	9	23	1	2	2.0	28	0.07	Semester
TU1210 S	African American Sch Sem 10 S2	16	19	23	1	4	4.0	28	0.14	Semester
TU1210S	African American Sch Sem 10 S1	17	20	23	1	4	4.0	28	0.14	Semester
TU1212S	African American Sch Sem 12	18	21	23	1	4	4.0	28	0.14	
TU2000	BHS Tutorial 10	93	109	11	10	4	40.0	28	1.43	
									2.71	
	TUTORIAL HOUSE SUBTOTAL	234	274							
							2.71	**/ .85 =**	**3.2**	**Say3 Tutorial Classrooms**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

TUTORIAL

Basic Educational Space
for Planned Program

SUMMARY

1800 STUDENTS
23 target / class size

		Classrooms Required for 1800 Students	Classrooms Required for 2600 Students	Current Classrooms	Comments
Core Academic					
EN	English	14			
WL	World Languages	15			
WL	Language Lab	1			
SO	Social Studies	11			
MA	Math	15			
HF	Wellness	1			needs review
	Classroom total	**57**			
Science					
SC	Physics	5			
SC	Chemistry	5			
SC	Biology	4			
SC	Applied Science	2			
	Science Total	**16**			
	STEM?				
Special Education					
EN, MA, SO, TU	Shared SPED Classrooms	4			
TU	Dedicated Classrooms	8			Learning Centers, Small Group, Special Programs
EL	ELL	2			small classrooms
Performing Arts					
PA	Choir / Choral	1			
PA	Band/Orchestra/Jazz	1			
PA	Piano	1			
PA	Dance	2			
PA	Drama	Aud			

PA	Back Stage	Scene Shop			not driven by curriculum
PA	Black Box	1			not driven by curriculum
PA	White Box	1			not driven by curriculum
School Within a School					
SW	Classrooms	3			2 classrooms if shared
SW	Lounge	1			
Visual Arts					
VA	Art 2D	2			
VA	Art 3D	1			
VA	Photo / Graphics Lab	1			
VA	Jewlery	1			
VA	TV Production	1			
		6			
Business Finance IT Technology					
CE	Business Classroom	2			
CE	Early Childhood	0.5			
CE	Culinary	4			
CE	Wood	0.4			one lab, one classroom
CE	Auto	0.1			
CE	Technical Drawing / Engineering	0.4			
Health and Physical Education		Gym			7 teaching Stations
	Alternate PE	?			
Tutorial					
TU	Small Rooms	?			

Basic Educational Space for Planned Program

Business Finance IT Technology

2300 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	Business Finance & IT Pathways		1.28							
CE1100	Introduction to Business Management S1	24	31	23	2	2	4	28	0.14	Semester
CE1100	Introduction to Business Management S2	39	50	23	3	2	6	28	0.21	Semester
CE1200	World of Money S1	39	50	23	3	2	6	28	0.21	Semester
CE1200	World of Money S2	46	59	23	3	2	6	28	0.21	Semester
CE1400	Psychology of Marketing	21	27	23	2	2	4	28	0.14	Semester
CE1500	Comm for Engineers	0	0	23	0	4	0	28	0.00	
CE4100	Computer Science Engineering S1	35	45	23	2	4	8	28	0.29	
CE4100	Computer Science Engineering S2	17	22	23	1	4	4	28	0.14	
CE4200	CE Computer Programming QVB	17	22	23	1	4	4	28	0.14	
CE4800	Computer Programming Java	8	10	23	1	4	4	28	0.14	
CE4900	Web Site Design	18	23	23	1	4	4	28	0.14	
									1.79	
							1.8	**/ .85 =**	**2.1**	
CE5200	Early Childhood	16	20	23	2	4	8	28	0.29	
CE5500	Medical Careers	18	23	18	1	4	4	28	0.14	
CE5700	Early Childhood Childrens Lit	9	12	23	1	4	4	28	0.14	
									0.57	
CE6100	Culinary CR 1X	65	83	12	7	4	28	28	1.00	
CE6100S	Culinary CR Semester S1	21	27	6	5	2	10	28	0.36	Semester
CE6100S	Culinary CR Semester S2	21	27	6	5	2	10	28	0.36	Semester
CE6400	Reastaurant & Cul Sci/Theory	5	6	12	1	8	8	28	0.29	
FP2000	Italy / China S1	58	74	23	4	2	8	28	0.29	Semester

FP2000	Italy / China S2	54	69	23	3	2	6	28	0.21	Semester
FP3000	American Cuisine S1	47	60	23	3	2	6	28	0.21	Semester
FP3000	American Cuisine S2	24	31	23	2	2	4	28	0.14	Semester
FP4000	Foods of France	23	29	23	2	2	4	28	0.14	Semester
FP5000	International Baking S1	92	118	23	5	2	10	28	0.36	Semester
FP5000	International Baking S2	114	146	23	7	2	14	28	0.50	Semester
FP7000	Vegitarian Cuisine	15	19	23	1	2	2	28	0.07	
	CE SUBTOTAL	846	1,083						3.93	
							3.93	**/ .85 =**	**4.6**	**Say 5 Culinary Spaces**
TE1001	Creative Woodworking I S1	32	41	16	3	2	6	28	0.21	Semester
TE1001	Creative Woodworking I S2	31	40	16	3	2	6	28	0.21	Semester
TE1002	Creative Woodworking II	8	10	8	1	2	2	28	0.07	Semester
TE1003	Furniture Design & Construction	8	10	8	1	2	2	28	0.07	Semester
									0.6	
TE1101	Auto Tech S1	16	20	16	2	2	4	28	0.14	Semester
TE1102	Auto Tech S2	16	20	16	2	2	4	28	0.14	Semester
									0.3	
TE3200	Technical Drawing	10	13	10	1	2	2	28	0.07	Semester
TE3300	Architectural Design/Drafting CAD	6	8	10	1	2	2	28	0.07	Semester
TE4501	Engineering Future I S1	31	40	15	3	2	6	28	0.21	
TE4501	Engineering Future I S2	24	31	15	2	2	4	28	0.14	
									0.5	
TE4200	Graphic Arts/Copy Center Lab	4	5	5	1	2	2	28	0.07	
	Business Finance & IT Pathways Subtotals									
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

Basic Educational Space
for Planned Program

ENGLISH

2300 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	ENGLISH		1.28							
EN1020	Points of View	130	166	18	10	4	40	28	1.43	
EN1030	Respond'g to Literature	318	407	23	18	4	72	28	2.57	
EN2020 EN2022	World Lit: Living The Questions	47	60	18	4	4	16.0	28	0.57	
EN2030	World Literature Honors, Identity, Culture and Meaning	118	151	23	7	4	28.0	28	1.00	
EN2120 EN2130	Future World Literature + Honors	146	187	18	11	4	44.0	28	1.57	
EN2220 EN2230	Real World Literature + Honors	85	109	23	5	4	20.0	28	0.71	
EN3020 EN3022	American Literature	110	141	23	6	4	24.0	28	0.86	
EN3030	American Literature Honors	243	311	23	14	4	56.0	28	2.00	
EN4020	Stranger in Literature (Land)	17	22	23	1	4	4.0	28	0.14	
EN4030	Stranger in Literature Honors	50	64	23	3	4	12.0	28	0.43	
EN4220 EN4222	Biography and Autobiography	40	51	23	3	4	12.0	28	0.43	
EN4430	English Literature Honors (British?)	50	64	23	3	4	12.0	28	0.43	
EN4530	European Literature	14	18	23	1	4	4.0	28	0.14	
EN4600	Craft of Writing	65	83	23	4	4	16.0	28	0.57	

EN4700	Public Speaking	66	84	23	4	4	16.0	28	0.57	
EN4800	Fiction and Film	46	59	23	3	4	12.0	28	0.43	
EN4900	Communication for Entrepreneurs	30	38	30	2	4	8.0	28	0.29	
IDO100	Journalism I	28	36	23	2	4	8.0	28	0.29	
IDO 130	Journalism Honors	26	33	23	2	4	8.0	28	0.29	
	ENGLISH SUBTOTAL	1629	2,085						14.71	
							14.71	**/ .85 =**	**17.3**	**Say 18 English Classrooms**
									ASSUME 18 ENGLISH CLASSROOMS	
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

Basic Educational Space
for Planned Program

ELL

2300 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	ELL		1.28							
EL1000	ELL I:US Civics and History	6	8	20	1	4	4	28	0.14	
EL1100	ELL I Reading / Writing	6	8	20	1	4	4	28	0.14	
EL1200	ELL I: List/Speaking	6	8	20	1	4	4	28	0.14	
EL2000	ELL II Reading / Writing	14	18	20	1	4	4	28	0.14	
EL2100	ELL II: List/Speaking	14	18	20	1	4	4	28	0.14	
EL3000	ELL III: Composition	21	27	20	2	4	8	28	0.29	
EL3100	ELL III: Literature	20	26	20	2	4	8	28	0.29	
	ELL SUBTOTAL	87	111						1.29	
							1.29	**/ .85 =**	**1.5**	**Say 2 ELL Classrooms**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

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Basic Educational Space
for Planned Program

HEALTH FITNESS

2300 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	HEALTH & FITNESS		1.28							
HF0900 HF1000	Health and Fitness S1	252	323	23	14	4	56	35	1.60	Semester
HF0900 HF1000	Health and Fitness S2	275	352	23	15	4	60	35	1.71	Semester
HF1100	Lifetime Activities S1	96	123	20	6	4	24.0	35	0.69	Semester
HF1100	Lifetime Activities S2	75	96	23	5	4	20.0	35	0.57	Semester
HF2100	Tennis Spec	25	32	23	2	4	8.0	35	0.23	Semester
HF2200	Swim-Aquadics Aero	15	19	15	2	4	8.0	35	0.23	Semester
HF2300	Weight Training / Cardio S1	25	32	25	2	4	8.0	35	0.23	Semester
HF2300	Weight Training / Cardio S2	20	26	25	1	4	4.0	35	0.11	Semester
HF2400	Rock Climbing Advances S1	28	36	15	3	4	12.0	35	0.34	Semester
HF2400	Rock Climbing Advances S2	28	36	15	3	4	12.0	35	0.34	Semester
HF2500	Basketball Spec	11	14	25	1	4	4.0	35	0.11	Semester
HF2600	The Revolution	23	29	25	1	4	4.0	35	0.11	Semester
HF2610	Excel Lifetime S1	0	0	23	0	4	0.0	35	0.00	Semester
HF2610	Excel Lifetime S2	0	0	23	0	4	0.0	35	0.00	Semester
HF2800	Yoga S1	100	128	25	5	4	20.0	35	0.57	Semester
HF2800	Yoga S2	100	128	25	5	4	20.0	35	0.57	Semester
	HEALTH & FITNESS SUBTOTAL	1073	1,373						7.43	
							7.43	**/ .85 =**	**8.7**	**Say 9 Teaching Stations**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

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Basic Educational Space
for Planned Program

MATH

2300 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course	Subject	Current	Projected	Class	Sections	Sessions	Total	Periods	Total	
No.		Students,	Students,	Size		Per Week	Sessions	Per Week	Stations	
		per Subject	per Subject						Required	Comments
	MATH		1.28							
MA1000	Algebra I	19	24	18	2	4	8	28	0.29	
MA1006	Algebra I	12	15	18	1	4	4	28	0.14	
MA1020 MA1022	Geometry	112	143	18	8	4	32.0	28	1.14	
MA1030	Geometry Honors	247	316	23	14	4	56.0	28	2.00	
MA1040	AdvancedGeometry	101	129	23	6	4	24.0	28	0.86	
MA2020 MA 2022	Intro Algebra 2	122	156	18	9	4	36.0	28	1.29	
MA2030	Algebra 2 & Trig Honors	175	224	23	10	4	40.0	28	1.43	
MA2040	Algebra 2 & Advanced	68	87	23	4	4	16.0	28	0.57	
MA3010 MA3012	Algebra Topics & Technology	27	35	23	2	4	8.0	28	0.29	
MA3020	Algebra 2 & Trig	137	175	23	8	4	32.0	28	1.14	
MA3030	PreCalculus Honors	136	174	23	8	4	32.0	28	1.14	
MA3040	PreCalculus Advanced	79	101	23	5	4	20.0	28	0.71	
MA4010	College Algebra Topics	24	31	23	2	4	8.0	28	0.29	
MA4020	PreCalculus	134	172	23	8	4	32.0	28	1.14	
MA4025	Interactive Math Program IV	8	10	23	1	4	4.0	28	0.14	
MA4030	Foundations in Calculus	40	51	23	3	4	12.0	28	0.43	
MA4035	Interactive Math Program IV Honors	6	8	23	1	4	4.0	28	0.14	
MA4040	AP Calculus AB	114	146	23	7	4	28.0	28	1.00	
MA4041	AP Calculus BC	68	87	23	4	4	16.0	28	0.57	
MA4120	Statistics	65	83	23	4	4	16.0	28	0.57	
MA4140	AP Statistics	34	44	23	2	4	8.0	28	0.29	
MA4200	Perspectives of the Math Mind	25	32	23	2	4	8.0	28	0.29	
	MATH SUBTOTAL	1753	2,244						15.86	
							15.86	**/ .85 =**	**18.7**	**Say 19 Math Classrooms**
									ASSUME 19 MATH CLASSROOMS	

	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an								
	equivalent year classroom requirement.								

Basic Educational Space for Planned Program

PERFORMING ARTS

2300 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	PERFORMING ARTS		1.28							
PA1000	Concert Choir	40	51	60	1	4	4	28	0.14	
PA1200	Camerata Honors	50	64	50	2	4	8	28	0.29	
PA1500	A-Cappella Choir	26	33	60	1	4	4	28	0.14	
PA2000	Concert Band	65	83	90	1	4	4	28	0.14	
PA2201	Digital Music Production	26	33	15	2	2	4	28	0.14	Semester
PA2201	Digital Music Production	27	35	15	3	2	6	28	0.21	Semester
PA2300	Jazz Band	13	17	23	1	4	4	28	0.14	
PA2350	Jazz / Rock Ensemble	11	14	23	1	2	2	28	0.07	Semester
PA2500	Orchestra	58	74	100	1	4	4	28	0.14	
PA2700	AP Music Theory	22	28	23	2	4	8	28	0.29	
PA2801	Intro to World Music	15	19	23	1	4	4	28	0.14	Semester
PA2900	Piano	14	18	15	2	4	8	28	0.29	Semester
PA2900	Piano	14	18	23	1	4	4	28	0.14	Semester
									2.29	
							2.29	**/ .85 =**	**2.7**	
PA3000	Begin Dance	25	32	23	2	4	8	28	0.29	
PA3100	Intermediate Dance	21	27	23	2	4	8	28	0.29	
PA3200	Advanced Modern/Jazz Dance	25	32	23	2	4	8	28	0.29	
PA3600	Choreography	12	15	23	1	4	4	28	0.14	
PA3700	African Latin Hip Hop Dance	48	61	23	3	4	12	28	0.43	
									1.43	
							1	**/ .85 =**	**1.7**	
PA4000	Drama I	49	63	23	3	4	12	28	0.43	Auditorium
PA4100	Drama II	30	38	23	2	4	8	28	0.29	Auditorium
PA4300	Brookline Educational Theater Co, BETCO	17	22	23	1	4	4	28	0.14	Auditorium
PA4602	Need Improvement	10	13	23	1	4	4	28	0.14	Auditorium
									1.00	

							1	**/ .85 =**	**1.2**	
PA4400	Backstage: Power Tools	14	18	23	1	2	2	28	0.07	Semester
PA4400	Backstage: Power Tools	11	14	23	1	2	2	28	0.07	Semester
PA4501	Drama I-A	15	19	23	1	2	2	28	0.07	Semester
PA4501	Drama I-A	17	22	23	1	2	2	28	0.07	Semester
PA4501	Drama I-A	16	20	23	1	2	2	28	0.07	Semester
									0.36	
							0.36	**/ .85 =**	**0.4**	
	PERFORMING ARTS SUBTOTAL	691	884							**Say 5 Spaces**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

Basic Educational Space
for Planned Program

SCHOOL WITHIN A SCHOOL

2300 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	SCHOOL WITHIN A SCHOOL		1.28							
SW1000	Contemporary Literature Honors	9	12	12	1	2	2	28	0.07	
SW1100	Creative Non-Fiction Honors	14	18	21	1	2	2	28	0.07	
SW1200	Creative Writing Honors	9	12	21	1	2	2	28	0.07	
SW1300	Humanities in Literature Honors	5	6	21	1	2	2	28	0.07	
SW1400	Race & Identity in Lit Honors	12	15	21	1	2	2	28	0.07	
SW1410	Friendship in Literature Honors	11	14	21	1	2	2	28	0.07	
SW1500	Individual & Institutional Lit Honors	10	13	21	1	2	2	28	0.07	
SW1510	Memoir in Literature Honors	5	6	21	1	2	2	28	0.07	
SW1600	Spirit in Literature Honors	12	15	21	1	2	2	28	0.07	
SW1900	Dark Literature Honors	22	28	21	2	2	4	28	0.14	
SW2500	Feminism in Literature Honors	11	14	21	1	2	2	28	0.07	
SW2600	Psychology in Literature Honors	13	17	21	1	2	2	28	0.07	
SW4120 SW4130	SWS World History + Honors	20	26	23	2	4	8	28	0.29	
SW4120 SW4130	SWS US History + Honors	21	27	23	2	4	8	28	0.29	
SW4232	Contemporary World History Honors	15	19	23	1	2	2	28	0.07	
SW4321	Senior Capstone	14	18	23	1	2	2	28	0.07	
SW4331	Educational Seminar Honors	18	23	23	1	2	2	28	0.07	
SW6000	Town Meeting	118	151	130	1	4	4	28		once per week

SC3031	SWS Biology I Honors	0	0	0	0	0	0.0	0	0.00	listed with Science
	SWS SUBTOTAL	206	264						1.71	
							1.71	**/ .85 =**	**2.0**	**Say 2 SWS Classrooms**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

Basic Educational Space
for Planned Program

SPED

2300 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	Special Education		1.28							
EN1050	English I	15	19	20	1	4	4.0	28	0.14	
EN1060	LAHB English	3	4	23	1	4	4.0	28	0.14	
EN2050	English II	6	8	23	1	4	4.0	28	0.14	
EN2160	LAHB English II	7	9	18	1	4	4.0	28	0.14	
EN3050	English III	7	9	23	1	4	4.0	28	0.14	
EN4050	Senior English	20	26	23	2	4	8.0	28	0.29	
MA1050	Geometry I	17	22	23	1	4	4.0	28	0.14	
MA2050	Algebra 1 / Geometry	8	10	23	1	4	4.0	28	0.14	
MA3050	Essential Math for Life I	7	9	23	1	4	4.0	28	0.14	
MA4050	Essential Math for Life II	6	8	23	1	4	4.0	28	0.14	
SO1050	World History I	12	15	23	1	4	4.0	35	0.11	
SO2050	World History II	12	15	23	1	4	4.0	35	0.11	
TU2109	Comprehensive Learning Center	22	28	7	4	4	16	28	0.57	
TU2200	Learning Support	9	12	6	2	4	8	28	0.29	
TU2300	Learning Center OFC		0				0	28	0.00	
TU2309	LAHB Learing Center	10	13	15	2	4	8	28	0.29	
TU3000	Study Skills & Tutorial	15	19	4	5	4	20	28	0.71	
EN 8301 EN8304	Functional English I - IV	9	12	23	1	4	4.0	28	0.14	
MA8201 MA8204	Functional Math 1 - 4	5	6	23	1	4	4.0	28	0.14	
SO8501 SO8502	Functional Social Studies I, II, III & IV	8	10	23	1	4	4.0	35	0.11	
									4.06	
							4	**/ .85 =**	**4.8**	Say 5 SPED shared classrooms

	Dedicated Classrooms									
TU2009	Learning Center 9	35	45	7	7	4	28	28	1.00	
TU2010	Learning Center 10	30	38	7	6	4	24	28	0.86	
TU2011	Learning Center 11	32	41	7	7	4	28	28	1.00	
TU2012	Learning Center 12	34	44	7	7	4	28	28	1.00	
TU2909	Small Group Learning Center 9	7	9	10	1	4	4	28	0.14	
TU2910	Small Group Learn'g Center 10	3	4	10	1	4	4	28	0.14	
TU2911	Small Group Learn'g Center 11	4	5	10	1	4	4	28	0.14	
TU2912	Small Group Learn'g Center 12	6	8	10	1	4	4	28	0.14	
TU4000	RISE Tutorial	8	10	12	1	4	4	28	0.14	
TU4001	CBC Tutorial	4	5	7	2	2	4	28	0.14	
									4.71	**8 Dedicated prgram classrooms**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	SCIENCE		1.28							
	Physics									
SC1020 SC1022 SC1026	Physics I	139	178	18	10	4	40	28	1.43	
SC1030	Physics I Honors	330	422	23	19	4	76	28	2.71	
SC4140	AP Physics 1&2	24	31	23	2	4	8.0	28	0.29	
SC4141	AP Physics C	45	58	23	3	4	12.0	28	0.43	
									4.86	
							4.86	**/ .85 =**	**5.7**	Say 6 Physics
SC1300	Draw for Understanding in Field Science	0	0	23	0	4	0.0	28	0.00	see unified arts
	Chemistry									
SC2020 SC2022	Chemistry I	130	166	18	10	4	40.0	28	1.43	
SC2030	Chemistry I Honors	174	223	23	10	4	40.0	28	1.43	
SC2035	Chem I (LBC) Honors	114	146	23	7	4	28.0	28	1.00	
SC2100	SWS Chem I Honors	18	23	23	1	4	4.0	28	0.14	
SC4240	AP Chemistry	94	120	23	6	4	24.0	28	0.86	
SC6200	Chemistry I ELL	15	19	23	1	2	2.0	28	0.07	
SC5820 SC5830	Forensic Science S1	24	31	23	2	2	4.0	28	0.14	Semester
SC5820 SC5830	Forensic Science S2	32	41	23	2	2	2.0	28	0.07	Semester
									5.14	
							5.14	**/ .85 =**	**6.1**	Say 6 Chemistry
	Biology									
SC3020 SC3022	Biology I	71	91	18	5	4	20.0	28	0.71	

SC3025	Biology I BSCS	0	0	23	0	4	0.0	28	0.00	
SC3027	SWS Biology BSCS	0	0	23	0	4	0.0	28	0.00	
SC3030	Biology I Honors	186	238	23	11	4	44.0	28	1.57	
SC3031	SWS Biology IH	24	31	23	2	4	8.0	28	0.29	SWS
SC3035	Biology BSCS H	94	120	23	5	4	20.0	28	0.71	SWS
SC4320	Anatomy / Physiology	13	17	23	1	4	4.0	28	0.14	
SC4330	Anatomy / Physiology Honors	35	45	23	2	4	8.0	28	0.29	
SC4430	Biology II Honors	24	31	23	2	4	8.0	28	0.29	
SC4440	AP Biology	71	91	23	4	4	16.0	28	0.57	
SC5620	Marine Biology	8	10	23	1		0.0	28	0.00	
SC5630	Marine Biology Honors	16	20	23	1		0.0	28	0.00	
SC5920	Genetics	17	22	23	1	2	2.0	28	0.07	Semester
									4.64	
							4.64	**/ .85 =**	**5.5**	Say 6 Biology
	Applied Science									
SC1050	Applied Science I	13	17	23	1	4	4.0	28	0.14	
SC3035	Applied Science III	8	10	23	1	4	4.0	28	0.14	
SC8401 SC8404	Functional Science I thru IV	4	5	23	1	4	4.0	28	0.14	
SC4540	AP Environmental Science	24	31	23	2	4	8.0	28	0.29	
SC5130	Body / Mind Honors	24	31	23	2	4	8.0	28	0.29	
SC5530	Engineering by Design Honors	60	77	20	4	4	16.0	28	0.57	
									1.57	
	SCIENCE SUBTOTAL	1831	2,344				**1.57**	**/ .85 =**	**1.8**	Say 2 Applied Science
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

Basic Educational Space
for Planned Program

SOCIAL STUDIES

2300 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course	Subject	Current	Projected	Class	Sections	Sessions	Total	Periods	Total	
No.		Students,	Students,	Size		Per Week	Sessions	Per Week	Stations	
		per Subject	per Subject						Required	Comments
	SOCIAL STUDIES		1.28							
SO1020 SO1022	World History 9	121	155	18	9	4	36	35	1.03	
SO1030	World History 9 Honors	340	435	23	19	4	76	35	2.17	
SO1400	US History ELL II	14	18	23	1	4	4.0	35	0.11	
SO2020 SO2022	World History S	98	125	18	7	4	28.0	35	0.80	
SO2030	World History Honors	297	380	23	17	4	68.0	35	1.94	
SO3020 SO3022	US History S	88	113	23	5	4	20.0	35	0.57	
SO3030	US History Honors	186	238	23	11	4	44.0	35	1.26	
SO3040	US History AP	100	128	23	6	4	24.0	35	0.69	
SO 3300	US History 2 ELL III	19	24	23	1	4	4.0	35	0.11	
SO4040	American Government Pol AP	25	32	23	2	4	8.0	35	0.23	
SO4140	European History AP	20	26	23	2	4	8.0	35	0.23	
SO4220	African / American Sem	16	20	23	1	4	4.0	35	0.11	
SO4320	Legal Studies	50	64	23	3	4	12.0	35	0.34	
SO4420 SO4430	Psychology + Honors	99	127	23	6	4	24.0	35	0.69	
SO4500	Social Justice Leadership	52	67	23	3	4	12.0	35	0.34	
SO4600	Global Leadership	24	31	23	2	4	8.0	35	0.23	
SO4720	I/S Mock Trial	6	8	23	1	4	4.0	35	0.11	
SO5030	Philosophy Honors	25	32	23	2	2	4.0	35	0.11	
SO5420	Economics	25	32	23	2	2	4.0	35	0.11	
SO5600	Gender & Society	17	22	23	1	2	2.0	35	0.06	
SO5700 SO5730	Asian / American Studies + Honors	14	18	23	1	4	4.0	35	0.11	
									11.37	
	SOCIAL STUDIES SUBTOTAL	1515	1,939				**11.37**	**/ .85 =**	**13.4**	**Say 14 Social Studies Classrooms**

	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an								
	equivalent year classroom requirement.								

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	VISUAL ARTS		1.28							
VA0101	Art Studio	16	20	20	1	2	2	28	0.07	Semester
VA1001	Drawing I S1	85	109	22	5	2	10	28	0.36	Semester
VA1001	Drawing I S2	22	28	22	2	2	4.0	28	0.14	Semester
VA1201 SC1300	Drawing II S1, Draw for Understanding in Field Science	15	19	20	1	2	2.0	28	0.07	Semester
VA1201	Drawing II S2	16	20	20	1	2	2.0	28	0.07	Semester
VA2001	Painting I S1	31	40	20	2	2	4.0	28	0.14	Semester
VA2001	Painting I S2	11	14	20	1	2	2.0	28	0.07	Semester
VA2101	Painting II S1	4	5	20	1	2	2.0	28	0.07	Semester
VA2101	Painting II S2	4	5	20	1	2	2.0	28	0.07	Semester
VA6100	Drawing for Understanding S1	11	14	25	1	2	2.0	28	0.07	Semester
VA6100	Drawing for Understanding S2	10	13	25	1	2	2.0	28	0.07	Semester
VA9300	Advanced Drawing, Painting	15	19	20	1	4	4.0	28	0.14	Semester
									1.36	
							1.4	**/ .85 =**	**1.6**	
VA3001	Sculpture I S1	11	14	15	1	2	2.0	28	0.07	Semester
VA3001	Sculpture I S2	13	17	15	1	2	2.0	28	0.07	Semester
VA3101	Sculpture II	0	0	23	0	2	0.0	28	0.00	Semester
VA4001 VA4201	Print Making	31	40	18	3	2	6.0	28	0.21	Semester
VA5001	Ceramics I S1	59	76	20	4	2	8.0	28	0.29	Semester
VA5001	Ceramics I S2	59	76	20	4	2	8.0	28	0.29	Semester
VA5101 VA2201 VA5301	Ceramics II S1, III, IV	21	27	22	2	2	4.0	28	0.14	Semester
VA5101 VA5202 VA5301	Ceramics II S2, III, IV	16	20	22	1	2	2.0	28	0.07	Semester
									1.14	
							1.1	**/ .85 =**	**1.3**	
VA6001	Jewelry Making I S1	32	41	16	3	2	6.0	28	0.21	Semester

VA6001	Jewelry Making I S2	16	20	16	2	2	4.0	28	0.14	Semester
VA6101	Jewelry Making II S2	8	10	16	1	2	2.0	28	0.07	Semester
									0.43	
							0.4	**/ .85 =**	**0.5**	
VA7001	Photography I S1 + Digital	70	90	18	5	2	10.0	28	0.36	Semester
VA7001 VA 7210 VA7301	Photography I S2 + Digital	53	68	18	4	2	8.0	28	0.29	Semester
VA7101 VA7210 VA7301	Photography II S1 + Digital	13	17	18	1	2	2.0	28	0.07	Semester
VA7101 VA7301	Photography II S2 + Digital	22	28	18	2	2	4.0	28	0.14	Semester
VA8101 VA8201	Animation I, II	16	20	16	2	2	4.0	28	0.14	Semester
VA8301	3D Animation	15	19	16	2	2	4.0	28	0.14	Semester
VA9000	Portfolio AP	17	22	20	1	4	4.0	28	0.14	Semester
VA9101 VA9201	Digital Design Studio I, II S1	6	8	16	1	2	2.0	28	0.07	Semester
VA9201 VA9321	Digital Design Studio I, II S2	4	5	16	1	2	2.0	28	0.07	Semester
VA9310 VA9320	Digital Video I, II S1	9	12	16	1	2	2.0	28	0.07	Semester
VA9310 VA9320	Digital Video I, II S2	10	13	16	1	2	2.0	28	0.07	Semester
VA9401 VA9411	Comic Books 101, 102	13	17	16	1	2	2.0	28	0.07	Semester
VA9600	Documentary S1	8	10	16	1	2	2.0	28	0.07	Semester
VA9600	Documentary S2	9	12	16	1	2	2.0	28	0.07	Semester
VA9800 VA9900	TV Production 101, 102 S1	8	10	15	1	2	2.0	28	0.07	Semester
VA9800 VA9900	TV Production 101, 102 S2	7	9	15	1	2	2.0	28	0.07	Semester
									1.93	
	VISUAL ARTS SUBTOTAL	786	1,006				**1.93**	**/ .85 =**	**2.3**	
										Say 5 Art Classrooms
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	WORLD LANGUAGES		1.28							
WL0100	Chinese I	28	36	23	2	4	8	28	0.29	
WL0200 WL0230	Chinese II + Honors	45	58	23	3	4	12	28	0.43	
WL0300 WL0330	Chinese III + Honors	44	56	23	3	4	12.0	28	0.43	
WL0400 WL0430	Chinese IV + Honors	32	41	23	2	4	8.0	28	0.29	
WL0500 WL0530 WL0540	Chinese V + Honors + AP	20	26	23	2	4	8.0	28	0.29	
WL0600 WL0530 WL0640	Chinese VI + Honors + AP	4	5	23	1	4	4.0	28	0.14	
									1.86	
							1.9	**/ .85 =**	**2.2**	Chinese
WL1100	French I	33	42	23	2	4	8.0	28	0.29	
WL1220	French II	29	37	23	2	4	8.0	28	0.29	
WL1230	French II Honors	43	55	23	3	4	12.0	28	0.43	
WL1240	French II Advanced	25	32	23	2	4	8.0	28	0.29	
WL1320	French III	27	35	23	2	4	8.0	28	0.29	
WL1330	French III Honors	35	45	23	2	4	8.0	28	0.29	

WL1340	French III Advanced	17	22	23	1	4	4.0	28	0.14	
WL1420 WL1520	French IV Through Film	29	37	23	2	4	8.0	28	0.29	
WL1430	French IV Honors	32	41	23	2	4	8.0	28	0.29	
WL1440	French IV Advanced	20	26	23	2	4	8.0	28	0.29	
WL1530	French V Honors	21	27	23	2	4	8.0	28	0.29	
WL1540	AP French	25	32	23	2	4	8.0	28	0.29	
									3.43	
							3.4	**/ .85 =**	**4.0**	French
WL3100	Latin I	77	99	23	5	4	20.0	28	0.71	
WL3220 WL3330	Latin II + Honors	48	61	23	3	4	12.0	28	0.43	
WL3320 WL3330	Latin III + Honors	38	49	23	3	4	12.0	28	0.43	
WL3420 WL3430 WL3530 WL3540	Latin IV, V, + Honors + AP Latin Vergil	23	29	23	2	4	8.0	28	0.29	
									1.86	
							1.9	**/ .85 =**	**2.2**	Latin
WL4101	Beginner Spanish I	57	73	23	4	4	16.0	28	0.57	
WL4102 WL4130	Beginner Spanish II + Honors	42	54	23	3	4	12.0	28	0.43	
WL4220	Intermediate Spanish II	73	93	23	4	4	16.0	28	0.57	
WL4230	Intermediate Spanish II Honors	106	136	23	6	4	24.0	28	0.86	

WL4240	Spanish II Advanced	97	124	23	6	4	24.0	28	0.86	
WL4320	Spanish III	36	46	23	2	4	8.0	28	0.29	
WL4330	Spanish III Honors	86	110	23	5	4	20.0	28	0.71	
WL4340	Spanish III Advanced	87	111	23	5	4	20.0	28	0.71	
WL4420	Spanish IV Through Film	16	20	23	1	4	4.0	28	0.14	
WL4430	Spanish IV Honors	67	86	23	4	4	16.0	28	0.57	
WL4440	Spanish IV Advanced	78	100	23	5	4	20.0	28	0.71	
WL4520	Spanish V Through Film	10	13	23	1	4	4.0	28	0.14	
WL4530	Spanish V Honors	50	64	23	3	4	12.0	28	0.43	
WL4540	AP Spanish V Language & Culture	56	72	23	3	4	12.0	28	0.43	
WL4630	Medical Interpretation & Translation Spanish	7	9	23	1	4	4.0	28	0.14	
									7.57	
							7.6	**/ .85 =**	**8.9**	Spanish
WL5100	Japanese I	30	38	23	2	4	8.0	28	0.29	
WL5200 WL5230	Japanese II + Honors	25	32	23	2	4	8.0	28	0.29	
WL5300 WL5330	Japanese III + Honors	8	10	23	1	4	4.0	28	0.14	
WL5400 WL5430 WL5440	Japanese IV + Honors + AP	16	20	23	1	4	4.0	28	0.14	
									0.86	
							0.9	**/ .85 =**	**1.0**	Japanese

WL6630	Medical Interpretation & Translation Portugese	0	0	23	0	4	0.0	28	0.00	
	WORLD LANGUAGES SUBTOTAL	1642	2,102						15.57	
							15.57	**/ .85 =**	**18.3**	**Say 18 World Languages Classrooms (assumes shared across languages)**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

Basic Educational Space
for Planned Program

WINTHROP HOUSE

1800 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	WINTHROP HOUSE									30 students (off site)
			0	23		4	0	28	0.00	
			0	23		4	0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
	WINTHROP HOUSE SUBTOTAL	0	0						0.00	
							0.00	**/ .85 =**	**0.0**	**Say__ Winthrop House Classrooms**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

Brookline High School
SMMA No. 14030

7/31/2015

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Basic Educational Space
for Planned Program

TUTORIAL

2300 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	TUTORIAL		1.28							
TU1000	BHS Tutorial 9	67	86	23	4	4	16	28	0.57	???
TU1100	METCO Academic Center	8	10	10	1	4	4	28	0.14	Dedicated room
TU1209S	African American Sch Sem 9 S1	7	9	23	1	2	2.0	28	0.07	Semester
TU1209S	African American Sch Sem 9 S2	8	10	23	1	2	2.0	28	0.07	Semester
TU1210 S	African American Sch Sem 10 S2	16	20	23	1	4	4.0	28	0.14	Semester
TU1210S	African American Sch Sem 10 S1	17	22	23	1	4	4.0	28	0.14	Semester
TU1212S	African American Sch Sem 12	18	23	23	1	4	4.0	28	0.14	
TU2000	BHS Tutorial 10	93	119	11	11	4	44.0	28	1.57	
									2.86	
	TUTORIAL HOUSE SUBTOTAL	234	300							
							2.86	**/ .85 =**	**3.4**	**Say 4 Tutorial Classrooms**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

TUTORIAL

Basic Educational Space
for Planned Program

SUMMARY

1800 STUDENTS
23 target / class size

		Classrooms Required for 1800 Students	Classrooms Required for 2600 Students	Current Classrooms	Comments
Core Academic					
EN	English	14			
WL	World Languages	15			
WL	Language Lab	1			
SO	Social Studies	11			
MA	Math	15			
HF	Wellness	1			needs review
	Classroom total	**57**			
Science					
SC	Physics	5			
SC	Chemistry	5			
SC	Biology	4			
SC	Applied Science	2			
	Science Total	**16**			
	STEM?				
Special Education					
EN, MA, SO, TU	Shared SPED Classrooms	4			
TU	Dedicated Classrooms	8			Learning Centers, Small Group, Special Programs
EL	ELL	2			small classrooms
Performing Arts					
PA	Choir / Choral	1			
PA	Band/Orchestra/Jazz	1			
PA	Piano	1			
PA	Dance	2			
PA	Drama	Aud			

PA	Back Stage	Scene Shop			not driven by curriculum
PA	Black Box	1			not driven by curriculum
PA	White Box	1			not driven by curriculum
School Within a School					
SW	Classrooms	3			2 classrooms if shared
SW	Lounge	1			
Visual Arts					
VA	Art 2D	2			
VA	Art 3D	1			
VA	Photo / Graphics Lab	1			
VA	Jewlery	1			
VA	TV Production	1			
		6			
Business Finance IT Technology					
CE	Business Classroom	2			
CE	Early Childhood	0.5			
CE	Culinary	4			
CE	Wood	0.4			one lab, one classroom
CE	Auto	0.1			
CE	Technical Drawing / Engineering	0.4			
Health and Physical Education		Gym			7 teaching Stations
	Alternate PE	?			
Tutorial					
TU	Small Rooms	?			

Basic Educational Space for Planned Program

Business Finance IT Technology

2600 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	Business Finance & IT Pathways		1.44							
CE1100	Introduction to Business Management S1	24	35	23	1	2	2	28	0.07	Semester
CE1100	Introduction to Business Management S2	39	56	23	3	2	6	28	0.21	Semester
CE1200	World of Money S1	39	56	23	3	2	6	28	0.21	Semester
CE1200	World of Money S2	46	66	23	3	2	6	28	0.21	Semester
CE1400	Psychology of Marketing	21	30	23	2	2	4	28	0.14	Semester
CE1500	Comm for Engineers	0	0	23	0	4	0	28	0.00	
CE4100	Computer Science Engineering S1	35	50	23	3	4	12	28	0.43	
CE4100	Computer Science Engineering S2	17	24	23	1	4	4	28	0.14	
CE4200	CE Computer Programming QVB	17	24	23	1	4	4	28	0.14	
CE4800	Computer Programming Java	8	12	23	1	4	4	28	0.14	
CE4900	Web Site Design	18	26	23	1	4	4	28	0.14	
									1.86	
							1.9	**/ .85 =**	**2.2**	
CE5200	Early Childhood	16	23	23	1	4	4	28	0.14	
CE5500	Medical Careers	18	26	18	2	4	8	28	0.29	
CE5700	Early Childhood Childrens Lit	9	13	23	1	4	4	28	0.14	
									0.57	
CE6100	Culinary CR 1X	65	94	12	8	4	32	28	1.14	
CE6100S	Culinary CR Semester S1	21	30	6	5	2	10	28	0.36	Semester
CE6100S	Culinary CR Semester S2	21	30	6	5	2	10	28	0.36	Semester
CE6400	Reastaurant & Cul Sci/Theory	5	7	12	1	8	8	28	0.29	
FP2000	Italy / China S1	58	84	23	4	2	8	28	0.29	Semester

FP2000	Italy / China S2	54	78	23	4	2	8	28	0.29	Semester
FP3000	American Cuisine S1	47	68	23	3	2	6	28	0.21	Semester
FP3000	American Cuisine S2	24	35	23	2	2	4	28	0.14	Semester
FP4000	Foods of France	23	33	23	2	2	4	28	0.14	Semester
FP5000	International Baking S1	92	132	23	6	2	12	28	0.43	Semester
FP5000	International Baking S2	114	164	23	7	2	14	28	0.50	Semester
FP7000	Vegitarian Cuisine	15	22	23	1	2	2	28	0.07	
	CE SUBTOTAL	846	1,218						4.21	
							4.21	**/ .85 =**	**5.0**	**Say 5 Culinary Spaces**
TE1001	Creative Woodworking I S1	32	46	16	3	2	6	28	0.21	Semester
TE1001	Creative Woodworking I S2	31	45	16	3	2	6	28	0.21	Semester
TE1002	Creative Woodworking II	8	12	8	1	2	2	28	0.07	Semester
TE1003	Furniture Design & Construction	8	12	8	1	2	2	28	0.07	Semester
									0.6	
TE1101	Auto Tech S1	16	23	16	2	2	4	28	0.14	Semester
TE1102	Auto Tech S2	16	23	16	2	2	4	28	0.14	Semester
									0.3	
TE3200	Technical Drawing	10	14	10	2	2	4	28	0.14	Semester
TE3300	Architectural Design/Drafting CAD	6	9	10	1	2	2	28	0.07	Semester
TE4501	Engineering Future I S1	31	45	15	3	2	6	28	0.21	
TE4501	Engineering Future I S2	24	35	15	3	2	6	28	0.21	
									0.6	
TE4200	Graphic Arts/Copy Center Lab	4	6	5	1	2	2	28	0.07	
	Business Finance & IT Pathways Subtotals									
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

Basic Educational Space
for Planned Program

ENGLISH

2600 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	ENGLISH		1.44							
EN1020	Points of View	130	187	18	11	4	44	28	1.57	
EN1030	Respond'g to Literature	318	458	23	20	4	80	28	2.86	
EN2020 EN2022	World Lit: Living The Questions	47	68	18	4	4	16.0	28	0.57	
EN2030	World Literature Honors, Identity, Culture and Meaning	118	170	23	8	4	32.0	28	1.14	
EN2120 EN2130	Future World Literature + Honors	146	210	18	12	4	48.0	28	1.71	
EN2220 EN2230	Real World Literature + Honors	85	122	23	5	4	20.0	28	0.71	
EN3020 EN3022	American Literature	110	158	23	7	4	28.0	28	1.00	
EN3030	American Literature Honors	243	350	23	15	4	60.0	28	2.14	
EN4020	Stranger in Literature (Land)	17	24	23	1	4	4.0	28	0.14	
EN4030	Stranger in Literature Honors	50	72	23	4	4	16.0	28	0.57	
EN4220 EN4222	Biography and Autobiography	40	58	23	3	4	12.0	28	0.43	
EN4430	English Literature Honors (British?)	50	72	23	3	4	12.0	28	0.43	
EN4530	European Literature	14	20	23	1	4	4.0	28	0.14	
EN4600	Craft of Writing	65	94	23	4	4	16.0	28	0.57	

EN4700	Public Speaking	66	95	23	4	4	16.0	28	0.57	
EN4800	Fiction and Film	46	66	23	3	4	12.0	28	0.43	
EN4900	Communication for Entrepreneurs	30	43	30	2	4	8.0	28	0.29	
IDO100	Journalism I	28	40	23	2	4	8.0	28	0.29	
IDO 130	Journalism Honors	26	37	23	2	4	8.0	28	0.29	
	ENGLISH SUBTOTAL	1629	2,346						15.86	
							15.86	**/ .85 =**	**18.7**	**Say 19 English Classrooms**
									ASSUME 19 ENGLISH CLASSROOMS	
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

Basic Educational Space
for Planned Program

ELL

2600 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	ELL		1.44							
EL1000	ELL I:US Civics and History	6	9	20	1	4	4	28	0.14	
EL1100	ELL I Reading / Writing	6	9	20	1	4	4	28	0.14	
EL1200	ELL I: List/Speaking	6	9	20	1	4	4	28	0.14	
EL2000	ELL II Reading / Writing	14	20	20	1	4	4	28	0.14	
EL2100	ELL II: List/Speaking	14	20	20	1	4	4	28	0.14	
EL3000	ELL III: Composition	21	30	20	2	4	8	28	0.29	
EL3100	ELL III: Literature	20	29	20	2	4	8	28	0.29	
	ELL SUBTOTAL	87	125						1.29	
							1.29	**/ .85 =**	**1.5**	**Say 2 ELL Classrooms**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

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Basic Educational Space
for Planned Program

HEALTH FITNESS

2600 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	HEALTH & FITNESS		1.44							
HF0900 HF1000	Health and Fitness S1	252	363	23	16	4	64	35	1.83	Semester
HF0900 HF1000	Health and Fitness S2	275	396	23	17	4	68	35	1.94	Semester
HF1100	Lifetime Activities S1	96	138	20	6	4	24.0	35	0.69	Semester
HF1100	Lifetime Activities S2	75	108	23	5	4	20.0	35	0.57	Semester
HF2100	Tennis Spec	25	36	23	2	4	8.0	35	0.23	Semester
HF2200	Swim-Aquadics Aero	15	22	15	2	4	8.0	35	0.23	Semester
HF2300	Weight Training / Cardio S1	25	36	25	2	4	8.0	35	0.23	Semester
HF2300	Weight Training / Cardio S2	20	29	25	2	4	8.0	35	0.23	Semester
HF2400	Rock Climbing Advances S1	28	40	15	3	4	12.0	35	0.34	Semester
HF2400	Rock Climbing Advances S2	28	40	15	3	4	12.0	35	0.34	Semester
HF2500	Basketball Spec	11	16	25	1	4	4.0	35	0.11	Semester
HF2600	The Revolution	23	33	25	2	4	8.0	35	0.23	Semester
HF2610	Excel Lifetime S1	0	0	23	0	4	0.0	35	0.00	Semester
HF2610	Excel Lifetime S2	0	0	23	0	4	0.0	35	0.00	Semester
HF2800	Yoga S1	100	144	25	7	4	28.0	35	0.80	Semester
HF2800	Yoga S2	100	144	25	7	4	28.0	35	0.80	Semester
	HEALTH & FITNESS SUBTOTAL	1073	1,545						8.57	
							8.57	**/ .85 =**	**10.1**	**Say 10 Teaching Stations**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

Brookline High School
SMMA No. 14030

7/31/2015

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Basic Educational Space
for Planned Program

MATH

2600 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	MATH		1.44							
MA1000	Algebra I	19	27	18	2	4	8	28	0.29	
MA1006	Algebra I	12	17	18	1	4	4	28	0.14	
MA1020 MA1022	Geometry	112	161	18	9	4	36.0	28	1.29	
MA1030	Geometry Honors	247	356	23	16	4	64.0	28	2.29	
MA1040	AdvancedGeometry	101	145	23	7	4	28.0	28	1.00	
MA2020 MA 2022	Intro Algebra 2	122	176	18	10	4	40.0	28	1.43	
MA2030	Algebra 2 & Trig Honors	175	252	23	11	4	44.0	28	1.57	
MA2040	Algebra 2 & Advanced	68	98	23	5	4	20.0	28	0.71	
MA3010 MA3012	Algebra Topics & Technology	27	39	23	2	4	8.0	28	0.29	
MA3020	Algebra 2 & Trig	137	197	23	9	4	36.0	28	1.29	
MA3030	PreCalculus Honors	136	196	23	9	4	36.0	28	1.29	
MA3040	PreCalculus Advanced	79	114	23	5	4	20.0	28	0.71	
MA4010	College Algebra Topics	24	35	23	2	4	8.0	28	0.29	
MA4020	PreCalculus	134	193	23	9	4	36.0	28	1.29	
MA4025	Interactive Math Program IV	8	12	23	1	4	4.0	28	0.14	
MA4030	Foundations in Calculus	40	58	23	3	4	12.0	28	0.43	
MA4035	Interactive Math Program IV Honors	6	9	23	1	4	4.0	28	0.14	
MA4040	AP Calculus AB	114	164	23	7	4	28.0	28	1.00	
MA4041	AP Calculus BC	68	98	23	5	4	20.0	28	0.71	
MA4120	Statistics	65	94	23	4	4	16.0	28	0.57	
MA4140	AP Statistics	34	49	23	2	4	8.0	28	0.29	
MA4200	Perspectives of the Math Mind	25	36	23	2	4	8.0	28	0.29	
	MATH SUBTOTAL	1753	2,524						17.43	
							17.43	**/ .85 =**	**20.5**	**Say 21 Math Classrooms**
									ASSUME 21 MATH CLASSROOMS	

	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an								
	equivalent year classroom requirement.								

Basic Educational Space for Planned Program

PERFORMING ARTS

2600 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	PERFORMING ARTS		1.44							
PA1000	Concert Choir	40	58	60	1	4	4	28	0.14	
PA1200	Camerata Honors	50	72	50	2	4	8	28	0.29	
PA1500	A-Cappella Choir	26	37	60	1	4	4	28	0.14	
PA2000	Concert Band	65	94	90	1	4	4	28	0.14	
PA2201	Digital Music Production	26	37	15	3	2	6	28	0.21	Semester
PA2201	Digital Music Production	27	39	15	3	2	6	28	0.21	Semester
PA2300	Jazz Band	13	19	23	1	4	4	28	0.14	
PA2350	Jazz / Rock Ensemble	11	16	23	1	2	2	28	0.07	Semester
PA2500	Orchestra	58	84	100	1	4	4	28	0.14	
PA2700	AP Music Theory	22	32	23	2	4	8	28	0.29	
PA2801	Intro to World Music	15	22	23	1	4	4	28	0.14	Semester
PA2900	Piano	14	20	15	2	4	8	28	0.29	Semester
PA2900	Piano	14	20	23	1	4	4	28	0.14	Semester
									2.36	
							2.36	**/ .85 =**	**2.8**	
PA3000	Begin Dance	25	36	23	2	4	8	28	0.29	
PA3100	Intermediate Dance	21	30	23	2	4	8	28	0.29	
PA3200	Advanced Modern/Jazz Dance	25	36	23	2	4	8	28	0.29	
PA3600	Choreography	12	17	23	1	4	4	28	0.14	
PA3700	African Latin Hip Hop Dance	48	69	23	3	4	12	28	0.43	
									1.43	
							1	**/ .85 =**	**1.7**	
PA4000	Drama I	49	71	23	3	4	12	28	0.43	Auditorium
PA4100	Drama II	30	43	23	2	4	8	28	0.29	Auditorium
PA4300	Brookline Educational Theater Co, BETCO	17	24	23	1	4	4	28	0.14	Auditorium
PA4602	Need Improvement	10	14	23	1	4	4	28	0.14	Auditorium
									1.00	

							1	**/ .85 =**	**1.2**	
PA4400	Backstage: Power Tools	14	20	23	1	2	2	28	0.07	Semester
PA4400	Backstage: Power Tools	11	16	23	1	2	2	28	0.07	Semester
PA4501	Drama I-A	15	22	23	1	2	2	28	0.07	Semester
PA4501	Drama I-A	17	24	23	1	2	2	28	0.07	Semester
PA4501	Drama I-A	16	23	23	1	2	2	28	0.07	Semester
									0.36	
							0.36	**/ .85 =**	**0.4**	
	PERFORMING ARTS SUBTOTAL	691	995							**Say 5 Spaces**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

Basic Educational Space
for Planned Program

SCHOOL WITHIN A SCHOOL

2600 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	SCHOOL WITHIN A SCHOOL		1.44							
SW1000	Contemporary Literature Honors	9	13	12	1	2	2	28	0.07	
SW1100	Creative Non-Fiction Honors	14	20	21	1	2	2	28	0.07	
SW1200	Creative Writing Honors	9	13	21		2	0	28	0.00	
SW1300	Humanities in Literature Honors	5	7	21	1	2	2	28	0.07	
SW1400	Race & Identity in Lit Honors	12	17	21	1	2	2	28	0.07	
SW1410	Friendship in Literature Honors	11	16	21		2	0	28	0.00	
SW1500	Individual & Institutional Lit Honors	10	14	21	1	2	2	28	0.07	
SW1510	Memoir in Literature Honors	5	7	21	1	2	2	28	0.07	
SW1600	Spirit in Literature Honors	12	17	21	1	2	2	28	0.07	
SW1900	Dark Literature Honors	22	32	21	2	2	4	28	0.14	
SW2500	Feminism in Literature Honors	11	16	21	1	2	2	28	0.07	
SW2600	Psychology in Literature Honors	13	19	21	1	2	2	28	0.07	
SW4120 SW4130	SWS World History + Honors	20	29	23	2	4	8	28	0.29	
SW4120 SW4130	SWS US History + Honors	21	30	23	2	4	8	28	0.29	
SW4232	Contemporary World History Honors	15	22	23	1	2	2	28	0.07	
SW4321	Senior Capstone	14	20	23	1	2	2	28	0.07	
SW4331	Educational Seminar Honors	18	26	23	1	2	2	28	0.07	
SW6000	Town Meeting	118	170	130	1	4	4	28		once per week

SC3031	SWS Biology I Honors	0	0	0	0	0	0.0	0	0.00	listed with Science
	SWS SUBTOTAL	206	297						1.57	
							1.57	**/ .85 =**	**1.8**	**Say __ SWS Classrooms**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

Basic Educational Space
for Planned Program

SPED

2600 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	Special Education		1.44							
EN1050	English I	15	22	20	1	4	4.0	28	0.14	
EN1060	LAHB English	3	4	23	1	4	4.0	28	0.14	
EN2050	English II	6	9	23	1	4	4.0	28	0.14	
EN2160	LAHB English II	7	10	18	1	4	4.0	28	0.14	
EN3050	English III	7	10	23	1	4	4.0	28	0.14	
EN4050	Senior English	20	29	23	2	4	8.0	28	0.29	
MA1050	Geometry I	17	24	23	1	4	4.0	28	0.14	
MA2050	Algebra 1 / Geometry	8	12	23	1	4	4.0	28	0.14	
MA3050	Essential Math for Life I	7	10	23	1	4	4.0	28	0.14	
MA4050	Essential Math for Life II	6	9	23	1	4	4.0	28	0.14	
SO1050	World History I	12	17	23	1	4	4.0	35	0.11	
SO2050	World History II	12	17	23	1	4	4.0	35	0.11	
TU2109	Comprehensive Learning Center	22	32	7	5	4	20	28	0.71	
TU2200	Learning Support	9	13	6	2	4	8	28	0.29	
TU2300	Learning Center OFC		0				0	28	0.00	
TU2309	LAHB Learing Center	10	14	15	1	4	4	28	0.14	
TU3000	Study Skills & Tutorial	15	22	4	6	4	24	28	0.86	
EN 8301 EN8304	Functional English I - IV	9	13	23	1	4	4.0	28	0.14	
MA8201 MA8204	Functional Math 1 - 4	5	7	23	1	4	4.0	28	0.14	
SO8501 SO8502	Functional Social Studies I, II, III & IV	8	12	23	1	4	4.0	35	0.11	
									4.20	
							4	**/ .85 =**	**4.9**	Say 5 SPED shared classrooms

Brookline High School
SMMA No. 14030

7/31/2015

	Dedicated Classrooms									
TU2009	Learning Center 9	35	50	7	7	4	28	28	1.00	
TU2010	Learning Center 10	30	43	7	7	4	28	28	1.00	
TU2011	Learning Center 11	32	46	7	7	4	28	28	1.00	
TU2012	Learning Center 12	34	49	7	7	4	28	28	1.00	
TU2909	Small Group Learning Center 9	7	10	10	1	4	4	28	0.14	
TU2910	Small Group Learn'g Center 10	3	4	10	1	4	4	28	0.14	
TU2911	Small Group Learn'g Center 11	4	6	10	1	4	4	28	0.14	
TU2912	Small Group Learn'g Center 12	6	9	10	1	4	4	28	0.14	
TU4000	RISE Tutorial	8	12	12	1	4	4	28	0.14	
TU4001	CBC Tutorial	4	6	7	2	2	4	28	0.14	
									4.86	**8 Dedicated prgram classrooms**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	SCIENCE		1.44							
	Physics									
SC1020 SC1022 SC1026	Physics I	139	200	18	12	4	48	28	1.71	
SC1030	Physics I Honors	330	475	23	21	4	84	28	3.00	
SC4140	AP Physics 1&2	24	35	23	2	4	8.0	28	0.29	
SC4141	AP Physics C	45	65	23	3	4	12.0	28	0.43	
									5.43	
							5.43	**/ .85 =**	**6.4**	Say 7 Physics
SC1300	Draw for Understanding in Field Science	0	0	23	0	4	0.0	28	0.00	see unified arts
	Chemistry									
SC2020 SC2022	Chemistry I	130	187	18	11	4	44.0	28	1.57	
SC2030	Chemistry I Honors	174	251	23	11	4	44.0	28	1.57	
SC2035	Chem I (LBC) Honors	114	164	23	8	4	32.0	28	1.14	
SC2100	SWS Chem I Honors	18	26	23	2	4	8.0	28	0.29	
SC4240	AP Chemistry	94	135	23	6	4	24.0	28	0.86	
SC6200	Chemistry I ELL	15	22	23	1	2	2.0	28	0.07	
SC5820 SC5830	Forensic Science S1	24	35	23	2	2	4.0	28	0.14	Semester
SC5820 SC5830	Forensic Science S2	32	46	23	2	2	2.0	28	0.07	Semester
									5.71	
							5.71	**/ .85 =**	**6.7**	Say 7 Chemistry
	Biology									
SC3020 SC3022	Biology I	71	102	18	6	4	24.0	28	0.86	

SC3025	Biology I BSCS	0	0	23	0	4	0.0	28	0.00	
SC3027	SWS Biology BSCS	0	0	23	0	4	0.0	28	0.00	
SC3030	Biology I Honors	186	268	23	12	4	48.0	28	1.71	
SC3031	SWS Biology IH	24	35	23	2	4	8.0	28	0.29	SWS
SC3035	Biology BSCS H	94	135	23	6	4	24.0	28	0.86	SWS
SC4320	Anatomy / Physiology	13	19	23	1	4	4.0	28	0.14	
SC4330	Anatomy / Physiology Honors	35	50	23	3	4	12.0	28	0.43	
SC4430	Biology II Honors	24	35	23	2	4	8.0	28	0.29	
SC4440	AP Biology	71	102	23	5	4	20.0	28	0.71	
SC5620	Marine Biology	8	12	23	1		0.0	28	0.00	
SC5630	Marine Biology Honors	16	23	23	1		0.0	28	0.00	
SC5920	Genetics	17	24	23	1	2	2.0	28	0.07	Semester
									5.36	
							5.36	**/ .85 =**	**6.3**	Say 7 Biology
	Applied Science									
SC1050	Applied Science I	13	19	23	1	4	4.0	28	0.14	
SC3035	Applied Science III	8	12	23	1	4	4.0	28	0.14	
SC8401 SC8404	Functional Science I thru IV	4	6	23	1	4	4.0	28	0.14	
SC4540	AP Environmental Science	24	35	23	2	4	8.0	28	0.29	
SC5130	Body / Mind Honors	24	35	23	2	4	8.0	28	0.29	
SC5530	Engineering by Design Honors	60	86	20	5	4	20.0	28	0.71	
									1.71	
	SCIENCE SUBTOTAL	1831	2,637				**1.71**	**/ .85 =**	**2.0**	
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

Basic Educational Space
for Planned Program

SOCIAL STUDIES

2600 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course	Subject	Current	Projected	Class	Sections	Sessions	Total	Periods	Total	
No.		Students,	Students,	Size		Per Week	Sessions	Per Week	Stations	
		per Subject	per Subject						Required	Comments
	SOCIAL STUDIES		1.44							
SO1020 SO1022	World History 9	121	174	18	10	4	40	35	1.14	
SO1030	World History 9 Honors	340	490	23	21	4	84	35	2.40	
SO1400	US History ELL II	14	20	23	1	4	4.0	35	0.11	
SO2020 SO2022	World History S	98	141	18	8	4	32.0	35	0.91	
SO2030	World History Honors	297	428	23	19	4	76.0	35	2.17	
SO3020 SO3022	US History S	88	127	23	6	4	24.0	35	0.69	
SO3030	US History Honors	186	268	23	12	4	48.0	35	1.37	
SO3040	US History AP	100	144	23	7	4	28.0	35	0.80	
SO 3300	US History 2 ELL III	19	27	23	2	4	8.0	35	0.23	
SO4040	American Government Pol AP	25	36	23	2	4	8.0	35	0.23	
SO4140	European History AP	20	29	23	2	4	8.0	35	0.23	
SO4220	African / American Sem	16	23	23	1	4	4.0	35	0.11	
SO4320	Legal Studies	50	72	23	3	4	12.0	35	0.34	
SO4420 SO4430	Psychology + Honors	99	143	23	7	4	28.0	35	0.80	
SO4500	Social Justice Leadership	52	75	23	4	4	16.0	35	0.46	
SO4600	Global Leadership	24	35	23	2	4	8.0	35	0.23	
SO4720	I/S Mock Trial	6	9	23	1	4	4.0	35	0.11	
SO5030	Philosophy Honors	25	36	23	2	2	4.0	35	0.11	
SO5420	Economics	25	36	23	2	2	4.0	35	0.11	
SO5600	Gender & Society	17	24	23	1	2	2.0	35	0.06	
SO5700 SO5730	Asian / American Studies + Honors	14	20	23	1	4	4.0	35	0.11	
									12.74	
	SOCIAL STUDIES SUBTOTAL	1515	2,182				**12.74**	**/ .85 =**	**15.0**	**Say 15 Social Studies Classrooms**

	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an								
	equivalent year classroom requirement.								

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	VISUAL ARTS		1.44							
VA0101	Art Studio	16	23	20	2	2	4	28	0.14	Semester
VA1001	Drawing I S1	85	122	22	6	2	12	28	0.43	Semester
VA1001	Drawing I S2	22	32	22	2	2	4.0	28	0.14	Semester
VA1201 SC1300	Drawing II S1, Draw for Understanding in Field Science	15	22	20	1	2	2.0	28	0.07	Semester
VA1201	Drawing II S2	16	23	20	1	2	2.0	28	0.07	Semester
VA2001	Painting I S1	31	45	20	2	2	4.0	28	0.14	Semester
VA2001	Painting I S2	11	16	20	1	2	2.0	28	0.07	Semester
VA2101	Painting II S1	4	6	20	1	2	2.0	28	0.07	Semester
VA2101	Painting II S2	4	6	20	1	2	2.0	28	0.07	Semester
VA6100	Drawing for Understanding S1	11	16	25	1	2	2.0	28	0.07	Semester
VA6100	Drawing for Understanding S2	10	14	25	1	2	2.0	28	0.07	Semester
VA9300	Advanced Drawing, Painting	15	22	20	1	4	4.0	28	0.14	Semester
									1.50	
							1.5	**/ .85 =**	**1.8**	
VA3001	Sculpture I S1	11	16	15	1	2	2.0	28	0.07	Semester
VA3001	Sculpture I S2	13	19	15	2	2	4.0	28	0.14	Semester
VA3101	Sculpture II	0	0	23	0	2	0.0	28	0.00	Semester
VA4001 VA4201	Print Making	31	45	18	3	2	6.0	28	0.21	Semester
VA5001	Ceramics I S1	59	85	20	4	2	8.0	28	0.29	Semester
VA5001	Ceramics I S2	59	85	20	4	2	8.0	28	0.29	Semester
VA5101 VA2201 VA5301	Ceramics II S1, III, IV	21	30	22	2	2	4.0	28	0.14	Semester
VA5101 VA5202 VA5301	Ceramics II S2, III, IV	16	23	22	1	2	2.0	28	0.07	Semester
									1.21	
							1.2	**/ .85 =**	**1.4**	
VA6001	Jewelry Making I S1	32	46	16	3	2	6.0	28	0.21	Semester

VA6001	Jewelry Making I S2	16	23	16	2	2	4.0	28	0.14	Semester
VA6101	Jewelry Making II S2	8	12	16	1	2	2.0	28	0.07	Semester
									0.43	
							0.4	**/ .85 =**	**0.5**	
VA7001	Photography I S1 + Digital	70	101	18	6	2	12.0	28	0.43	Semester
VA7001 VA 7210 VA7301	Photography I S2 + Digital	53	76	18	5	2	10.0	28	0.36	Semester
VA7101 VA7210 VA7301	Photography II S1 + Digital	13	19	18	1	2	2.0	28	0.07	Semester
VA7101 VA7301	Photography II S2 + Digital	22	32	18	2	2	4.0	28	0.14	Semester
VA8101 VA8201	Animation I, II	16	23	16	2	2	4.0	28	0.14	Semester
VA8301	3D Animation	15	22	16	2	2	4.0	28	0.14	Semester
VA9000	Portfolio AP	17	24	20	2	4	8.0	28	0.29	Semester
VA9101 VA9201	Digital Design Studio I, II S1	6	9	16	1	2	2.0	28	0.07	Semester
VA9201 VA9321	Digital Design Studio I, II S2	4	6	16	1	2	2.0	28	0.07	Semester
VA9310 VA9320	Digital Video I, II S1	9	13	16	1	2	2.0	28	0.07	Semester
VA9310 VA9320	Digital Video I, II S2	10	14	16	1	2	2.0	28	0.07	Semester
VA9401 VA9411	Comic Books 101, 102	13	19	16	1	2	2.0	28	0.07	Semester
VA9600	Documentary S1	8	12	16	1	2	2.0	28	0.07	Semester
VA9600	Documentary S2	9	13	16	1	2	2.0	28	0.07	Semester
VA9800 VA9900	TV Production 101, 102 S1	8	12	15	1	2	2.0	28	0.07	Semester
VA9800 VA9900	TV Production 101, 102 S2	7	10	15	1	2	2.0	28	0.07	Semester
									2.21	
	VISUAL ARTS SUBTOTAL	786	1,132				**2.21**	**/ .85 =**	**2.6**	
										Say 5 Art Classrooms
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	WORLD LANGUAGES		1.44							
WL0100	Chinese I	28	40	23	2	4	8	28	0.29	
WL0200 WL0230	Chinese II + Honors	45	65	23	3	4	12	28	0.43	
WL0300 WL0330	Chinese III + Honors	44	63	23	3	4	12.0	28	0.43	
WL0400 WL0430	Chinese IV + Honors	32	46	23	2	4	8.0	28	0.29	
WL0500 WL0530 WL0540	Chinese V + Honors + AP	20	29	23	2	4	8.0	28	0.29	
WL0600 WL0530 WL0640	Chinese VI + Honors + AP	4	6	23	1	4	4.0	28	0.14	
									1.86	
							1.9	**/ .85 =**	**2.2**	Chinese
WL1100	French I	33	48	23	2	4	8.0	28	0.29	
WL1220	French II	29	42	23	2	4	8.0	28	0.29	
WL1230	French II Honors	43	62	23	3	4	12.0	28	0.43	
WL1240	French II Advanced	25	36	23	2	4	8.0	28	0.29	
WL1320	French III	27	39	23	2	4	8.0	28	0.29	
WL1330	French III Honors	35	50	23	3	4	12.0	28	0.43	

WL1340	French III Advanced	17	24	23	1	4	4.0	28	0.14	
WL1420 WL1520	French IV Through Film	29	42	23	2	4	8.0	28	0.29	
WL1430	French IV Honors	32	46	23	2	4	8.0	28	0.29	
WL1440	French IV Advanced	20	29	23	2	4	8.0	28	0.29	
WL1530	French V Honors	21	30	23	2	4	8.0	28	0.29	
WL1540	AP French	25	36	23	2	4	8.0	28	0.29	
									3.57	
							3.6	**/ .85 =**	**4.2**	French
WL3100	Latin I	77	111	23	5	4	20.0	28	0.71	
WL3220 WL3330	Latin II + Honors	48	69	23	3	4	12.0	28	0.43	
WL3320 WL3330	Latin III + Honors	38	55	23	3	4	12.0	28	0.43	
WL3420 WL3430 WL3530 WL3540	Latin IV, V, + Honors + AP Latin Vergil	23	33	23	2	4	8.0	28	0.29	
									1.86	
							1.9	**/ .85 =**	**2.2**	Latin
WL4101	Beginner Spanish I	57	82	23	4	4	16.0	28	0.57	
WL4102 WL4130	Beginner Spanish II + Honors	42	60	23	3	4	12.0	28	0.43	
WL4220	Intermediate Spanish II	73	105	23	5	4	20.0	28	0.71	
WL4230	Intermediate Spanish II Honors	106	153	23	7	4	28.0	28	1.00	

WL4240	Spanish II Advanced	97	140	23	6	4	24.0	28	0.86	
WL4320	Spanish III	36	52	23	3	4	12.0	28	0.43	
WL4330	Spanish III Honors	86	124	23	6	4	24.0	28	0.86	
WL4340	Spanish III Advanced	87	125	23	6	4	24.0	28	0.86	
WL4420	Spanish IV Through Film	16	23	23	1	4	4.0	28	0.14	
WL4430	Spanish IV Honors	67	96	23	4	4	16.0	28	0.57	
WL4440	Spanish IV Advanced	78	112	23	5	4	20.0	28	0.71	
WL4520	Spanish V Through Film	10	14	23	1	4	4.0	28	0.14	
WL4530	Spanish V Honors	50	72	23	3	4	12.0	28	0.43	
WL4540	AP Spanish V Language & Culture	56	81	23	4	4	16.0	28	0.57	
WL4630	Medical Interpretation & Translation Spanish	7	10	23	1	4	4.0	28	0.14	
									8.43	
							8.4	**/ .85 =**	**9.9**	Spanish
WL5100	Japanese I	30	43	23	2	4	8.0	28	0.29	
WL5200 WL5230	Japanese II + Honors	25	36	23	2	4	8.0	28	0.29	
WL5300 WL5330	Japanese III + Honors	8	12	23	1	4	4.0	28	0.14	
WL5400 WL5430 WL5440	Japanese IV + Honors + AP	16	23	23	1	4	4.0	28	0.14	
									0.86	
							0.9	**/ .85 =**	**1.0**	Japanese

WL6630	Medical Interpretation & Translation Portugese	0	0	23	0	4	0.0	28	0.00	
	WORLD LANGUAGES SUBTOTAL	1642	2,364						16.57	
							16.57	**/ .85 =**	**19.5**	**Say 20 World Languages Classrooms (assumes shared across languages)**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

Basic Educational Space
for Planned Program

WINTHROP HOUSE

2600 STUDENTS
23 target / class size

	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	WINTHROP HOUSE									30 students (off site)
			0	23		4	0	28	0.00	
			0	23		4	0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
			0	23		4	0.0	28	0.00	
	WINTHROP HOUSE SUBTOTAL	0	0						0.00	
							0.00	**/ .85 =**	**0.0**	**Say__ Winthrop House Classrooms**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an									
	equivalent year classroom requirement.									

Brookline High School
SMMA No. 14030

7/31/2015

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	A		B	C	D	E	F	G	H	
Course No.	Subject	Current Students, per Subject	Projected Students, per Subject	Class Size	Sections	Sessions Per Week	Total Sessions	Periods Per Week	Total Stations Required	Comments
	TUTORIAL									
TU1000	BHS Tutorial 9	67	67	23	3	4	12	28	0.43	???
TU1100	METCO Academic Center	8	8	10	1	4	4	28	0.14	Dedicated room
TU1209S	African American Sch Sem 9 S1	7	7	23	1	2	2.0	28	0.07	Semester
TU1209S	African American Sch Sem 9 S2	8	8	23	1	2	2.0	28	0.07	Semester
TU1210 S	African American Sch Sem 10 S2	16	16	23	1	4	4.0	28	0.14	Semester
TU1210S	African American Sch Sem 10 S1	17	17	23	1	4	4.0	28	0.14	Semester
TU1212S	African American Sch Sem 12	18	18	23	1	4	4.0	28	0.14	
TU2000	BHS Tutorial 10	93	93	11	9	4	36.0	28	1.29	
									2.43	
	TUTORIAL HOUSE SUBTOTAL	234	234							
							2.43	**/ .85 =**	**2.9**	**Say 3 Tutorial Classrooms**
	Courses listed as "Semester" are adjusted to Full Time Equivalent (FTE). This is done by reducing "sessions per week" by half to give an equivalent year classroom requirement.									

TUTORIAL

Basic Educational Space
for Planned Program

SUMMARY

2600 STUDENTS
23 target / class size

		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)	Total Support Space SF	Comments
Core Academic											
EN	English	14	14	16	18	19	9805	17100		1260	
WL	World Languages	15	15	17	18	20	10865	18000		1175	
WL	Language Lab	1	1	1	1	1	1275	1275			
SO	Social Studies	11	11	12	14	15	7600	13500		800	
MA	Math	13	15	17	19	21	9125	18900		1490	
HF	Wellness	0	1	2	2	2	0	1800			needs review
	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?										
Special Education											
EN, MA, SO	Shared SPED Classrooms		4	5	5	5					
	Dedicated Classrooms	18	8			10	10855				Learning Centers (4), Comprehensive Learning Center, Small Group Room, Pathways, Excel (3), Rise, Community Based Classroom, Bridge, Transitions, and EDCO (3), LAHB
	Support Space	4					2200				SPED Administration, Rise/Community Office, Speech and Language, SPED Reading
EL	ELL	3	2	2	2	2	1210				small classrooms
Performing Arts											
PA	Choir / Choral		1	1	1	1	1025				
PA	Band/Orchestra/Jazz		1	1	1	1	1625				
PA	Piano		1	1	1	1	480				
PA	Practice Rooms	2					260				
PA	Dance		2	2	1	2					
PA	Drama		Aud	Aud	Aud	Aud					
PA	Back Stage		Scene Shop	Scene Shop	Scene Shop	Scene Shop	975				not driven by curriculum

PA	Black Box		1	1	1	1	1825				not driven by curriculum
PA	White Box		1	1	1	1	1675				not driven by curriculum
School Within a School											
SW	Classrooms		3	3	3	3	2145				2 classrooms if shared
SW	Lounge		1	1	1	1	640				
SW	Library		1	1	1	1	425				
Visual Arts											
VA	Art 2D		2	2	2	2					
VA	Art 3D		1	1	2	2					
VA	Photo / Graphics Lab		1	2	2	2					
VA	Jewlery		1	1	1	1					
VA	TV Production		1	1	1	1					
			6	**7**	**8**	**8**					
Business Finance IT Technology											
CE	Business Classroom		2	2	2	3					
CE	Early Childhood		0.5	0.6	0.6	0.6					
CE	Culinary		4	4	5	5					
CE	Wood		0.4	0.6	0.6	0.6					one lab, one classroom
CE	Auto		0.1	0.3	0.3	0.3					
CE	Technical Drawing / Engineering		0.4	0.5	0.5	0.6					
Health and Physical Education			Gym	Gym	Gym	Gym					7 teaching Stations
	Alternate PE		?			10 TS					
Tutorial											
TU	Small Rooms	3	3	3	4	?	2085				

Appendix

6.4 Traffic and Parking Assessment
Vanasse & Associates, Inc.

MEMORANDUM

TO:	Mr. Peter S. Glick, P.E. Senior Associate Symmes Maini & McKee Associates 400 Westminster Street Providence, RI 02903	**FROM:**	Mr. Jeffrey S. Dirk, P.E., PTOE, FITE Principal Vanasse & Associates, Inc. 35 New England Business Center Drive Suite 140 Andover, MA 01810-1066 (978) 474-8800 x830 jdirk@rdva.com
DATE:	July 13, 2015	**RE:**	7028
SUBJECT:	Traffic and Parking Assessment Brookline High School Master Plan Brookline, Massachusetts		

DRAFT

Vanasse & Associates, Inc. (VAI) has completed a Traffic and Parking Assessment in conjunction with the master planning effort for Brookline High School located at 115 Greenough Street in Brookline, Massachusetts (hereafter referred to as the "Project"). The purpose of this assessment is to document the following existing conditions baseline information as it relates to the Project: i) traffic volumes; ii) traffic operations; iii) safety considerations; iv) parking regulations; and v) parking supply and demand; along critical roadways and at intersections in the vicinity of the Project site. In addition, traffic volume projections have also been developed for the planned future expansion of the high school.

This assessment was prepared in consultation with the Town of Brookline and with information provided by Symmes Maini & McKee Associates; was performed in general accordance with the Massachusetts Department of Transportation (MassDOT) *Transportation Impact Assessment (TIA) Guidelines*; and was conducted pursuant to the standards of the Traffic Engineering and Transportation Planning professions.

Based on a review of the results of this assessment, we have noted the following:

Parking:

- Approximately 379 parking spaces are provided within the study area consisting of both on and off-street parking.
- On-street parking along the study area roadways is generally limited to school personnel and residents only with valid permit during weekdays between the hours of 7:00 AM to 3:00 PM.
- The observed peak parking demand within the study area was identified as 282 vehicles during the weekday morning peak period (9:30 to 10:30 AM) and 303 vehicles during the afternoon peak period (2:30 to 3:30 PM).

Traffic Operations:

- The two (2) signalized intersections within the study area were found to be operating at an overall level-of-service (LOS) of "B" or better during both the weekday morning and afternoon peak hours (peak traffic volume hours for the Project) where a LOS "D" or better is generally considered acceptable.

- Critical movements at the unsignalized intersections within the study area were also found to be operating at LOS B or better during both the weekday morning and afternoon peak hours.

Safety:

- Calculated crash rates at the study area intersections were found to be below MassDOT averages for a signalized or unsignalized intersection, as appropriate. The majority of the crashes occurring within the study area involved property damage only; occurred on a weekday; were reported as rear-end-type collisions; and were evenly distributed between school and non-school hours.

Traffic Volume Projections:

- With a projected increase in enrollment of 800 students and the addition of 30 teachers/staff, the increased student population and staffing is expected to result in approximately 890 additional vehicle trips on an average weekday (two-way traffic over the operational day of the school), with 224 additional vehicle trips expected during the weekday morning peak-hour and 150 additional vehicle trips expected during the weekday afternoon peak-hour.

The following details the results of the Traffic and Parking Assessment.

EXISTING CONDITIONS

A comprehensive field inventory of existing conditions within the study area was conducted in May and June 2015. The field investigation consisted of an inventory of existing roadway geometrics; pedestrian and bicycle facilities; parking regulations; parking supply and demand; public transportation services; traffic volumes; and operating characteristics; as well as posted speed limits and land use information within the study area. The study area was selected to contain the major roadways serving the Project site: Greenough Street, Tappan Street, Davis Avenue, Gorham Avenue, Stanton Road, Welland Road, Blake Road, Somerset Road, Sumner Road and Lowell Road; as well as 7 major intersections located along these roadways through which Project related traffic will travel which are listed below and shown on Figure 1:

1. Cypress Street at Tappan Street
2. Cypress Street at Davis Avenue
3. Tappan Street at Greenough Street and Sumner Road
4. Greenough Street at Davis Avenue
5. Greenough Street at Lowell Road
6. Tappan Street at Welland Road
7. Stanton Road at Welland Road

The following describes existing conditions within the study area.

Intersections

Table 1 and Figure 2 summarize lane use, traffic control, and pedestrian and bicycle accommodations at the study area intersections as observed in May and June 2015.

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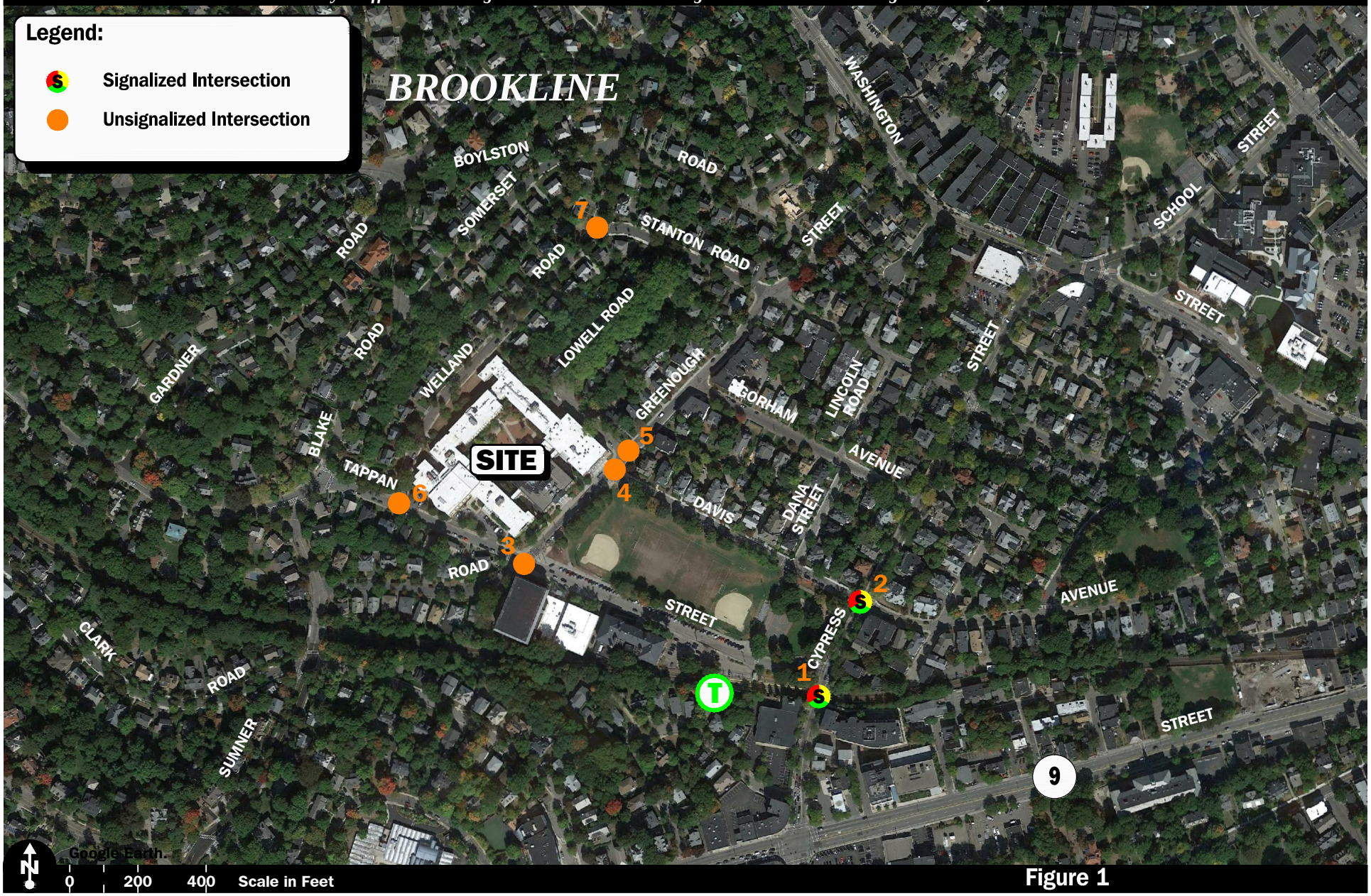

Figure 1

Site Location and Study Area Map

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Table 1
STUDY AREA INTERSECTION DESCRIPTION

No.	Intersection	Traffic Control Type[a]	No. of Travel Lanes Provided	Shoulder Provided? (Yes/No/Width)	Pedestrian Accommodations? (Yes/No/Description)	Bicycle Accommodations? (Yes/No/Description)
1.	Cypress Street/ Tappan Street	TS	1 per direction on Cypress Street; 1 left-turn lane and 1 right-turn lane on Tappan Street	No	Yes – Sidewalks along both sides of Cypress Street and Tappan Street; crosswalks for crossing south and west legs of intersection with concurrent pedestrian phasing with pushbutton actuation	Yes[b] – Bicycle lane and shared travelled-way on Cypress Street with "Sharrow" pavement markings; shared travelled-way on Tappan Street
2.	Cypress Street/ Davis Avenue	TS	1 per direction on Cypress Street with northbound left-turn lane; 1 per direction on Davis Avenue east of Cypress Street.	No	Yes – Sidewalks along both sides of Cypress Street and Davis Avenue; crosswalks for crossing all legs of intersection with concurrent pedestrian phasing with pushbutton actuation	Yes[b] – Bicycle lane and shared travelled-way on Cypress Street with "Sharrow" pavement markings; Shared travelled-way on Tappan Street
3.	Tappan Street/ Greenough Street/ Sumner Road	S	1 lane one-way direction on Tappan Street east and west of Greenough Street; 1 one-way northbound lane on Sumner Road; 1 one-way southbound lane on Greenough Street	No	Yes – Sidewalks along both sides of Tappan Street, Greenough Street and Sumner Road; crosswalks for crossing all legs of the intersection	Yes[b] - Shared travelled-way on Tappan Street, Greenough Street and Sumner Road
4.	Greenough Street/ Davis Avenue/	S	1 per direction on Greenough Street; 1 one-way westbound lane on Davis Avenue	No	Yes – Sidewalks along both sides of Greenough Street and Davis Avenue; crosswalks for crossing the south and east legs of the intersection	Yes[b] - Shared travelled-way on Greenough Street and Davis Avenue
5.	Greenough Street/ Lowell Road	S	1 per direction on both Greenough Street and Lowell Road	No	Yes – Sidewalks along both sides of Greenough Street and Lowell Road	Yes[b] - Shared travelled-way on Greenough Street
6.	Tappan Street/ Welland Road/	S	1 one-way westbound lane on Tappan Street; 1 one-way southbound lane on Welland Road	No	Yes – Sidewalk along both sides of Tappan Street and Welland Road; crosswalk for crossing the north leg of the intersection	Yes[b] - Shared travelled-way on Tappan Street
7.	Stanton Road/ Welland Road	S	1 per direction on Stanton Road and Welland Road	No	Yes – Sidewalk along both sides of Stanton Road and Welland Road	Yes[b] - Shared travelled-way on Welland Road south of Stanton Road

[a]TS = traffic signal control; S = STOP-sign control.
[b]Combined travel lane and shoulder width equals or exceeds 14 feet.

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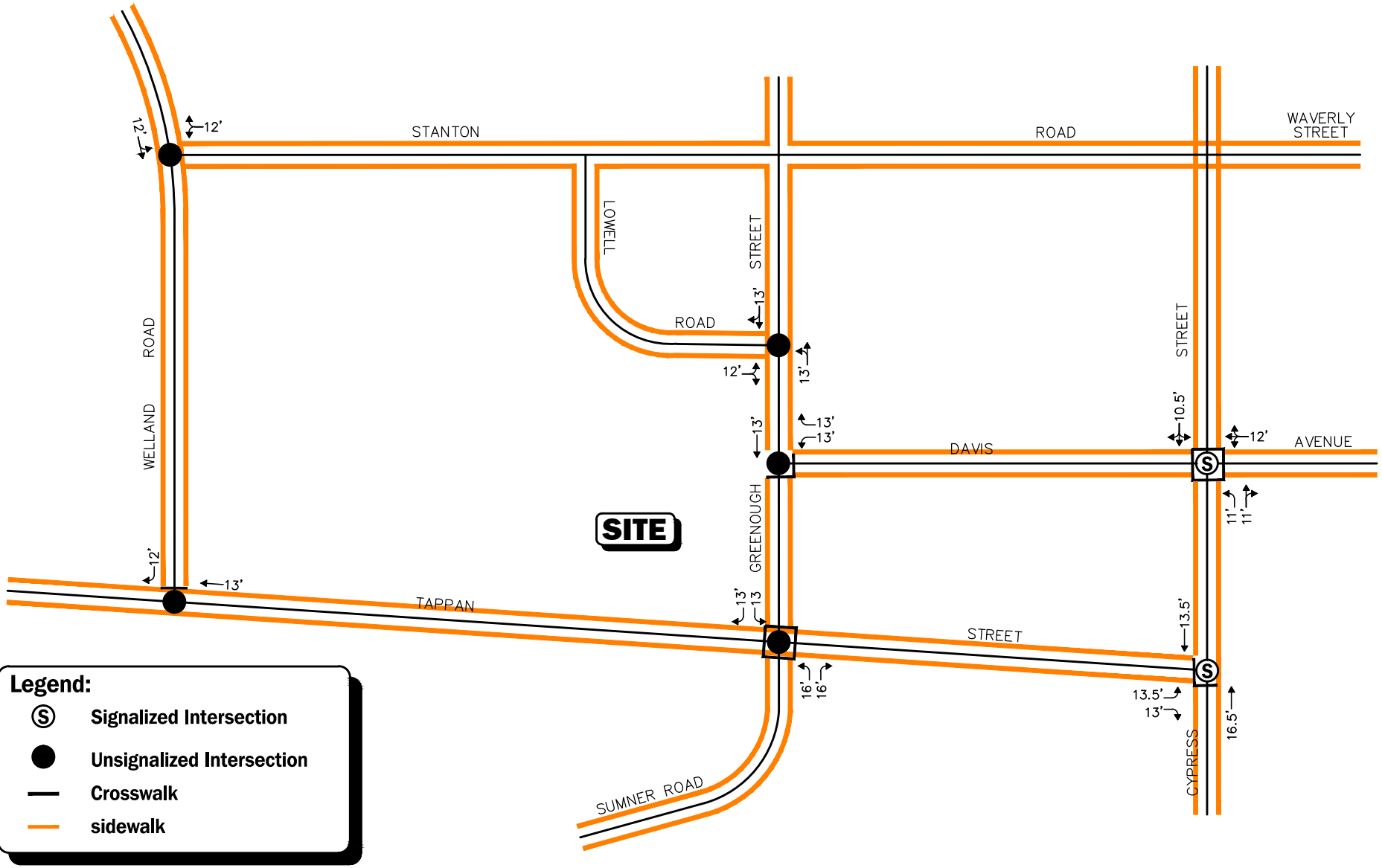

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Figure 2

Existing Intersection Control, Lane Use and Lane Width

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Traffic Volumes

In order to determine existing traffic-volume demands and flow patterns within the study area, manual turning movement counts (TMCs) and vehicle classification counts were completed in May 2015 while public schools were in regular session. The TMC's were performed at the study intersections during the weekday morning (7:30 to 8:30 PM) and afternoon (2:30 to 3:30 PM) peak hours. These time periods are representative of the peak traffic volume periods for the Project.

Seasonal Adjustment

In order to evaluate the potential for seasonal fluctuation of traffic volumes within the study area, MassDOT weekday seasonal traffic volume factors for Group 6 roadways (urban arterials, collectors & rural arterials, the MassDOT functional classification for Cypress Street) were reviewed.[1] Based on a review of this data, it was determined that traffic volumes for the month of May are approximately 9 percent above average-month conditions. In order to provide a conservative (above average) analysis condition, the May traffic volumes were not adjusted downward to average-month conditions. The 2015 Existing weekday morning and afternoon peak-hour traffic volumes are graphically depicted on Figures 3, and 4, respectively.

Parking Facilities

A comprehensive field inventory of existing parking facilities within the study area was undertaken in May and June 2015. The field inventory consisted of an inventory of the available parking supply, posted parking regulations and observed demands.

On-Street Parking Regulations

Figure 5 provides a summary of existing parking regulations within the study area. In general, parking is prohibited on weekdays along the majority of the roadways within the study area between the hours of 7:00 AM and 9:00 AM, or 7:00 AM and 10:00 AM. All roadways within the study area have a 2-hour parking limit except for vehicles displaying a Brookline School Department or resident parking permit.

Parking Demand Observations

Parking demand observations were conducted on Tuesday, May 19, 2015, during the morning (8:30 to 10:30 AM) and afternoon (2:30 to 4:30 PM) time periods in order to document existing parking demands within the study area. The observations were conducted in 1-hour intervals within the school parking lots (Tappan Street and Unified Arts Building) and along the following roadways:

1. Tappan Street between Blake Road and Cypress Street
2. Lowell Road between Greenough Street and Stanton Road
3. Welland Road between Somerset Road and Tappan Street
4. Blake Road between Somerset Road and Tappan Street
5. Somerset Road between Greenough Street and Blake Road
6. Stanton Road between Cypress Street and Welland Road
7. Gorham Avenue between Cypress Street and Greenough Street
8. Davis Avenue between Cypress Street and Greenough Street

[1] *MassDOT Traffic Volumes for the Commonwealth of Massachusetts;* 2013 Weekday Seasonal Factors; Group 6 – Urban Arterials, Collectors & Rural Arterials.

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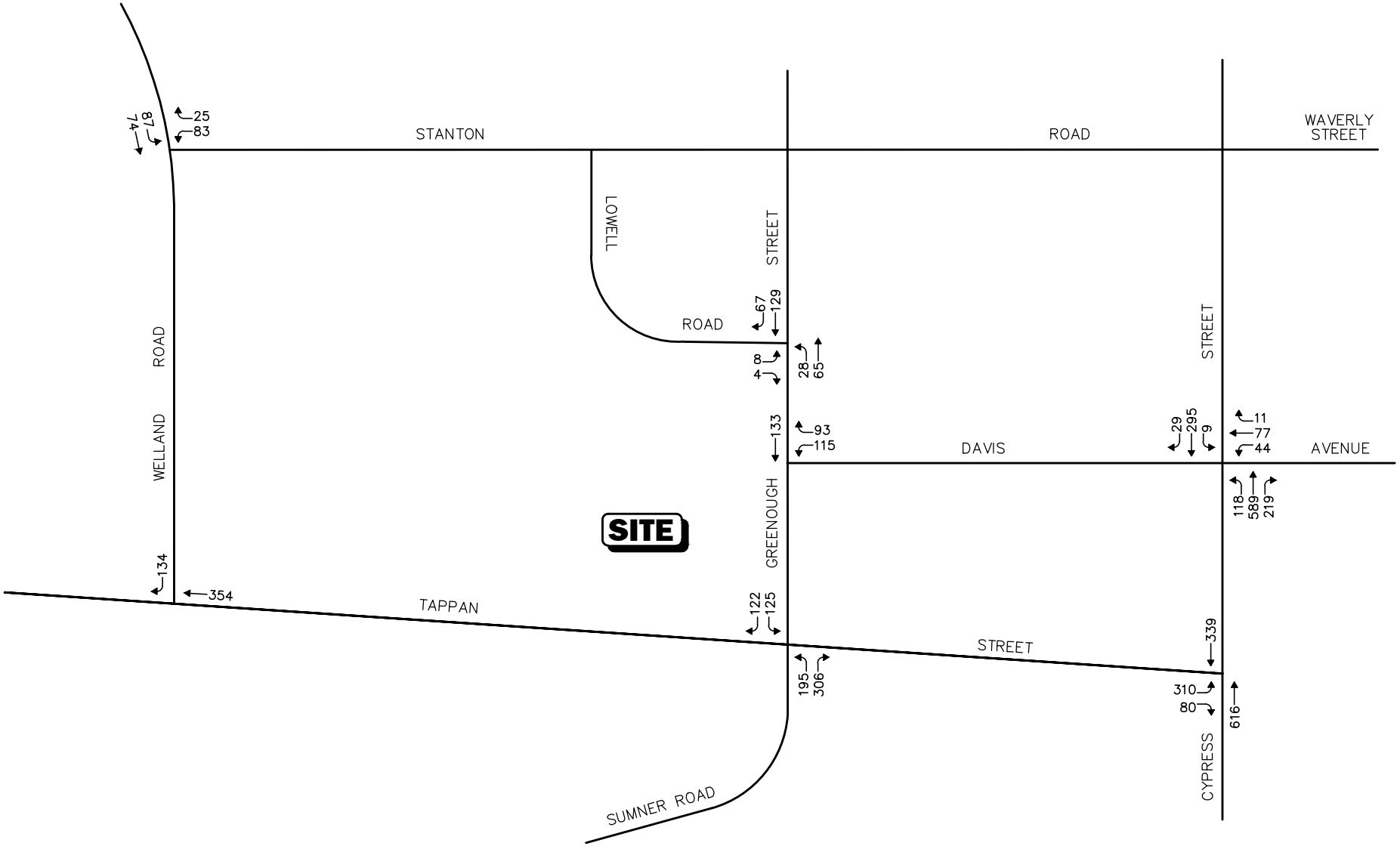

Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 3

2015 Existing Weekday Morning Peak Hour Traffic Volumes (7:30-8:30 AM)

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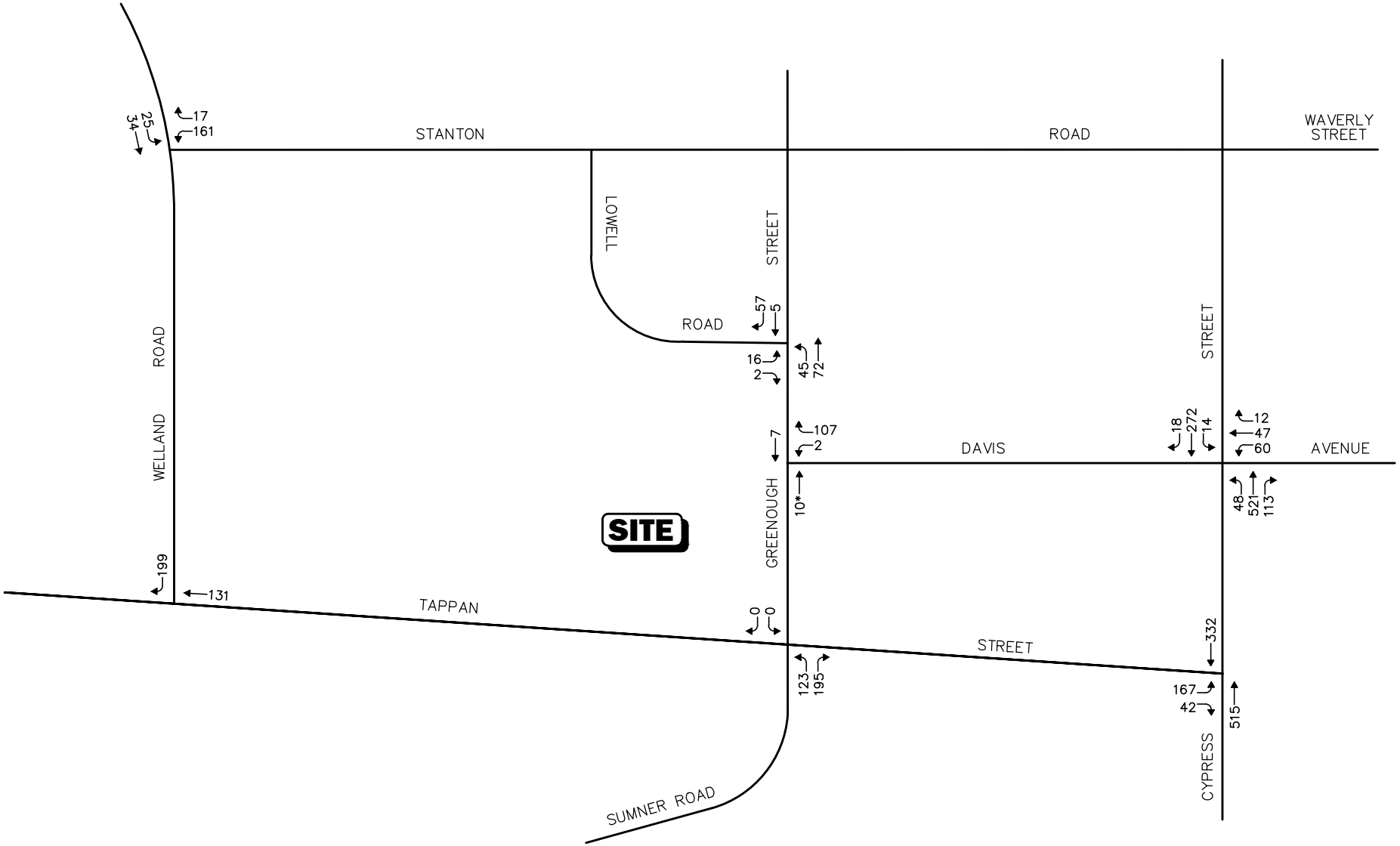

Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.
***Illegal movement**

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Figure 4

2015 Existing Weekday Afternoon Peak Hour Traffic Volumes (2:30-3:30 PM)

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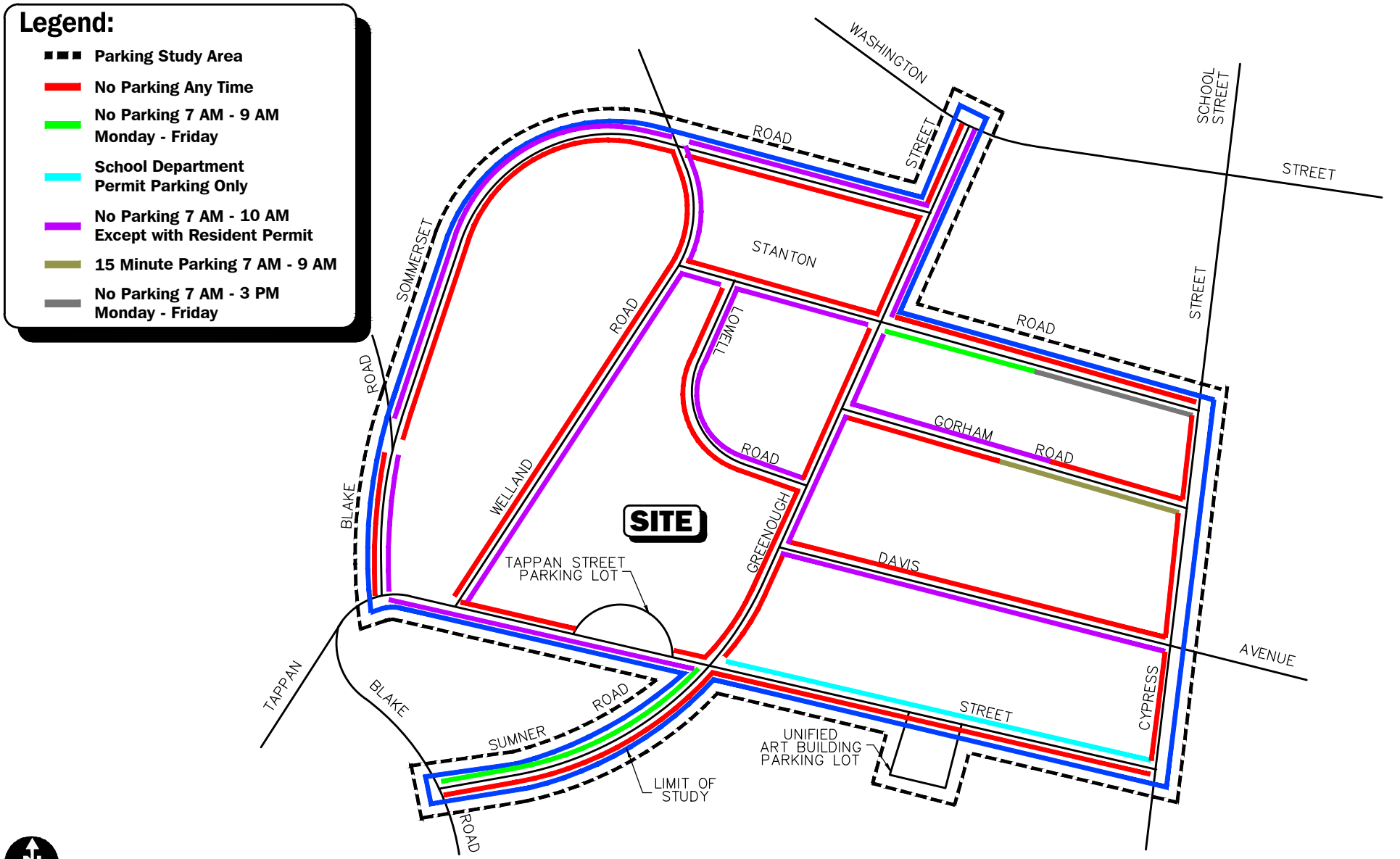

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Figure 5

Existing On-Street Parking Regulation Summary

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9. Greenough Street between Washington Street and Davis Avenue
10. Sumner Road between Blake Road and Tappan Street

Based on the field inventory, there are approximately 379 parking spaces provided within the study area consisting of 325 on-street parking spaces and 54 off-street spaces. Table 2 summarizes the results of the parking demand observations and the available parking supply by location.

Table 2
PARKING DEMAND OBSERVATIONS – MAY 19, 2015

	Number of Vehicles Parked				
	Weekday Morning		Weekday Afternoon		
Location	8:30 to 9:30 AM	9:30 to 10:30 AM	2:30 to 3:30 PM	3:30 to 4:30 PM	Number of Available Parking Spaces
1. Tappan Street between Blade Road and Cypress Street	53	50	60	59	54
2. Lowell Road between Greenough Street and Stanton Road	24	28	36	21	28
3. Welland Road between Somerset Road and Tappan Street	44	43	40	35	45
4. Blake Road between Somerset Road and Tappan Street	8	14	6	8	46
5. Somerset Road between Greenough Street and Blake Road	6	13	7	6	18
6. Stanton Road between Cypress Street and Welland Road	22	9	20	18	25
7. Gorham Avenue between Cypress Street and Greenough Street	20	17	14	17	21
8. Davis Avenue between Cypress Street and Greenough Street	33	32	35	31	33
9. Greenough Street between Washington Street and Davis Avenue	23	15	20	16	35

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Table 2 (Continued)
PARKING DEMAND OBSERVATIONS – MAY 19, 2015

Location	Number of Vehicles Parked				Number of Available Parking Spaces
	Weekday Morning		Weekday Afternoon		
	8:30 to 9:30 AM	9:30 to 10:30 AM	2:30 to 3:30 PM	3:30 to 4:30 PM	
10. Sumner Road between Blake Road and Tappan Street	1	18	18	15	20
11. Brookline High School Tappan Street Lot	10	12	15	13	15
12. Unified Arts Building Parking Lot	20	31	32	30	39
TOTAL	264	282	303	269	379

As can be seen in Table 2, a total of 264 vehicles were observed to be parked within the study area between 8:30 and 9:30 AM, with 282 vehicles parked between 9:30 to 10:30 AM. During the afternoon observation period, a total of 303 vehicles were observed to be parked within the study area between 2:30 to 3:30 PM, with 269 vehicles parked between 3:30 to 4:30 PM. The majority (approximately 80 percent) of the available parking spaces within the study area were found to be occupied during the observation period.

Public Transportation Services

The study area and the Project site are served by public transportation services provided by the Massachusetts Bay Transportation Authority (MBTA). The MBTA operates the Green Line D Branch and Bus Route 51, *Reservoir (Cleveland Circle) – Forest Hills Station*, within the study area. The Green Line D Branch provides access to the Town of Brookline via Longwood Station to the east and Reservoir Station to the west. The closest stop on the Green Line D Branch to the Project is located at Tappan Street, approximately 650 feet southeast of the Project site. Service on the Green Line D Branch is provided Monday through Thursday between 4:56 AM and 12:46 AM; on Friday between 4:56 AM and 2:25 AM; on Saturday between 4:55 AM and 2:25 AM;, and on Sunday between 5:25 AM and 12:48 AM. MBTA Route 51 bus provides scheduled service between Brookline High School and Forest Hills Station via South Brookline at 3:05 PM on school days.

The MBTA service schedules and fare information are included in the Appendix.

Motor Vehicle Crash Data

Motor vehicle crash information for the study intersections was provided by the MassDOT Highway Division Safety Management/Traffic Operations Unit for the most recent five-year period available (2008 through 2012, inclusive) in order to examine motor vehicle crash trends occurring within the study area. The data is summarized by intersection, type, severity, and day of occurrence, and presented in Table 3.

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Table 3
MOTOR VEHICLE CRASH DATA SUMMARY[a]

	Cypress Street/ Tappan Street	Cypress Street/ Davis Avenue	Tappan Street/ Greenough Street/ Summer Road	Greenough Street/ Davis Avenue	Greenough Street/ Lowell Road	Tappan Street/ Welland Road	Stanton Road/ Welland Road
Traffic Control Type[b]:	TS	TS	U	U	U	U	U
Year:					0	0	1
2008	0	1	2	0	0	0	0
2009	1	0	0	0	0	0	0
2010	0	1	0	0	0	0	0
2011	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0
Total	1	2	2	0	0	0	1
Average	0.20	0.40	0.40	0.40	0.00	0.00	0.20
Rate[c]	0.04	0.09	0.13	0.00	0.00	0.00	0.18
MassDOT Crash Rate[d]	0.80/0.76	0.80/0.76	0.60/0.58	0.60/0.58	0.60/0.58	0.60/0.58	0.60/0.58
Significant?[e]	No	No	No	No	No	No	No
Severity:							
Property Damage Only	1	0	2	0	0	0	1
Personal Injury	0	2	0	0	0	0	0
Fatal	0	0	0	0	0	0	0
Total	1	2	2	0	0	0	1
Type:							
Angle	1	0	0	0	0	0	0
Rear-End	0	2	1	0	0	0	0
Head-On	0	0	0	0	0	0	0
Fixed Object	0	0	0	0	0	0	0
Sideswipe	0	0	1	0	0	0	0
Bicyclists	0	0	0	0	0	0	0
Unknown/Other	0	0	0	0	0	0	1
Total	1	2	2	0	0	0	1
Day of Week:							
Monday through Friday	1	2	2	0	0	0	0
Saturday	0	0	0	0	0	0	0
Sunday	0	0	0	0	0	0	1
Total	1	2	2	0	0	0	1
Time of Day:							
School Hours	1	1	1	0	0	0	0
Other	0	1	1	0	0	0	1
Total	1	2	2	0	0	0	1

[a]Source: MassDOT Safety Management/Traffic Operations Unit records, 2008 through 2012.
[b]Traffic Control Type: TS = traffic signal; U = unsignalized.
[c]Crash rate per million vehicles entering the intersection.
[d]Statewide/District crash rate.
[e]The intersection crash rate is significant if it is found to exceed the MassDOT statewide or District crash rate for the MassDOT Highway Division District in which the intersections are located (District 6).

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As can be seen in Table 3, the calculated motor vehicle crash rates (average number of motor vehicle crashes reported per year per million vehicles travelling through the intersection) at all of the study intersections were found to be below both the MassDOT statewide and District averages for a signalized or unsignalized intersection, as appropriate, for the MassDOT Highway Division District in which the intersections are located (District 6). The majority of the crashes occurring within the study area involved property damage only; occurred on a weekday; were reported as rear-end-type collisions; and were evenly distributed between school and non-school hours. No fatal motor vehicle crashes were reported at the study intersections over the five-year review period. The detailed MassDOT Crash Rate Worksheets are provided in the Appendix.

TRAFFIC OPERATION ANALYSIS

In order to evaluate existing traffic operations at the study intersections, a detailed traffic operations analysis was completed under 2015 Existing traffic volume conditions. In brief, six levels of service are defined for each type of facility. They are given letter designations ranging from "A" to "F", with a level-of-service (LOS) "A" representing the best operating conditions and a LOS "F" representing congested or constrained operations. A LOS "E" is representative of a transportation facility that is operating at its design capacity with a LOS "D" generally defined as the limit of "acceptable" traffic operations. Since the level-of-service of a traffic facility is a function of the flows placed upon it, such a facility may operate at a wide range of levels of service depending on the time of day, day of week, or period of the year.

The Synchro™ intersection capacity analysis software, which is based on the analysis methodologies and procedures presented in the 2010 *Highway Capacity Manual* (HCM),[2] was used to complete the level-of-service and vehicle queue analyses. For signalized intersections, the level-of-service was calculated using the Percentile Delay Method implemented as a part of the Synchro™ 8 software as suggested by MassDOT in order to compensate for errors found when employing the 2010 *Highway Capacity Manual* methodology as a part of the software.

The results of the traffic operations analyses are graphically depicted on Figures 6 and 7 for the weekday morning and afternoon peak hours, respectively. The level-of-service for each individual movement/lane group along with the overall level-of-service for each intersection is presented on the aforementioned figures. The detailed analysis worksheets are provided in the Appendix.

2015 Existing Conditions Analysis Summary

Signalized Intersections

The two (2) signalized intersections within the study area were shown to operate at an overall LOS B or better during the weekday morning and afternoon peak hours where LOS "D" or better is considered acceptable.

Unsignalized Intersections

Each movement at the unsignalized intersections within the study area were also shown to operate at LOS B or better during the weekday morning and afternoon peak hours.

[2] *Highway Capacity Manual*, Transportation Research Board; Washington, DC; 2010.

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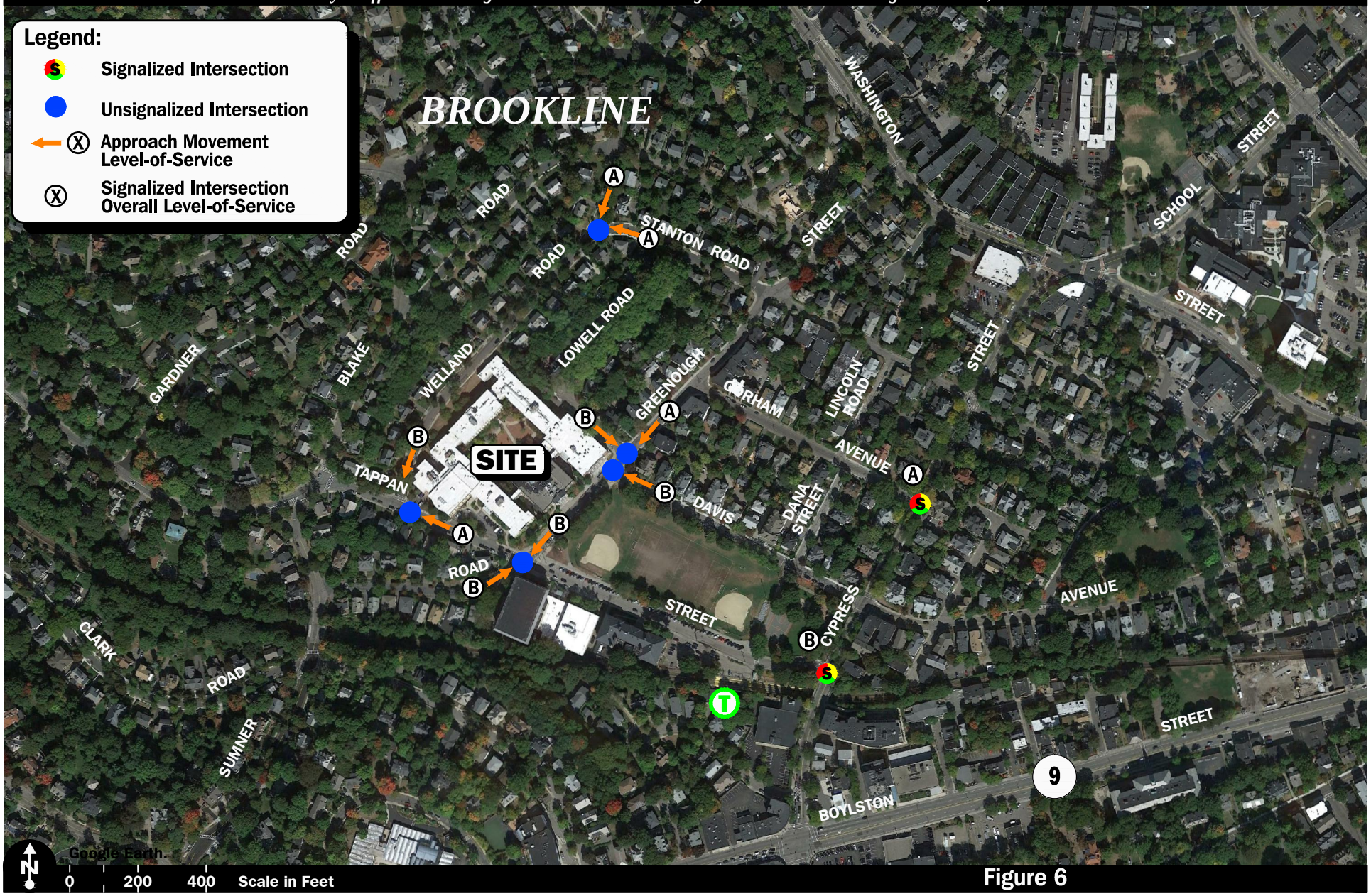

Figure 6

2015 Existing Weekday Morning Peak Hour Level-of-Service Summary

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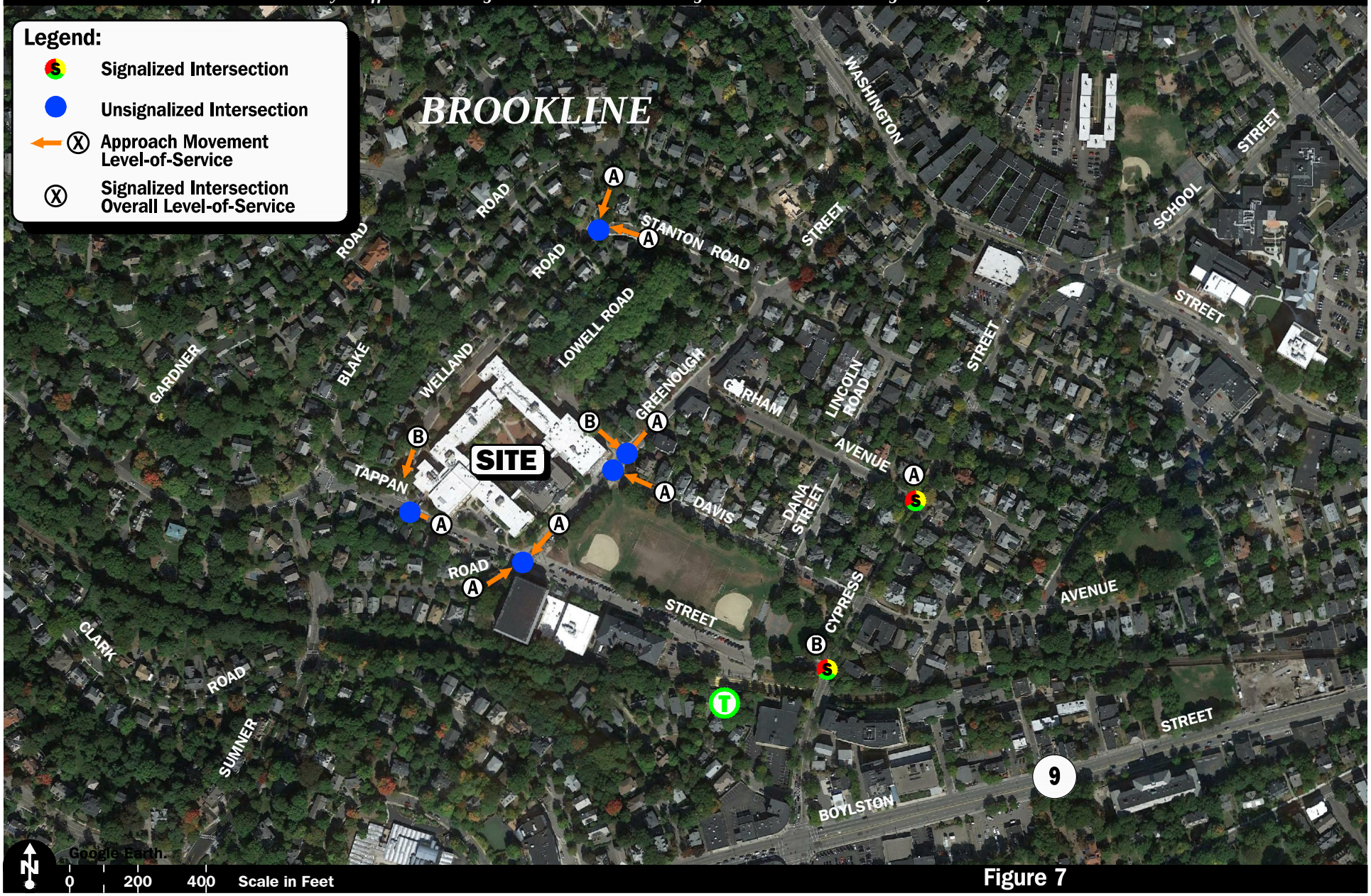

Figure 7

2015 Existing Weekday Afternoon Peak Hour Level-of-Service Summary

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BROOKLINE HIGH SCHOOL BASELINE CONDITIONS

Currently, Brookline High School has an enrollment of approximately 1,800 students with 260 teachers/staff. School starts at 8:20 AM, with dismissal at 2:50 PM. The segment of Greenough Street proximate to the main entrance to the high school is closed to traffic between the hours of 8:00 AM and 4:00 PM. There are two parking lots provided for the high school: one located along the north side of Tappan Street adjacent to the high school and the other located along the south side of Tappan Street next to the Unified Art Building. On-street parking by permit is available for teachers/staff in the vicinity of the high school.

Travel Modes

Teachers/Staff

Based on information provided by the Brookline School Department, teachers/staff arrive by private automobile, take public transportation or walk to the school. Currently, Brookline High School employs approximately 260 teachers/staff, of which approximately 125 drive to work and park within the designated school parking lots or on the surrounding streets with a valid school department parking permit. The remaining teachers/staff use public transportation (Green Line D Branch) or walk to work.

Students

Students are dropped off/picked up by parents/caregivers, use public transportation, walk/bicycle or arrive by private automobile. A review of information provided by the Brookline School Department indicates that a small number of students drive to school and park along surrounding streets, with the majority of students transported by parents/caregivers and the balance using public transportation, bicycling or walking. A review of the existing traffic volume data indicates that the primary automobile travel route for students to the high school campus is via Sumner Road, Greenough Street and Welland Road. The Brookline Hills Green Line subway station provides public transportation access for students.

PROJECT TRIP-GENERATION

Projections provided by the Brookline School Department indicate that student enrollment at Brookline High School is expected to increase from 1,800 students to 2,600 students by 2025, or an increase of 800 students, with an additional 30 teachers/staff. In order to develop the traffic characteristics that may be associated with the projected increase in the student population, trip-generation statistics published by the Institute of Transportation Engineers (ITE)[3] for a similar land use as that proposed were used. The ITE provides trip-generation information for various types of land uses developed as a result of scientific studies that have been conducted over the past 50 plus years. Based on a review of the ITE trip-generation database and the land use characteristics of the Project, ITE Land Use Code (LUC) 530, *High School*, was used to develop the traffic characteristics of the Project.

Given: i) the limited number of parking spaces available for teachers/staff and students; ii) the availability of public transportation; and iii) accessibility of the school by pedestrians and bicycles; it is expected that a portion of the trips generated by the additional students, teachers and staff will be made by public transportation or will include pedestrian/bicycle trips. In order to account for the use of alternative modes of transportation to private automobile, it was assumed that approximately 15 percent of trips will be

[3] *Trip Generation*, 9th Edition; Institute of Transportation Engineers; Washington, DC; 2012.

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made using public transportation, with 10 percent assumed to be pedestrian trips and 10 percent assumed to be made by bicycle.

Table 4 summarizes the anticipated traffic characteristics of the Project using the above methodology.

Table 4
BROOKLINE HIGH SCHOOL
TRIP-GENERATION SUMMARY

Time Period/Direction	Brookline High School (800 Students)[a]
Average Weekday Daily:	
Entering	445
Exiting	445
Total	890
Weekday Morning Peak Hour:	
Entering	174
Exiting	50
Total	224
Weekday Afternoon Peak Hour:	
Entering	36
Exiting	114
Total	150

[a]Based on ITE LUC 530, *High School.*

As shown in Table 4, the projected increase in the student population and the increased teacher/staffing level is expected to result in approximately 890 additional vehicle trips on an average weekday (two-way traffic over the school day, or 445 vehicles entering and 445 exiting), with 224 additional vehicle trips expected during the weekday morning peak-hour (174 vehicles entering and 50 exiting) and 150 additional vehicle trips (36 vehicles entering and 114 exiting) expected during the weekday afternoon peak-hour.

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SUMMARY

VAI has completed a Traffic and Parking Assessment in conjunction with the master planning effort for Brookline High School located at 115 Greenough Street in Brookline, Massachusetts. The purpose of this assessment was to document the following existing conditions baseline information as it relates to the Project: i) traffic volumes; ii) traffic operations; iii) safety considerations; iv) parking regulations; and v) parking supply and demand; along critical roadways and at intersections in the vicinity of the Project site. In addition, traffic volume projections were also ~~been~~ developed for the planned future expansion of the high school.

Based on a review of the results of this assessment, we have noted the following:

Parking:

- Approximately 379 parking spaces are provided within the study area consisting of both on and off-street parking.
- On-street parking along the study area roadways is generally limited to school personnel and residents only with valid permit during weekdays between the hours of 7:00 AM to 3:00 PM.
- The observed peak parking demand within the study area was identified as 282 vehicles during the weekday morning peak period (9:30 to 10:30 AM) and 303 vehicles during the afternoon peak period (2:30 to 3:30 PM).

Traffic Operations:

- The two (2) signalized intersections within the study area were found to be operating at an overall LOS of "B" or better during both the weekday morning and afternoon peak hours (peak traffic volume hours for the Project) where a LOS "D" or better is generally considered acceptable.
- Critical movements at the unsignalized intersections within the study area were also found to be operating at LOS B or better during both the weekday morning and afternoon peak hours.

Safety:

- Calculated crash rates at the study area intersections were found to be below MassDOT averages for a signalized or unsignalized intersection, as appropriate. The majority of the crashes occurring within the study area involved property damage only; occurred on a weekday; were reported as rear-end-type collisions; and were evenly distributed between school and non-school hours.

Traffic Volume Projections:

- With a projected increase in enrollment of 800 students and the addition of 30 teachers/staff, the increased student population and staffing is expected to result in approximately 890 additional vehicle trips on an average weekday (two-way traffic over the operational day of the school), with 224 additional vehicle trips expected during the weekday morning peak-hour and 150 additional vehicle trips expected during the weekday afternoon peak-hour.

cc: BG, File

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