

Perkins&Will

STONEHAM HIGH SCHOOL
Feasibility Study
Community Forum 01

8.11.2020

Community Forum 01

AGENDA

INTRODUCTION

PDP FEASIBILITY STUDY SCOPE

MSBA PROCESS AND SCHEDULE

EDUCATIONAL VISIONING RECAP

EXISTING SCHOOL CONDITIONS

DISCUSSION



SCHOOL COMMITTEE MEMBERS

Marie Christie	Co-Chair	Jeanne Craigie	Town Moderator
David Bois	Co-Chair	Lisa Gallagher	Middle School Admin.
Raymie Parker	Chair Select Board	Kevin Yianacopolus	High School Facilities
Nicole Nial	School Committee Member	Albert Talarico	Community Member
Cory Mashburn	Finance and Advisory Board	Douglas Gove	Community Member
Dennis Sheehan	Town Administrator	Stephen O'Neill	Community Member
John Macero	Superintendent of Schools	Josephine Thomson	Community Member
Bryan Lombardi	High School Principal	Sharon Iovanni	Community Member
David Pignone	Athletic Director	Paul Ryder	Community Member
Brian McNeil	Town Facilities Director		

ARCHITECT Perkins and Will

OPM Symmes Maini and McKee Associates

Perkins&Will

PROCESS AND SCHEDULE

Community Forum 01

MASSACHUSETTS SCHOOL BUILDING AUTHORITY (MSBA)

- **MSBA** is an independent public authority that administers and funds a program for grants to eligible cities, towns, and regional school districts for school construction and renovation projects.
- **MSBA** mandates a multi-step rigorous study and approval process
- **MSBA** will fund **52.06%** plus incentives of eligible project cost for an approved project if accepted by the voters of Stoneham

PDP FEASIBILITY STUDY SCOPE

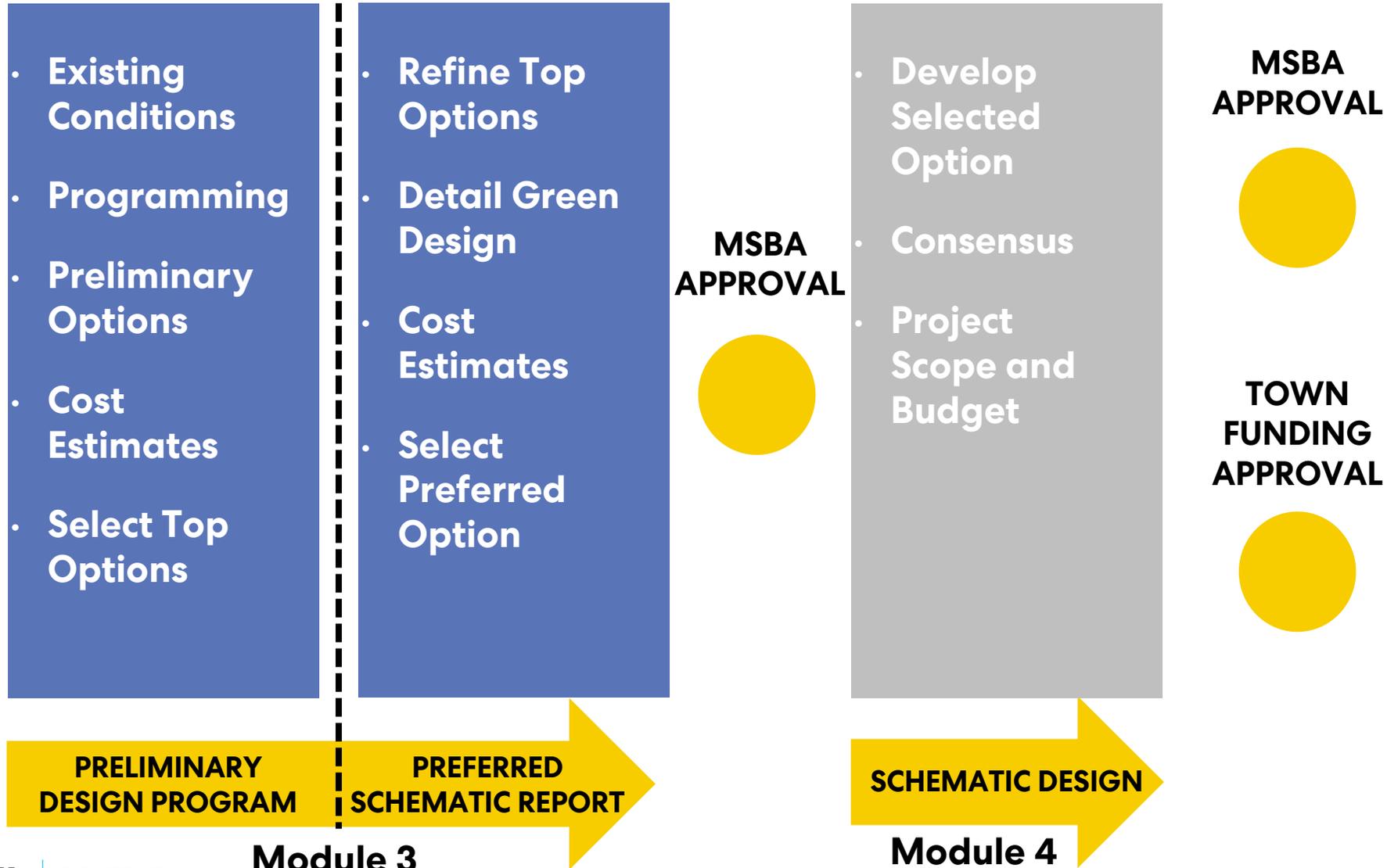
The MSBA has agreed to participate with Stoneham in a feasibility study for a **695** student High School.

Scope items include:

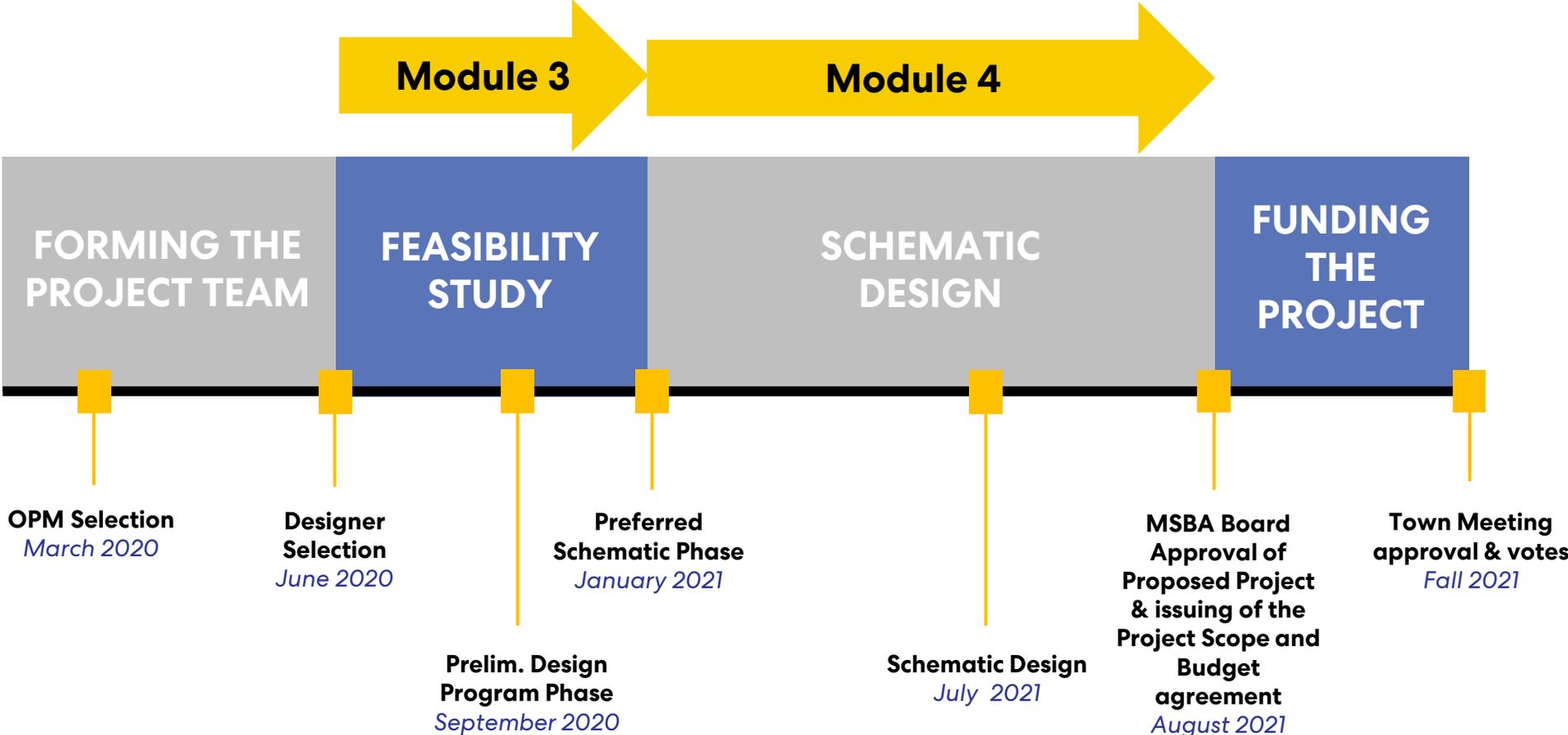
- Educational Visioning
- Existing Conditions Review
- Sustainable Design Achievement
- Design Alternatives
 - Renovation
 - Renovation / Addition
 - All New Construction
- Cost Estimates



MSBA PROCESS / FEASIBILITY STUDY AND SCHEMATIC DESIGN PHASES



PROJECT SCHEDULE



Perkins&Will

EDUCATIONAL VISIONING RECAP

Community Forum 01

Perkins&Will

TWO WEEKS / 8 DAYS

07.20.2020 – 07.31.2020



Virtual Visioning for Stoneham High School

Purpose

- To virtually bring together a group of important Stoneham High School stakeholders to look to innovations and future thinking to explore, discuss and influence the best possible solutions for an extraordinary future ready new facility.
- This work was done over eight days in order to make a real difference in the planning of the SHS to have a positive impact on teaching and learning!

Desired Outcomes

- What are the guiding principles that drive design thinking?
- What are the essential characteristics of the “new” Stoneham High School?
- What is the educational program that will support teaching, learning and your community?
- How does the new High School support the Community?

Means of Communication



Visit the Website:

envisionshs.squarespace.com

password: Spartan

Email Us:

envisionstoneham@gmail.com

Session Topics

2 Weeks / 8 days

WEEK 1

Day 1

Where Have We
Been and Where
Are We Going?

Day 2

Future Ready

Day 3

Planning Concepts

Day 4

Learning about
Exterior Space
Needs

WEEK 2

Day 5

Critical Adjacencies

Day 6

Learning from
Subject Matter
Experts

Day 7

Sustainability – Net
Zero Energy /
Carbon Neutral

Day 8

Hearing from the
Community

Recapping Our Two Weeks Together



Week 1 Recap: Day 1 / Where have we been and where are we going? / Visual Listening

DAY 1 Welcome / Where Have We Been and Where Are We Going?

MONDAY

7.20

AGENDA

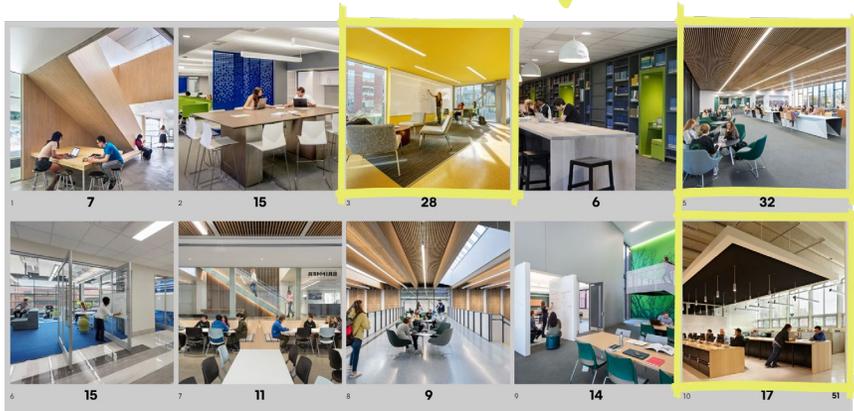
1. Welcome
 - Project schedule
 - Purpose and desired outcomes / Rules of engagement / Rules for feedback
2. Where Have We Been?
3. Where Are We Going?
4. Activity: Visual Listening

ACTIVITY: Visual Listening

HOMEWORK: Virtual Scavenger Hunt

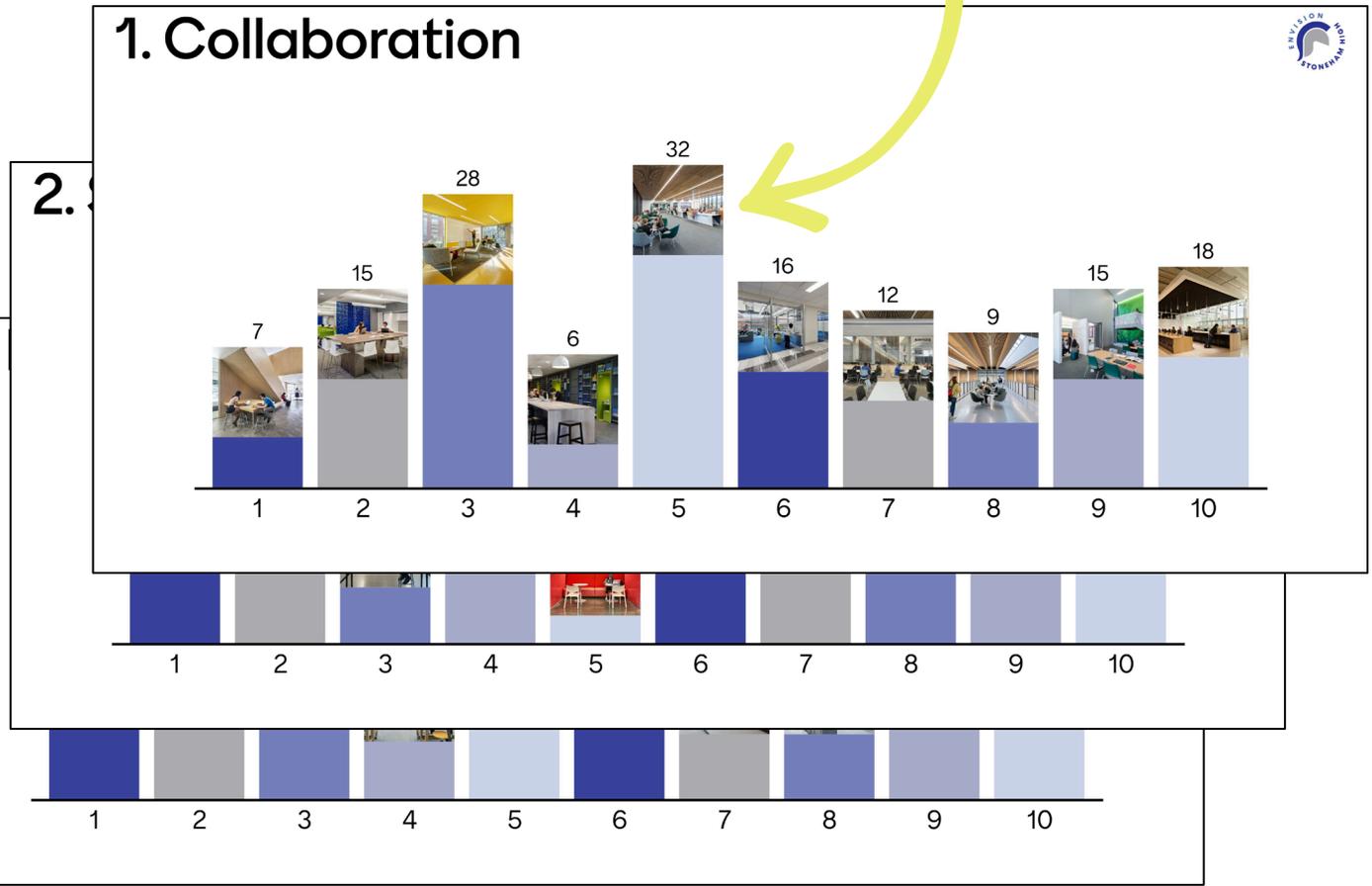
Presentation Slides

Session Recording



You showed us the spaces you liked!

1. Collaboration



Week 1 Recap: Day 1 / Where have we been and where are we going? / Virtual Scavenger Hunt

Rebekah Brooks <rbrooks@stonehamschools.org>
To: envisionstoneham@gmail.com

Tue, Jul 21, 2020 at 7:47 PM

Hi,

Below I have provided a mixture of images from a Google search along with the importance of classroom design specifically. Under each link/image, I have put most important aspects from my perspective as an English teacher.

1. Edutopia: <https://www.edutopia.org/article/flexible-classrooms-research-science>
"Biggest take away is the importance of flexibility and ownership: "The part of a full quarter of that improvement."
2. Classroom Design Elements to Inspire: <https://blog.worthingtondirect.com/inspire-productivity/>
"Most important is in relation to wall design. We do not want wasted wall technology/displays/projectors while also providing magnetic whiteboard stand engagement. Areas to display work and resources like student-created anchor charts."
3. 
"Open whiteboard panels to encourage student engagement and self-direction they provide flexibility for more space for learning to spill out past the walls of one wall of the room, it would be nice if some of the cabinets were open to display books to be visible in a classroom."
- 4.

Maya Ibrahim <mibrahim2023@stonehamschools.org>
To: envisionstoneham@gmail.com

Tue, Jul 21, 2020 at 7:47 PM




Alison Holland <holland1210@yahoo.com>
To: "envisionstoneham@gmail.com" <envisionstoneham@gmail.com>

Wed, Jul 22, 2020 at 11:35 AM



This is a photo of a high school greenhouse and living lab. Students could grow plants and produce for life science classes, culinary classes and to be sold at the town's farmers market. I see this as a multidisciplinary tool - science, business, economics and culinary. It could be used by the community as well.



An open science lab with lots of natural light. Students can move freely through the space and collaborate with classmates.

T Lawler <taraanne04@comcast.net>
To: "envisionstoneham@gmail.com" <envisionstoneham@gmail.com>

Wed, Jul 22, 2020 at 12:09 PM

Cory Mashburn <cory.mashburn910@gmail.com>
To: envisionstoneham@gmail.com

Wed, Jul 22, 2020 at 8:46 AM

Sarah Fitzpatrick <sfitzpatrick@stonehamschools.org>
To: envisionstoneham@gmail.com

Wed, Jul 22, 2020 at 11:27 AM

Lisa Gallagher <lgallagher@stonehamschools.org>
To: envisionstoneham@gmail.com

Wed, Jul 22, 2020 at 9:09 AM

Stephen O'Neill <soneill@hayner-swanson.com>
To: envisionstoneham@gmail.com

Tue, Jul 21, 2020 at 3:01 PM

To whom it may concern,

Congratulations and thanks for motivating me...I never got my homework done early when I was a student! But I guess when it's a pretty exciting assignment, it doesn't quite feel like homework. After getting sucked into, and eventually extricating myself from, the Google vortex, these are some images that came across that sparked my interest and illustrate some of my desires and aspiration for the new Stoneham High School. I apologize if I've gone overboard and offered more than the assignment requested.

- Main School Entrance – I would like the arrival experience at the new Stoneham High School to be impactful and to make a bold statement before even entering the school. (Sorry if I've infringed on any copyright protections in "borrowing" images of the Ballou Senior High School, the Bishop Lynch High School Center for Advancement and Academics and the Manor Senior High School. I couldn't help myself...beautiful work!)
- School Lobby – I would like the lobby to be open, bright and welcoming and to present clear direction to visitors immediately upon entering.
- STEM Spaces – As an engineer, I have a special affinity for STEM programs and hope that we provide flexible teaching / lab spaces for the full spectrum of the sciences and related extracurricular activities. But recognizing the importance of arts as well, I hope we put the **A** into **STEAM** with spaces that accommodate the broad spectrum of the arts as well...humanities, language arts, dance, drama, music, visual arts, design and new media.
- Outdoor Athletic Facilities – I hope to take advantage of our abundant campus to provide a state of the art athletic complex that will support the full spectrum of the high school's health and wellness programs, interscholastic athletics, and intramural and extracurricular activities. As important, I hope that these facilities will be availed outside of school hours and summers to the greater community and the town's many youth sports programs. To this end, I would champion one or more synthetic turf fields to allow the town to maximize the hours of use the athletic fields can support.
- Early Childhood Education – Let's not forget the little ones. Understanding the district's giving consideration of consolidating its Pre-K and K program, if that gains traction, let's provide great, cheerful spaces with lots of natural light and adjacent outdoor play spaces.

Most important and if nothing else, I hope the new high school and all of its spaces are welcoming, bright, open, airy and contemporary, a place that is 180° from the dank, dark, dreary and dated facility that is today's SHS. No matter what form or shape it takes, I hope that together we create a facility that is the crowning jewel in the town's extraordinary investment in its school facilities over the past 20 years; facilities that the town, its children and its educators so richly deserve.

Parker, Raymie <parker@stoneham-ma.gov>
To: "envisionstoneham@gmail.com" <envisionstoneham@gmail.com>

Tue, Jul 21, 2020 at 12:35 PM





Angela Billings <abilings@stonehamschools.org>
To: envisionstoneham@gmail.com

Tue, Jul 21, 2020 at 12:35 PM



I chose this first picture of the turf field as a vision for what will be at the new high school turf field. We are the only town in the entire Middlesex League (12 towns) that does not have multiple turf fields. Not only can the field be used by the high school teams but leagues. Also, many of our soccer and lacrosse games get canceled or moved to the rain/flooding from previous days. This will not happen with a new field with better drainage. The field can also be used for band performances, charity walks around the track, and other community events.



I chose this picture to represent the vision of the new high school because I love the feeling to the campus. Students would feel welcome and could more easily participate

Michael Quigley <mquigley@ebengineering.com>
To: "envisionstoneham@gmail.com" <envisionstoneham@gmail.com>

Tue, Jul 21, 2020 at 12:35 PM

Hi!

I've attached three images. The first two likely aren't what you envisioned for the exercise, but I went with it anyways 😊.

Image 1 (from forhealth.org) - Student Health -> Student Thinking -> Student Performance. The building plays a primary role in Students Health and Health translates directly to Performance. Students spend 1000+ hours per year inside the building so we need to make it as healthy as possible throughout the building.

Image 2 - 9 foundations of a healthy building from forhealth.org. I have no doubt that P+W will design a beautiful building that is functional and sustainable. My goal in participation is to highlight the importance of making it healthy as well. I know that's in line with P+W's philosophy, which is why I chose to use P+W was selected to design SHS!

Image 3 - I'm sure will look familiar to you, it's from the P+W website. I chose this space because it's open and airy, has clear views to nature and trees, and has lots of natural daylighting. The space looks like it could also serve multiple functions: classwork, project work, meeting, dining, exhibitions, etc.

Thanks
Mike

Iovanni, Sharon <Sharon.Iovanni@stonehambank.com>
To: "envisionstoneham@gmail.com" <envisionstoneham@gmail.com>

Tue, Jul 21, 2020 at 10:08 PM



These desks are quite adaptable - I've seen these in use at Malden Catholic and actually sat in one - they are easily moveable, comfortable and flexible! They would allow students and teachers to work in teams, individually or in any configuration.

Thanks for sharing these inspiring images!

So much detail!

Week 1 Recap: Day 1 / Where have we been and where are we going?

WHAT WE LEARNED:

1/ Who is Generation Alpha

2/ Interdisciplinary, project based, pathways

3/ Create meaningful connections

4/ Mix programs, technologies, people, spaces, functions

5/ Offer choice of activities; space adapt to needs

6/ Provide opportunities to collaborate

7/ For the people and the community

Week 1 Recap: Day 2 / Future Ready / Most Important Concepts

Learning about history + programs and facilities

You ranked the important issues around teaching and learning!

What is most important to teaching and learning at our future school?
Pick THREE most important issues, NO ORDER.

GROUP NAME:

PART 1: HISTORY + PROGRAMS

NAME OF ISSUE	WHY?
8. Relationships: Dunbar's Law, Magic of 150	- If you walk into Stoneham right now, it's like a prison - very little interaction; We need spaces that foster more student engagement and discussion, ready for the Real World, able to discuss ideas to large groups. 150 people seems like a large number. It is important that the space is designed towards relationships
10. Design Thinking, Making Things to Learn	As an employer, it seems like something that would help get students out of academics and into real life, give them a sense of accomplishment, geared toward 21st century competencies....As an engineer, there is a value in conceiving and designing something (new)....Some kids are very visual learners. How would special ed students be integrated in this type of learning?
5. 21st Century Skills/Competencies	- as a parent, a lot of students are reliant on their phones to communicate and don't communicate well face-to-face or verbally; working collaboratively

1. History Work + School
2. Student Engagement
3. Futurist Thoughts
4. Changing University Acceptance Criteria
5. 21st Century Skills/Competencies
6. Learning Pyramid
7. Social Emotional Learning
8. Relationships: Dunbar's Law, Magic of 150
9. Project Based Learning
10. Design Thinking, Making Things to Learn

NOTES:
The 10 concepts seem interchangeable. We are at a pivotal time when thinking about school buildings.
system was difficult because no one was prepared for remote learning and remote working simultaneously. Remote working will
Self-directed learning; how do we foster that? How could remedial or additional work be available to students at home/online/remotely?

PART 2: FACILITIES

NAME OF ISSUE	WHY?
15. 21st Century School Planning	Educational Paradigm: What are our desired outcomes as a district vs what colleges & universities are looking for, vs students who want to go straight into the working world? Flexibility will be critical. How learning evolves over time....Really like the new MS design where there are different pods.
16. Safety + Security	Also considering how after school events could be locked down if needed, blocking off certain parts of the school....Given the times, it's important. We want to be safe and protected but not have visual reminders of safety risks. You can't focus on school/learning if you're worried about your safety.
12. Integration: Arts + Academics	Having students be able to express themselves, talk to each other, is a basic tenant of learning. The idea of "How to survive being an artist" is fabulous, as currently some groups of students are ostracized....This also ties into 21st century curriculum design.
BONUS: #17, 13, & 14	Can't truly be separated; In order for #13 and 14 to happen, we need to reorganize the school around these priorities. Teachers need to have common time together, not just time with students, and the Union needs to support that.

11. Can School Organization Improve Learning?
12. Integration: Arts + Academics
13. Integration: Academics
14. Integration: Academics + C-TE
15. 21st Century School Planning
16. Safety + Security
17. Teacher Planning Centers

NOTES:
Teacher Planning Centers integrates academics, allows teachers to share ideas and work together in one place
When MCAS starts again, everyone becomes overconcerned with their own curriculum and the time constraints. There is too much emphasis on the MCAS right now. Students need basic knowledge and to be tested on those, but it has hurt group work.
Josephine has critical insights as a teacher
#s 17, 13 and 14 can't really be separated

WHAT WE LEARNED ABOUT 21c SCHOOLS:

1/ Future-ready school: Programs and Facility

2/ Most important - Programs:

- **Student Engagement**
- **Project Based Learning**
- **21st Century Skills/Competencies**

3/ Most important - Programs:

- **Safety + Security**
- **Teacher Planning Centers**
- **Integration of Academics**

Week 1 Recap: Day 3 / Planning Concepts / SWOT Analysis

You shared your thoughts on Strengths, Weakness, Opportunities and Threats!

STRENGTHS / What does Stoneham High School do well? Unique resources? What do others see as your strengths?

Inclusive	School culture
Academics	Inclusion in all areas
Killer at National History Day	Community
The staff is great!	School spirit
quality instruction	Close knit community
teachers!	Inclusive, Supportive staff
Theater, arts, music	Their student
Community involvement	Opportunities for collaboration
Collaboration of student	School spirit
National History Day	Parent involvement
Community involvement	School community
Small engaged community	Inclusive
Community, Student talents	Close knit community
Represents the town of Stoneham well in academics, theater / athletics	Stoneham High School maintains students to be who they are
National history day in class discussions and debates the library's history lab	community

WEAKNESSES / What could Stoneham High School improve?

New building	Facility
campus	Facilities
Better facility	Building
traffic flow	Air conditioning needed
More inclusion for special education students	Technology
traffic	energy efficiency
More collaboration spaces	Natural light
Better ventilation	Usage of Partnerships for our
School flow	Facility, hvac, sports fields
Better and inviting arts spaces	vocational skill
spaces for students that support collaboration and communication	progress
Up to date lab facilities	actual space for large student
more spacious	Library need windows that open
Recruitment of faculty and staff that represent the changing population of our students (black, brown, Latinx) etc.	Community spaces, Adult Ed
Natural light	More space for alternative pa

OPPORTUNITIES / What technology and educational opportunities are open to you? How can you turn your strengths into opportunities?

Facilities	Security of staff and students
Space for labs /stem	Facilities for all sports in the high share spaces with other commu
Excepting all students of different races and cultural. Have a facility that can show off everyone's culture backgrounds	We are ten miles from Boston or and some of the best hospitals
I think we tended to cover most of this earlier.	Every student has a chrome bo
We don't even begin to know what kinds if technology we will have available to us. We should be technically prepared for anything.	Biotech
Lots of interest in new community/ recreational space. What if we had a community garden run by students? A cafe, daycare, pool, weight room, etc with student employees?	Partner with Technology comp
having sponsors from major and small corporations	Each student in every grade lev and charger to bring home and This helps students who might n work done electronically from h
Chrome books	Biomedical and Hospitals close
Better technology equipment	Proximity to Boston
The drama department is able to use a sound and light board	Health Sciences and Computer in our area - we are literally in th
Daylighting drainage, creating nature/educational opportunities	the SHS site is rather large, it'd b athletic fields, etc for the immed great to have a master plan for programs.
Develop and/ or strengthen relationships with 128 companies- tech/medical/ industrial- student internships!	We are fortunate to be 11 with d there a way to ensure that all st access at home for times when necessary?

THREATS / Are there challenges that create obstacles for Stoneham High School students?

Traffic on Franklin Street	Funding	Need for a second exit
Funding	congestion on franklin street now and in the future	Expecting the Town so they vote in favor of the New High School.
Parking at events	More lighting outside	There is only one way in and out to the high school
Traffic/getting to the site	getting the votes!	Traffic
Security	We need better accessibility for people with disabilities	traffic
Town support	cutting funding to our arts programs	Security
The layout and age of building makes it difficult to secure the building.	We are planning a school size that doesn't allow for growth-people move into communities with great schools and we won't be able to fit them all	Traffic and entry and exit points.
Traffic	Would be good to have more than one driveway in and out	being flexible for changes unknown at time of approval
Need to be more excepting of all population such as cultures, language, disability, age, gender.	Building security	Driveway doesn't need to be as long better use of space
Facility limitations.	Accessibility	Larger library space
being big enough for GROWTH	Do not want to get into "nickel and diming" such an important project	Franklin St traffic!
Student safety during construction	Utilization of space	green space vs building/facility needs

Lots of great feedback!

WHAT WE HEARD DURING OUR SWOT ANALYSIS:

1/ Strengths

Culture, community engagement, inclusiveness, staff, students

2/ Weaknesses

Life skills, learning environment, curriculum, teacher collaboration

3/ Opportunities

Accessible to community, outdoor space, technology, flexibility

4/ Threats

Traffic, security, town support, accessibility, funding

Week 1 Recap: Day 4 / Learning about Exterior Space Wishes / Activity

DAY 4 Learning about Exterior Space Wishes

FRIDAY AGENDA

7.24

1. Welcome
2. Storytelling / Allison Connolly
3. Activity: Let's Learn about the Campus
4. Week 1 Recap
5. Activity: How Are You Feeling about Week 1?

Exterior Space Survey Results

Feeling after First Week

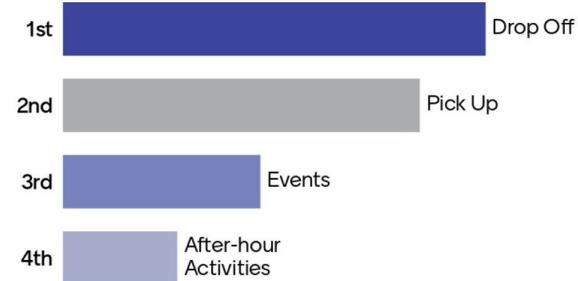
HOMEWORK: Exterior Space Questionnaire

Presentation Slides

Session Recording



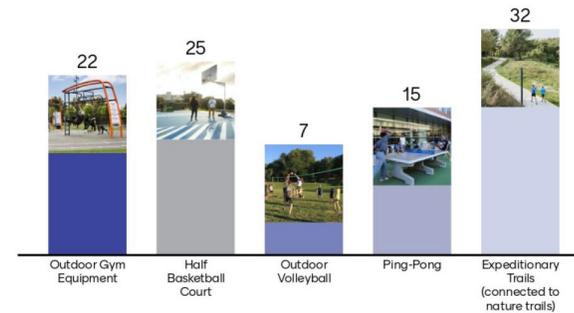
8. When are traffic challenges worst? Rank in order of priority



35

Informative and productive session!

14. In addition to the current outdoor fitness activities, which of the following are desirable? (Choose your top 3)



36

Week 1 Recap: Day 4 / Learning about Exterior Space Wishes / Questionnaire Homework

**Great feedback
Stoneham Team!**

DAY 4 Learning about Exterior Space Wishes

FRIDAY 7.24

AGENDA

1. Welcome
2. Storytelling / Allison Connolly
3. Activity: Let's Learn about the Campus
4. Week 1 Recap
5. Activity: How Are You Feeling about Week 1?

Exterior Space Survey Results

Feeling after First Week

HOMEWORK: Exterior Space Questionnaire

Presentation Slides

Session Recording



Circulation/Parking/Entrance Plazas

Outdoor Learning

Health & Wellness

Community Connections

What outdoor events and activities would attract alumni to the campus?
23 responses

- Last summer we had a town fair for a few days in the high school parking lot I think with that area being revamped we'll be able to hold more town activities there that we couldn't before, some sports also hold car washed there to raise money
- the track has always been a big draw for several years we have Relay for Life run there. turf field
- drive in movie nights, any outdoor concerts
- events for each sport similar to Future Spartan Day that Little league runs but for past students where they serve food, drinks, etc during one of their last games. Also a legit homecoming weekend
- Outdoor reunion events at new stadium
- concerts, "theatre in the park," snow shoeing,
- Passive recreation (where alumni and families can come on their own times to meet the space)
- sports, concerts, if we had outdoor dining there could be lectures, brunches, mini reunions held there

WHAT WE HEARD ABOUT THE EXTERIOR :

1/ Traffic/Parking Wishes/Issues

Congestion at dismissal, conflicts at Franklin St, dedicated parking

2/ Outdoor Activity Wishes

Shade, media connections, amphitheater, turf fields, lighting, seating

3/ Community Connection Wishes

Open space, walking trails, exercise station, outdoor basketball

4/ Pre-K Wishes

Inclusive, creative, safe, nature play, promote motor skills

**How are you feeling about the first week
of Envision Stoneham High School?**



How are you feeling about the first week of Virtual Visioning for Stoneham High School?



Week 2 Recap: Day 5 / Critical Adjacencies / Live Sketching

DAY 5 Critical Adjacencies

MONDAY

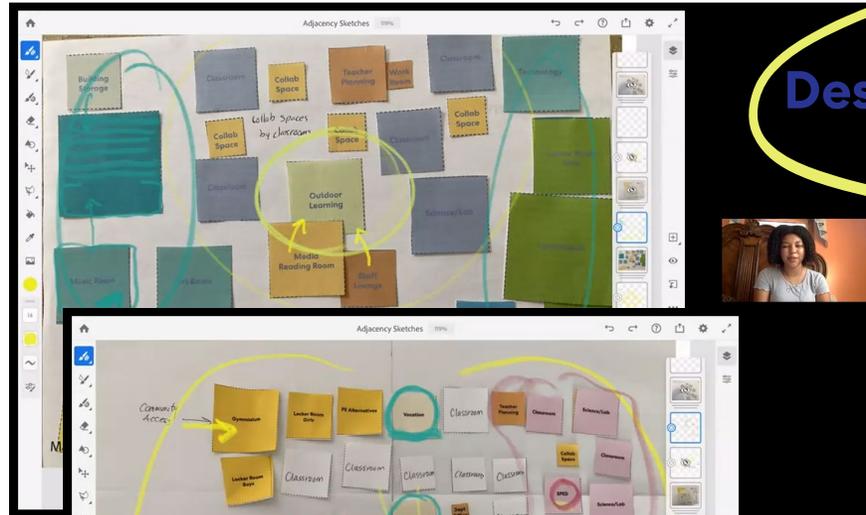
AGENDA

1. Welcome
2. Storytelling / Maria LaTerza
3. Critical Adjacencies Homework: Reporting Back

7.27

Presentation Slides

Session Recording



Designers in the making!

Teacher-Planning - Centered

Collaboration-Centered

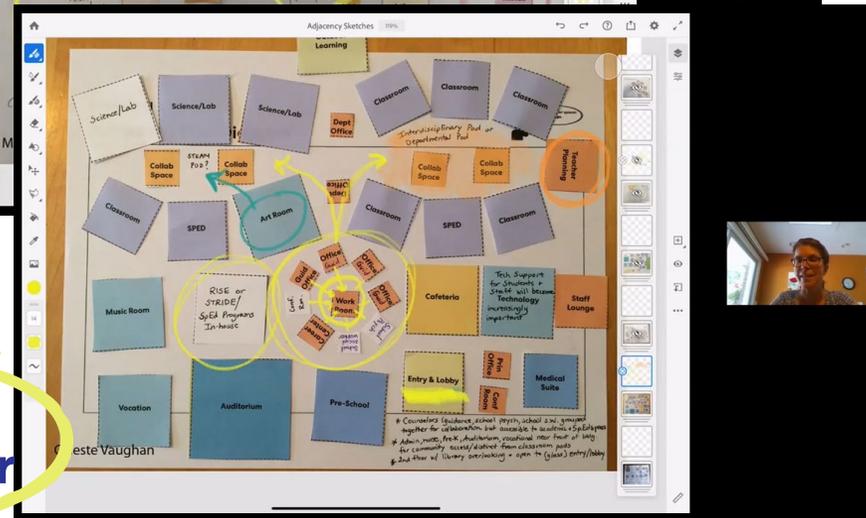
Auditorium-Centered

Project-Based-Learning-Centered

Outdoor-Learning-Centered

Technology-Centered

We reviewed the diagrams together



WHAT WE HEARD ABOUT ADJACENCIES:

- 1/ Flexibility of rooms**
- 2/ Interdisciplinary collaboration spaces**
- 3/ Organization strategies**
- 4/ Teacher planning in Pod**
- 5/ Safety and accessibility**
- 6/ Outdoor learning spaces**
- 7/ Spaces shared by school and community**
- 8/ Spaces for individuals and groups- different learners**

Week 2 Recap: Day 6 / Learning from Subject Matter Experts

DAY 6 Learning from Subject Matter Experts: Ted Talks
TUESDAY

7.28

AGENDA

1. Welcome
2. Storytelling / Maya Ibrahim
3. TED Talk: Aspirational Thinking
 - Jeff Zynda, Science and Technology, Perkins and Will
 - Stephen Sefton, Sports and Recreation, Perkins and Will
 - David Damon, High Education, Perkins and Will
 - Keith Curtis, Branded Environment, Perkins and Will
4. Panelist Q&A

[Presentation Slides](#)

[Session Recording](#)

Inspiring speakers!



Hearing from Experts:
Science + Technology
Sports + Recreation
Higher Education
Branded Environment

Trends in Sports & Recreation

Mental Health
Recovery
eSports
Hybrid Spaces
Diversity

Perkins&Will



WHAT WE HEARD FROM THE EXPERTS:

1/ How scient and technology can be integrated in the current curriculum?

2/ How a facility can promote health, wellness, versatility and diversity?

3/ How can we be prepared for the trends in higher education?

4/ How can branding help elevate the spirit of school/community?

Week 2 Recap: Day 7 / Learning about Sustainability & Stewardship / TED Talks

DAY 7 Sustainability / Zero Net Energy / Carbon Neutral

THURSDAY

7.30

AGENDA

1. Welcome
2. Storytelling / Angela Billings
3. Culture of Stewardship
4. Activity: Knowledge Base
5. TED Talk
 - Jim Newman
6. A Tale of Two Buildings
 - Shannon Kaplan
7. Activity: Priorities Discussion

Knowledge Base Results

Priorities Discussion Results

Presentation Slides

Session Recording

Learning about sustainability



Wellness

Regenerative & Resilience Site & Water Energy & Atmosphere Health & Materials

Living Design

5 big principles for a school building

THE OUTCOME:

STONEHAM SCHOOL COMMUNITY SCHOOL BUILDING

Myths About Getting to Net Zero Energy: A Tale of Two Buildings

<p>Millersville University: Lombardo Welcome Center</p> <p>14,627 sf 1 story with limited basement Primary Use: Office, (1) classroom</p>	<p>The Sustainable Energy Fund: Office Building</p> <p>14,826 sf 1 story Primary Use: Office, (1) classroom</p>
--	--

BOTH AIMING TO BE NET ZERO ENERGY

Perkins&Will



WHAT WE HEARD ABOUT SUSTAINABILITY:

- 1/ Understanding sustainable concepts and measurements**
- 2/ Setting sustainability as a goal for the school and community**
- 3/ Achieving sustainability through various means and methods**

What concepts are you most inspired by?



SHS EXISTING CONDITIONS UPDATE

Existing Conditions/ Site Plan

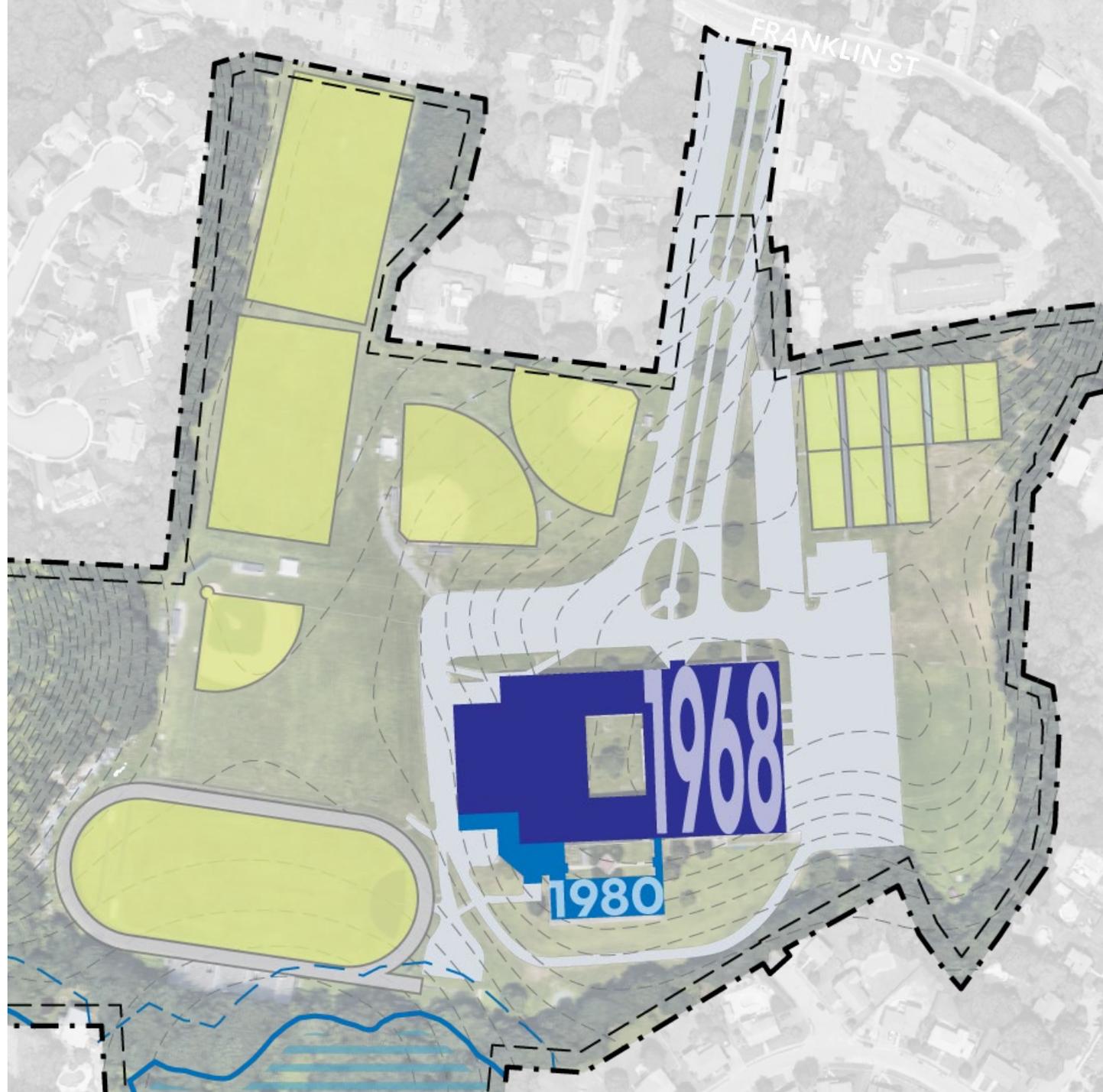
Current Campus

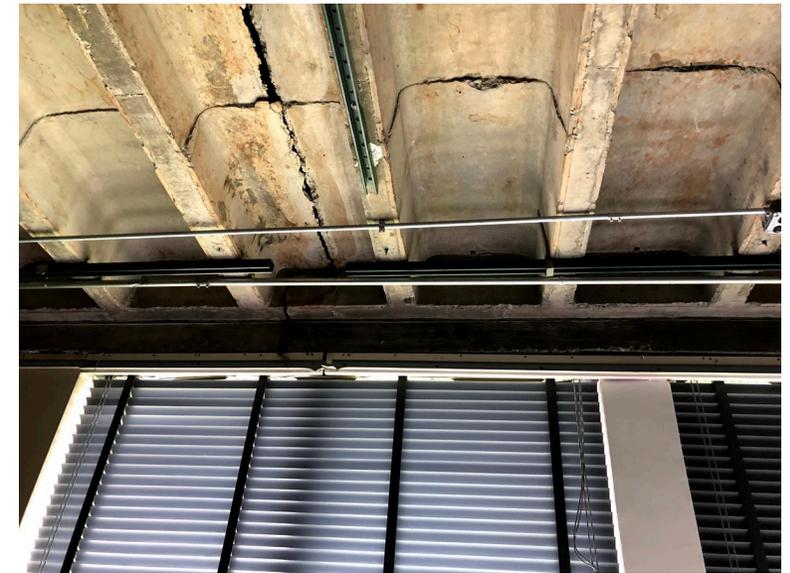
Junior High School (1968)

52 YEARS OLD

Senior High School (1980)

40 YEARS OLD





Existing Conditions/ Landscape: Warner Larson

Parcel ID:

284-08-134

284-02-152

Parcel Size:

38.88 acres

0.75 acres

Zoning: Education

Physical Conditions

+/-30' Grade Change

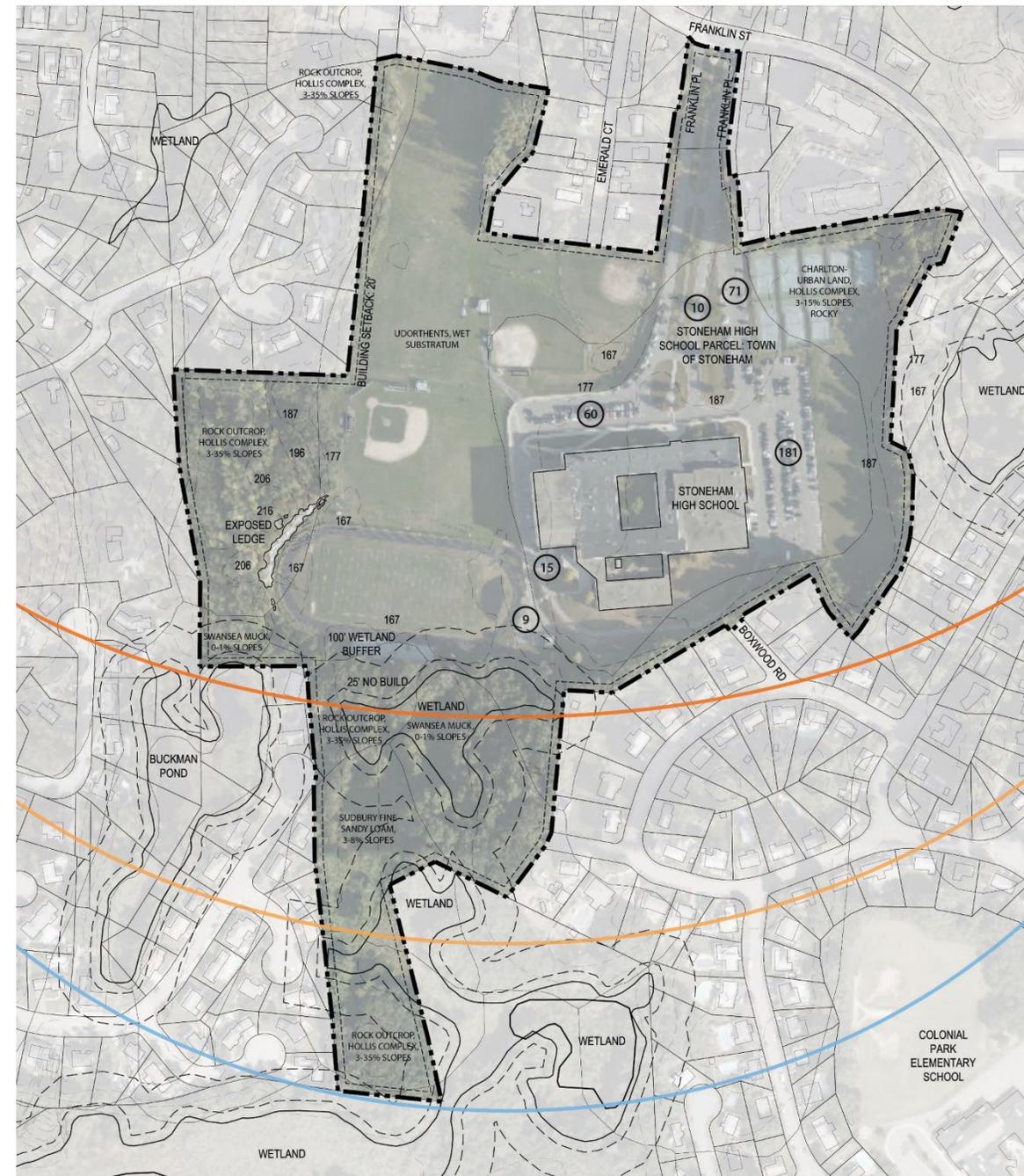
194' at Tennis Courts

164' at Wetlands

Exposed Ledge

Perkins&Will | SMMA

Project Management

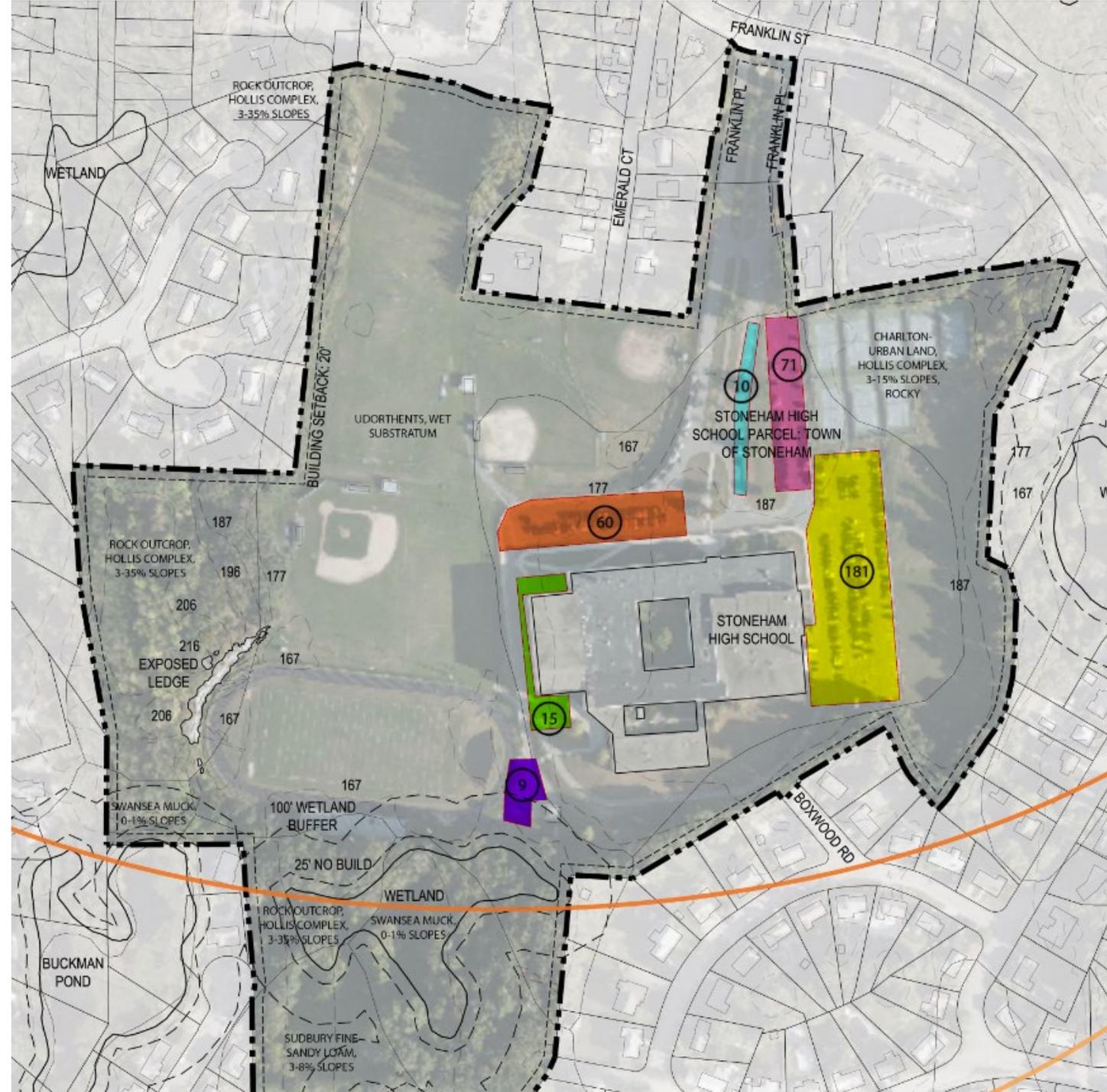


STONEHAM HIGH SCHOOL
SITE ANALYSIS

Existing Conditions/ Landscape

Site Features

- One-way loop off Franklin St
- 3 main parking lots (71, 181, 60 spaces)
- Visitor parking (10 spaces)
- Service parking (15 spaces)
- Track facility parking (9 spaces)



Existing Conditions/ Landscape

- Significant cracking in asphalt driveway and parking lots
- Granite curbing moderate condition
- Asphalt berm in poor condition
- 5 Accessible spaces in total
- Lack of curb cuts and detectable warning



Existing Conditions/ Landscape

Fields

1 & 2: Soccer/Lacrosse

3 & 4: Softball

5: Tennis Courts

6 & 7: Baseball and Field Hockey

8: Track

9: Long/Triple Jump

10: Football Field

11: High Jump

12: Pole Vault

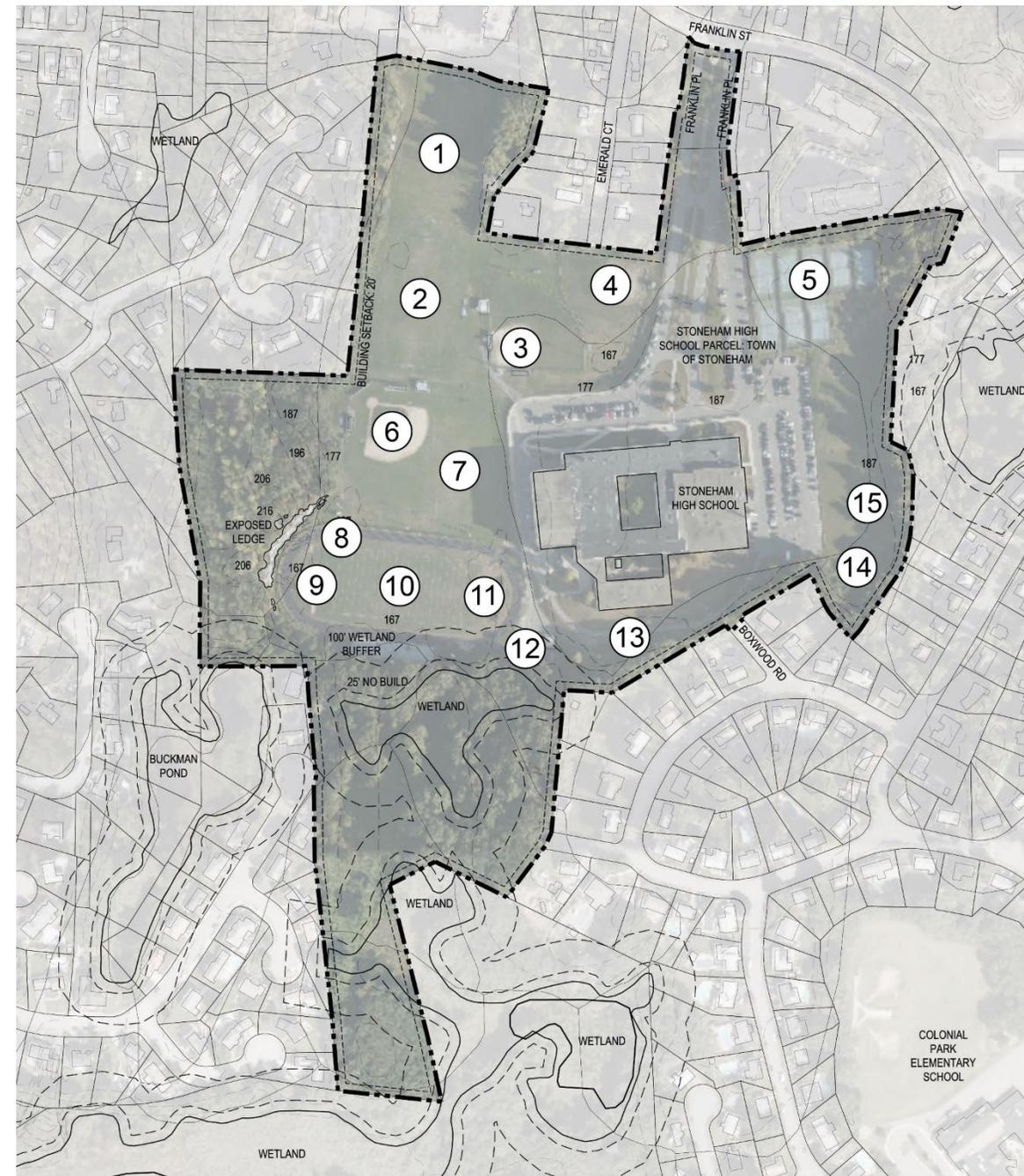
13: Shotput

14: Discus

15: Javelin and Practice Field

Perkins&Will | **SMMA**

Project Management



STONEHAM HIGH SCHOOL
SITE ANALYSIS

Existing Conditions/ Landscape

Leo Herlihy Memorial Tennis Courts/8

- Fair/Poor Condition
- Limited accessibility
- Terraced Configuration

Rocher-Fillback Track Facility

- Bleachers or press box not accessible
- Previous sinkhole issues on football field



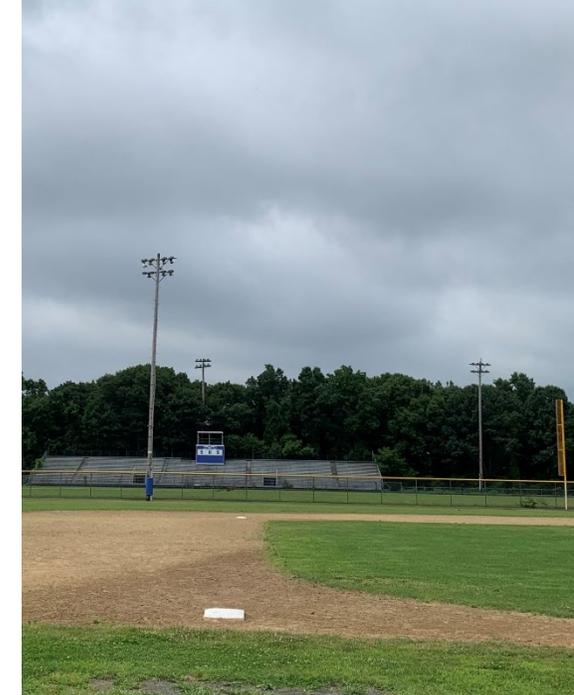
Existing Conditions/ Landscape

Site Lighting

- Primarily roadway lighting
- Lack of pedestrian scaled lighting on site
- Wiring problems with sports lighting

General

- Limited outdoor café seating
- Greenhouse and gardens
- No structured outdoor classrooms
- Limited student use of courtyard



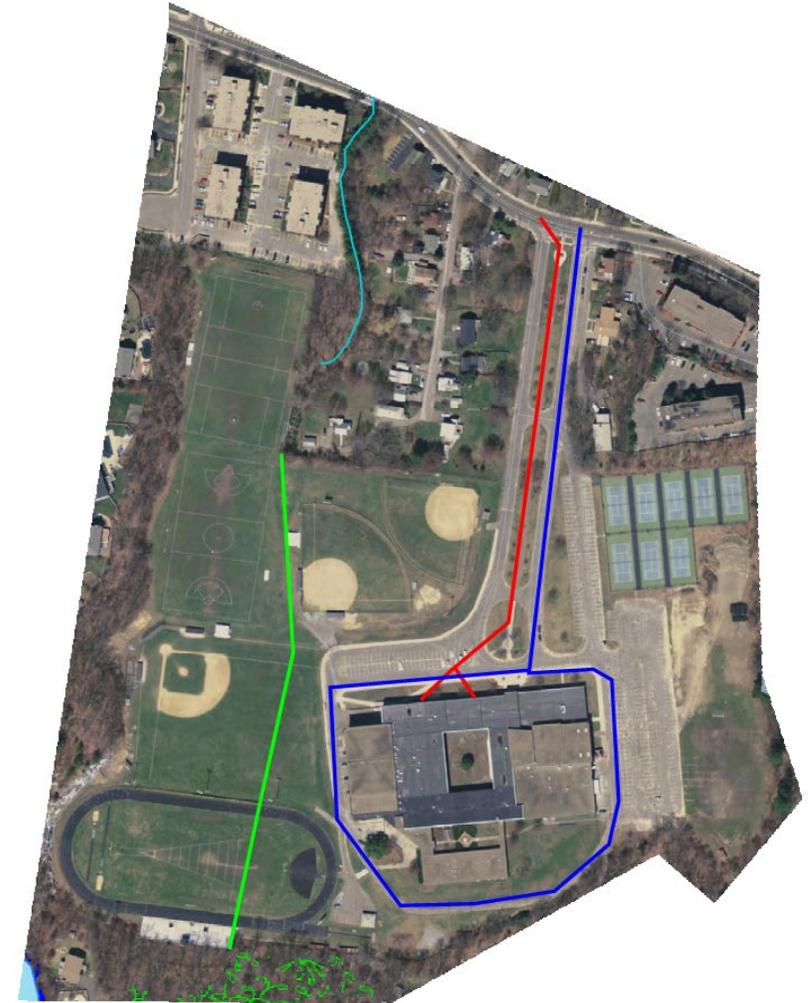
Existing Conditions/ Civil : Nitsch Engineering

Site Utilities

48-inch Storm Drain-Shown in **Green**
Route could be adjusted, slightly

Sanitary Sewer-Shown in **Red**
Sufficient capacity
Elevation an issue if construction is on lower fields

Water lines-Shown in **Blue**
Portions of existing system could be incorporated into new campus configuration



Existing Conditions/ Code Compliance:

Extensive ADA Upgrades Required:

- Bathrooms
- Locker Rooms
- Entrances
- Auditorium Seating
- Stage Access
- Routes throughout

Construction Type

- Concrete, Unprotected Steel
- Existing insufficient to support addition
- Fire Wall construction



Existing Conditions/ Structure: B+AC

Structural Conditions

- Floors are cast-in-place concrete
- Roofs are reinforced concrete. Cast-in-place at classrooms. Precast at gym, auditorium, kitchen/café. Steel at classroom addition.
- Spalling and cracking of concrete at multiple locations throughout the building.
- Minor cracks in masonry. Efflorescence at fly tower back wall
- Many old leaks through roof. Active leaks at the classroom additions potentially due to incorrect execution of joint



Existing Conditions/ Structure

Structural Considerations:

- Seismic bracing may be needed for walls and structure
- Expansion joints may need to be addressed
- Auditorium: No fly tower, trap or pits present. May need framing work
- Gym: Structure displaying signs of aging. Should be repaired to keep. Roof to north column connection needs repairing



Existing Conditions/ HVAC Systems: Bala Engineering

Classrooms

- Classrooms served by heating only unit ventilators
- Cooling systems consist of local, through the wall AC Units

Auditorium / Gym /Locker Rooms /

- Cafeteria
- All spaces served by heating only unit ventilators and air handling systems

Administrative Areas

- Area served by heating and cooling rooftop unit

Recommendations

- All systems, except for the boilers, are well past their useful life.
- Boilers will need to be evaluated based on the energy goals of the project.



Existing Conditions/ Electrical and Security Systems: Bala

Power

- Electrical Distribution is original to the building and is in poor condition.
- Emergency equipment is well past useful life.

Lighting

- Lighting is fluorescent. Coverage is acceptable but fixtures are in poor condition and create a lot of glare.

Fire Alarm

- Fire alarm system is obsolete.
- System has limited coverage and no smoke detector coverage.



Existing Conditions/ Electrical and Security Systems

Security

- Security systems (access control and CCTV) are in good working condition. System is connected to a town wide system.
- System should be expanded on for additional coverage.

Recommendations

- All systems are recommended to be replaced.



Existing Conditions/ Fire Protection: Architectural Engineers

**No Water Based Fire Protection
System in School**

**Renovations will require a new water
service and sprinklers**



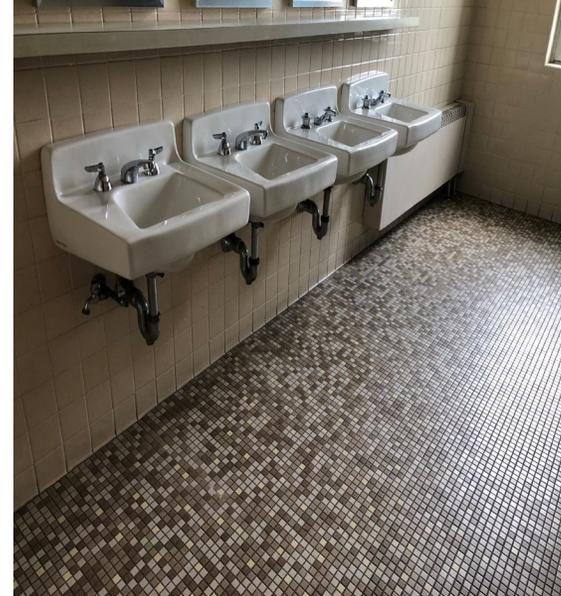
Existing Conditions/ Plumbing: Architectural Engineers

Plumbing Fixtures

- Old Models Need Replacement
- Manual Faucets & Flush Valves Not Water Saving Types
- Classroom Sinks & Faucets Older models need replacement

Domestic Water System

- Size & pressure of service adequate
- HW Boiler & Storage Tank old equipment needs replacement
- CW & HW Piping Systems and Valves are older and need replacement



Existing Conditions/ Plumbing

Sanitary Waste System

- Some new piping observed
- Most piping older and needs replacement

Storm Drainage

- Roof drains good condition
- Interior piping is older and should be replaced.

Natural Gas

- Medium pressure gas service meets current building needs.
- Piping system in good condition.



Existing Conditions/ Plumbing

Locker Rooms / Showers

- Gang Shower Area doesn't meet current code requirements
- Need Individual Shower Stalls and multiple floor drains

Kitchen

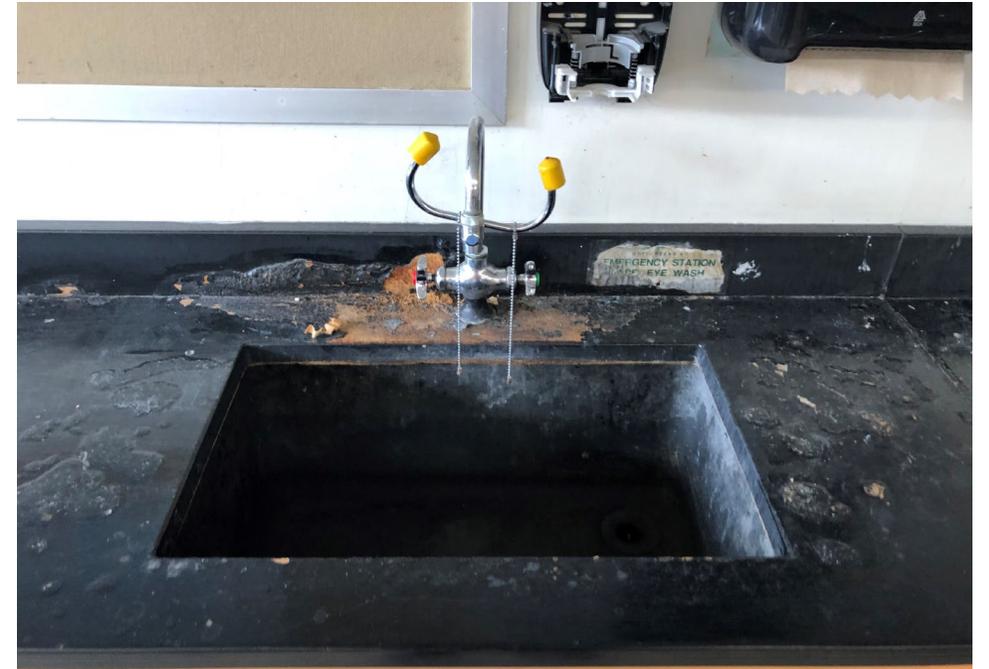
- Three-bay sink discharges to a Grease Interceptor. Replace.
- Dishwasher does not discharge to a grease interceptor
- Fixtures & floor drains do not connect to an independent grease waste system. Need exterior GT.



Existing Conditions/ Plumbing

Science Classrooms

- Sink waste connected to an exterior limestone chip neutralization system. No problems reported.
- Lab water not protected from main water system. Need non-potable water systems.
- Emergency Showers/eyewashes exist but not on a Tempered Water system. Separate water heater and recirc system required.
- Gas to bench turrets. Move main shut-off valve near door.



Existing Conditions/ Food Service

Commodity Storage

- The High School supports five lower schools
- The lower schools lack sufficient cook and storage capacity
- Storage capacity has been expanded to the exterior to accommodate storage demands

Exhaust Hoods

- Lack of sufficient lighting
- Missing a hood fire suppression system
- Floors are uneven resulting in hard to clean conditions and tripping hazards



Existing Conditions/ Building Exterior: Perkins and Will

Walls

- Spalling exposed concrete structure
- Deteriorated and asbestos containing sealant at doors and windows
- Leaks observed below rising walls on roofs

Windows

- Single-pane aluminum windows not meeting energy code
- Rotting existing curtain walls
- Kalwall system at gym yellowed and is worn out



Existing Conditions/ Building Exterior

Doors

- Damaged and bent frames
- Worn doors and panic hardware

Roofs

- Rubber roofs over 15 years old; some are original from 1968/1980
- Ponding reported to appear on roofs
- Leaking observed at various locations



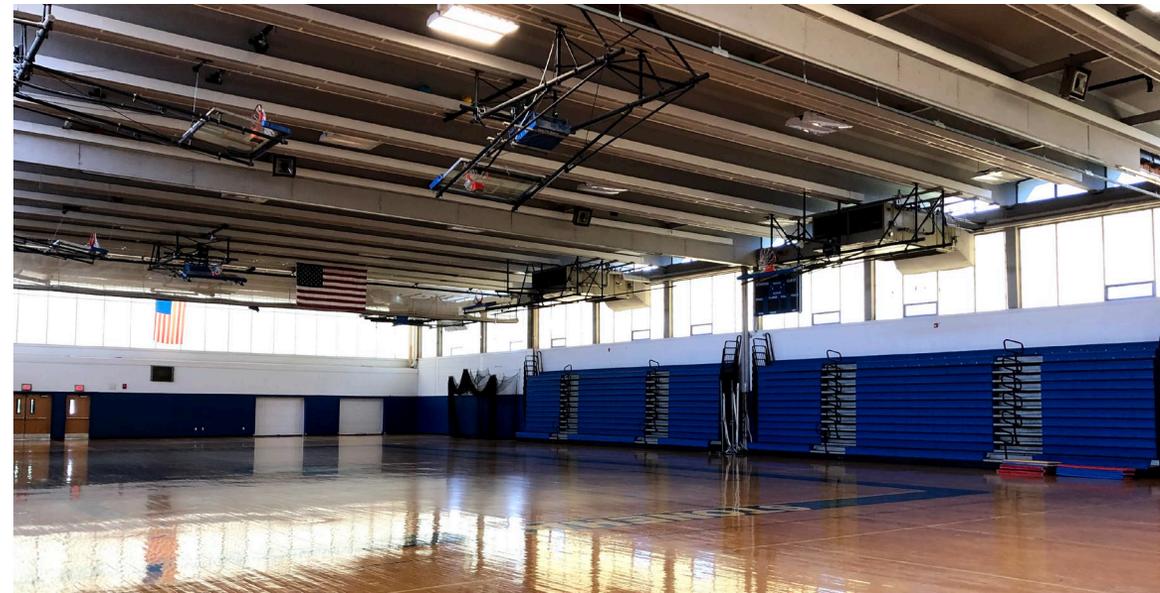
Existing Conditions/ Building Interior

Walls

- Damaged tile base at many areas
- Wood paneling in auditorium and cafeteria in poor condition

Flooring

- Vinyl asbestos tiles to be investigated (Hazardous Material Assessment on site this week)
- Auditorium stage has several large patches
- Gymnasium wood floor in good shape, but does not provide appropriate shock absorption



Existing Conditions/ Building Interior

Ceiling

- Acoustic ceiling tiles (discontinued) in poor shape in many locations
- Water damaged ceilings observed through out the upper levels
- Poor acoustic plaster ceiling at auditorium

Doors

- Roughly $\frac{3}{4}$ of doors not compliant with push/push clearance requirement

Vertical Circulation

- Stairs not code-compliant
- Elevator/lift not code-compliant

Perkins&Will | SMMA

Project Management



COMMUNITY RESOURCES

Stoneham School Building Committee

- Meetings every two weeks.
- Meetings and Agendas are posted on the SSBC Website

SSBC Website:

<https://www.Stoneham-Ma.Gov/hsbc>

Project Email:

SSBC@Stoneham-Ma.gov



Perkins&Will

COMMUNITY FORUM 01 DISCUSSION

Community Forum 01