

Project Minutes

Project: Stoneham High School Feasibility Study
 Prepared by: Joel Seeley
 Re: School Building Committee Meeting
 Location: Remote Locations
 Distribution: Attendees (MF)

Project No.: 20033
 Meeting Date: 8/31/2020
 Time: 7:00pm
 Meeting No: 8

Attendees:

PRESENT	NAME	AFFILIATION	VOTING MEMBER
✓	Marie Christie	Co-Chair, School Building Committee	Voting Member
✓	David Bois	Co-Chair, School Building Committee; Community Member with Architecture Experience	Voting Member
✓	Nicole Nial	School Committee Member	Voting Member
✓	Raymie Parker	Chair Select Board	Voting Member
	Albert Talarico	Community Member with Building Commissioner Experience	Voting Member
✓	Douglas Gove	Community Member with Engineering Experience	Voting Member
✓	Stephen O'Neill	Community Member with Engineering Experience	Voting Member
✓	Josephine Thomson	Community Member	Voting Member
✓	Jeanne Craigie	Town Moderator	Voting Member
✓	Lisa Gallagher	Community Member, School Secretary, Past member of Middle School Building Committee	Voting Member
✓	Sharon Iovanni	Community Member	Voting Member
✓	Cory Mashburn	Community Member, Finance and Advisory Board	Voting Member
✓	Paul Ryder	Community Member with Construction Experience	Voting Member
✓	David Pignone	Athletic Director, Member knowledgeable in educational mission and function of facility	Voting Member
✓	Kevin Yianacopolus	Local Official responsible for Building Maintenance	Voting Member
✓	Dennis Sheehan	Town Administrator / MCPPO Certified	Non-Voting Member
✓	John Macero	Superintendent of Schools, Secretary of School Building Committee	Non-Voting Member
✓	Bryan Lombardi	Stoneham High School Principal	Non-Voting Member
✓	Brian McNeil	Facilities Director	Non-Voting Member
✓	Brooke Trivas	Perkins and Will	
✓	Patrick Cunningham	Perkins and Will	
✓	Leo Liu	Perkins and Will	
✓	Joel Seeley	SMMA	

Item #	Action	Discussion
8.1	Record	Call to Order, 7:00 PM, meeting opened by roll call.
8.2	Record	In accordance with the executive order issued by the Governor on March 10, 2020, this meeting will be held via video conference and a recording of such will be posted on the Town's website.
8.3	Record	A motion was made by D. Pignone and seconded by R. Parker to approve the 8/17/20 School Building Committee meeting minutes. No discussion, motion passed unanimous by roll call vote.
8.4	Committee Members	<p>J. Seeley provided an overview of the meeting held on 8/31/20 with committee members, P&W, SMMA and Eversource to review Zero Net Energy (ZNE) design strategies, decision making sequences , MassSave incentive program and Path 1 and Path 2 MassSave Memorandum of Understanding (MOU), attached. The Committee to vote approval of the MOU at the next Committee meeting.</p> <p>Committee Discussion:</p> <ol style="list-style-type: none"> D. Sheehan indicated a follow-up meeting will be scheduled in two weeks and if any Committee members are interested in attending, contact D. Sheehan or J. Seeley.
8.5	Record	B. Trivas presented and reviewed the Educational Programming and Space Summary development, attached. The High School Vision Committee has been meeting weekly and is developing the documents thru a shared Google Docs site. B. Trivas reviewed the Organizational Diagrams translated into scaled room sizes and quantities, attached.
8.6	B. Trivas J. Seeley D. Sheehan	<p>B. Trivas presented and reviewed preliminary Site Planning Options, attached. Each option maintains the same parking, playfields and tennis courts counts as currently exists. The building square feet is based on the progress Space Summary and is the same for all the options, except the Renovation Only option. The Options are as follows:</p> <ol style="list-style-type: none"> Renovation Only Renovation/Addition Option 1 Renovation/Addition Option 2 New Construction Option 1 New Construction Option 2 <p>Committee Discussion:</p> <ol style="list-style-type: none"> R. Parker asked if relocating the existing 48" storm pipe is required in all options? <i>P. Cunningham indicated yes, all except the New Construction Option 2.</i>

Item #	Action	Discussion
		<p>2. C. Mashburn asked if temporary classroom modulars would be needed in any of the Options and where would they be located? <i>B. Trivas to review and provide direction at the next committee meeting.</i></p> <p>3. R. Parker asked if the cost for relocating playfields is reimbursable? <i>B. Trivas indicated the costs for relocating playfields is reimbursable but is subject to the 8% cap for overall sitework costs.</i></p> <p>4. D. Bois asked if the options have taken into account emergency and service vehicles access to the existing building during construction? <i>B. Trivas to review and provide direction at the next committee meeting.</i></p> <p>5. D. Gove asked that sufficient parking adjacent to the Gymnasium, Auditorium and football field be provided in each option for community use. <i>B. Trivas to review and provide direction at the next committee meeting.</i></p> <p>6. D. Gove asked if the same quantity of parking, playfields and tennis courts as currently exists is what should be planned for? <i>B. Trivas to coordinate with B. Lombardi and D. Pignone for the required counts.</i></p> <p>7. J. Macero asked if the single vehicular access from Franklin Street, shown in each option, is sufficient? <i>P. Cunningham indicated the traffic engineer is reviewing other potential vehicular access options. One potential vehicular access option may be via Benjamin Terrace, thru the Town-owned parcel, but needs further review.</i></p> <p>8. D. Sheehan indicated the Fire Chief has indicated a second access for emergency vehicles should be included in the high school planning. <i>D. Sheehan and J. Seeley to coordinate a meeting with the Traffic Commission, P&W and SMMA as soon as possible.</i></p> <p>9. R. Parker asked that any emergency vehicle access also be designed to allow for pedestrian access.</p> <p>10. D. Pignone requests a listing of the pros and cons of renovating the existing Gymnasium versus constructing a new Gymnasium be provided. <i>B. Trivas to develop a listing of the pros and cons for review for the next committee meeting.</i></p> <p>11. D. Pignone asked if an elevated jogging track can be installed in the existing Gymnasium? <i>P. Cunningham indicated it was unlikely the existing Gymnasium structure can accommodate an elevated jogging track.</i></p>

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		<p>12. M. Christie asked what is the additional cost to construct a new Gymnasium the same size as the existing Gymnasium? <i>B. Trivas to provide direction for the next committee meeting.</i></p> <p>13. D. Bois asked what is the approximate cost of each option? <i>B. Trivas and J. Seeley will coordinate on providing an estimate of the construction cost and project cost for each option for the next committee meeting.</i></p> <p>14. D. Bois asked what is the approximate reimbursement for each option? <i>J. Seeley will provide an estimate of reimbursement for the next committee meeting.</i></p> <p>15. C. Mashburn asked if the plans can be shared on Google Docs to allow the committee to provide further comments. <i>B. Trivas and J. Seeley to coordinate on the process for shared documents.</i></p> <p>16. D. Bois asked if more specific pros and cons can be developed from the civil, landscape architecture and MEP consultants on each option? <i>B. Trivas to provide for next committee meeting.</i></p> <p>17. Paul Ryder cautioned that relocating the football field and lighting closer to the Sunset Road/Fieldstone Drive abutters may be a concern for the neighborhood.</p> <p>18. D. Gove indicated each option should accommodate pedestrian access from all the surrounding neighborhoods to reduce vehicular traffic.</p> <p>19. J. Craigie indicated the options should accommodate pedestrian access from the Dapper Darby Drive neighborhood, who access thru the woods.</p> <p>20. B. Trivas asked if there is strong sentiment to keeping the football field in its current location or can it be relocated? <i>Committee members indicated the football field does not have to remain in its current location if relocating provides for better orientation, visibility, parking access and community use.</i></p> <p>21. S. O'Neill asked that each option indicate the location for student/staff parking during construction, bus and parent access and queuing during construction, and contractor parking and access, as these will a major effect on the construction cost. <i>B. Trivas to provide direction for the next committee meeting.</i></p> <p>22. J. Craigie indicated the Middle School project utilized off-site locations for teacher and staff parking.</p>

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		<p>23. B. McNeil asked if a New Construction option could be developed to place the new building in the location of the two softball fields and adjacent soccer field to minimize disruption to the existing school operation during construction? <i>P. Cunningham indicated that location would place the school at the low point of the site which is not desirable from a planning perspective.</i></p> <p>24. B. Trivas to develop a New Construction option that places the building East of the existing school to minimize disruption to the existing school operation during construction.</p> <p>25. D. Sheehan asked if P&W can review flipping the Gymnasium and Pre-K wings in New Construction Option 1 to provide better access to the playfields from the Gymnasium. <i>B. Trivas to develop option for committee review.</i></p> <p>26. J. Macero indicated concern with the Gymnasium and Auditorium immediately adjacent to each other in New Construction Option 1 relative to potential sound transmission.</p>
8.7	S. Iovanni J. Seeley B. Trivas	<p>Subcommittee Updates</p> <p>Public Relations Subcommittee</p> <ol style="list-style-type: none"> S. Iovanni reviewed Community Forum No. 2 Flyer and date, attached. The Committee indicated approval of the Community Forum No. 2 Flyer and date. S. Iovanni, J. Seeley and B. Trivas to develop a brief video to advertise Community Forum No. 2 that can be shown on Stoneham TV and be shared on social media. D. Gove asked if a response to a recent letter to the editor in the local newspaper is needed. The Committee indicated no formal response to the newspaper is needed at this time, but be prepared with the feasibility study history, MSBA process and impacts of delay. <p>Educational Mission Subcommittee</p> <ol style="list-style-type: none"> J. Seeley reviewed the Educational Mission Subcommittee meeting minutes, dated 8/21/20, attached. The subcommittee will attend the next High School Vision Committee meeting on 9/2/20.
8.8	Record	Committee Questions
8.9	Record	Old or New Business - none
8.10	Record	Public Comment - none

Item #	Action	Discussion
8.11	Record	Next SBC Meeting: September 14, 2020 at 7:00 pm.
8.12	Record	A Motion was made by J. Craigie and seconded by J. Thomson to adjourn the meeting. No discussion, motion passed unanimous by roll call vote.

Attachments: Agenda, Path 1 and Path 2 MassSave Memorandum of Understanding (MOU), Community Forum No. 2 Flyer, Educational Mission Subcommittee meeting minutes, Powerpoint

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes

PROJECT MEETING SIGN-IN SHEET

Project: Stoneham High School Feasibility Study
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 Re: School Building Committee Meeting
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 Distribution: Attendees, (MF)

Project No.: 20033.00
 Meeting Date: 8/31/2020
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SIGNATURE	ATTENDEES	EMAIL	AFFILIATION
Attended Remotely	Marie Christie	mariechristie@comcast.net	Co-Chair, Past Member of the School Committee/Middle School Building Committee
Attended Remotely	David Bois	bois@arrowstreet.com	Co-Chair, Community Member with Architecture Experience
Attended Remotely	Nicole Nial	nicole.nial@stonehamschools.org	School Committee Member
Attended Remotely	Raymie Parker	rparker@stoneham-ma.gov	Select Board Member
	Albert Talarico	albert.talarico@gmail.com	Community Member with Building Commissioner Experience
Attended Remotely	Douglas Gove	goved11@gmail.com	Community Member with Engineer Experience
Attended Remotely	Stephen O'Neill	soneill@hayner-swanson.com	Community Member with Engineer Experience
Attended Remotely	Josephine Thomson	Jjthomson315@yahoo.com	Community Member, Middle School Faculty
Attended Remotely	Jeanne Craigie	jcraigie@stoneham-ma.gov	Town Moderator
Attended Remotely	Lisa Gallagher	lgallagher@stonehamschools.org	Community Member, School Secretary, Past member of Middle School Building Committee
Attended Remotely	Sharon Iovanni	sharon.iovanni@stonehambank.com	Community Member
Attended Remotely	Cory Mashburn	cory.mashburn910@gmail.com	Community Member, Finance and Advisory Board
Attended Remotely	Paul Ryder	pryder52@icloud.com	Community Member with Construction Experience
Attended Remotely	David Pignone	dpignone@stonehamschools.org	Athletic Director, Member knowledgeable in educational mission and function of facility
Attended Remotely	Kevin Yianacopolus	kyianacopolus@stonehamschools.org	Local Official responsible for Building Maintenance
Attended Remotely	Dennis Sheehan	DSheehan@stoneham-ma.gov	Town Administrator / MCPPO Certified
Attended Remotely	John Macero	jmacero@stonehamschools.org	Superintendent of Schools, Secretary of School Building Committee
Attended Remotely	Bryan Lombardi	blombardi@stonehamschools.org	Stoneham High School Principal
Attended Remotely	Brian McNeil	bmcneil@stonehamschools.org	Facilities Director
Attended Remotely	Brooke Trivas	brooke.trivas@perkinswill.com	Perkins and Will
Attended Remotely	Patrick Cunningham	Patrick.cunningham@perkinswill.com	Perkins and Will
Attended Remotely	Leo Liu	xi.liu@perkinswill.com	Perkins and Will
Attended Remotely	Joel Seeley	jseeley@smma.com	SMMA

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Agenda

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Meeting Time: 7:00 PM

-
1. Call to Order
 2. Approval of Minutes
 3. Approval of Invoices and Commitments
 4. Schedule and Budget Update
 5. Sustainable Design Update
 6. Educational Programming Update
 7. Design Alternatives Review
 8. Subcommittee Updates
 9. New or Old Business
 10. Committee Questions
 11. Public Comments
 12. Next Meeting: September 14, 2020
 13. Adjourn

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Commercial New Construction or Major Renovation

Path 1: Zero-Net Energy / Deep Energy Savings



Get to Net Zero with Help from Mass Save

Partner with the Sponsors of Mass Save for help reaching your team's zero net energy (ZNE) goals while getting the project on a path to minimize future overall energy use.

If you are planning a ZNE commercial or industrial building project, receive the highest level of incentives to offset project costs, as well as resources and tools to help you achieve a very low energy use intensity (EUI) and ultimately, zero-net energy success.

Zero Net Energy and Post Occupancy Performance

In this pathway, Mass Save Sponsors support customers all the way through a year of post occupancy performance--setting customers up for success not only in the design phase, but through construction and operation.

Project Eligibility Requirements*

1. Commit to a ZNE, ZNE ready or Passive House (as a path to zero) project
2. Target a goal of 25 EUI or less **
3. Minimum of 20,000 square feet (sf) of heated and cooled space
4. Must anticipate year-round occupancy
5. Engage your Mass Save Sponsor(s) before 50% schematic design
6. Include ZNE or ZNE ready goal and EUI target in project documents
7. Commit to building commissioning

* Please refer to MOU document for full eligibility requirements

** If 25 EUI is not possible due to project type or hours of operation, contact your Sponsor to discuss an alternative EUI target



Zero net energy buildings consume as much energy as they produce over a 1 year period.

About Mass Save:

Mass Save® is a collaborative of Massachusetts' natural gas and electric utilities and energy efficiency service providers including Berkshire Gas, Blackstone Gas, Cape Light Compact, Columbia Gas, Eversource, Liberty Utilities, National Grid, and Unitil. We empower residents, businesses, and communities to make energy efficient upgrades by offering a wide range of services, rebates, incentives, trainings, and information.

WE ARE MASS SAVE®:



By partnering with the Sponsors of Mass Save early on in your high-performing building project, you gain:

- Services of a zero energy expert to help develop the most cost-effective EUI reduction strategies to reach low EUI and ZNE goals
- Financial incentive paid at construction completion
- Post occupancy incentive if the project meets the EUI target after a post occupancy period plus optional technical support to help teams succeed
- The highest level of energy cost savings as soon as your building is operational
- ZNE and Passive House (PH) certification support and incentives
- Design team incentives of up to \$15,000 for integrated, creative design aimed at attaining very low EUIs and ZNE

Summary of ZNE/Deep Energy Savings Incentives

Customer Incentives

Construction Incentive	Paid if the project design successfully achieves a 25 EUI or alternative target approved by Mass Save Sponsor(s)	\$1.25/sf
Post Occupancy Incentive	Available following the 1-year post-occupancy period if customer successfully shows the project achieved the target EUI	\$1.00/sf
ZNE or PH Certification Incentive	Paid to customers that officially certify their projects as ZNE or PH	\$3,000
Technical Assistance for ZNE Services		Up to \$10,000
Verification Incentive		50% of fee up to \$10,000

Design Team Incentives

Calculated at \$0.20/sf and capped at \$15,000, but not less than \$8,000 per project

Go to MassSave.com/business, click on the **Find Your Mass Save Sponsor tool and enter your zip code to connect with your your Mass Save Sponsor(s).**

About Mass Save:

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NEW CONSTRUCTION & MAJOR RENOVATIONS

Memorandum of Understanding for Path 1: Zero Net Energy / Deep Energy Savings

The Path 1, Zero Net Energy (ZNE)/Deep Energy Savings Program (the “Program”) is intended for customers pursuing a ZNE or zero net ready building and who also are interested in maintaining focus on the Energy Use Intensity (EUI)¹ reduction component of ZNE. To participate, customers must commit to a very low EUI target and must pursue that target throughout design and construction as well as through post occupancy. The Mass Save Sponsors² offer incentives to help customers offset the incremental costs associated with designing and implementing low EUI strategies. The technical assistance and incentives offered in this pathway focus customers and project teams on post occupancy outcomes.

Project Eligibility:

1. **Project teams must commit to a goal of either zero net energy, zero net energy ready³ or Passive House (as a path to net zero)**
2. **Customer must engage Mass Save Sponsor(s) during the project’s feasibility or conceptual design phases, but before 50% Schematic Design**
3. **Projects must have a minimum of 20,000 square feet of comfort conditioned (heated and cooled) space**
4. **Projects must anticipate year-round occupancy. For K-12 schools, this requirement includes a minimum of 4 weeks of anticipated summer use in classroom areas.**
5. **Building must be separately metered (not on same utility meters as other buildings)**
6. **Projects must be new buildings or major renovations. A major renovation would qualify for this Program if the scope is such that occupancy is not possible during construction and where scope includes at least 3 of the following 5 systems: (1) HVAC, (2) DHW, (3) lighting, (4) envelope, and (5) process equipment**
7. **Core and shell and multi-family projects may not participate in Path 1 at this time**
8. **Projects where scope includes Combined Heat and Power (CHP) are not eligible for participation in Path 1**
9. **Participants must be a customer of one of the Mass Save Sponsors**

Key Customer Commitments:

1. Project teams must be willing to target a **25.0 site EUI or less**. An exception may be requested (or necessary) if 25.0 EUI is not reasonable due to building type, hours of operation or because some percentage of the building is semi-conditioned. In these situations, participants alternatively may pursue a site EUI target representing a minimum 25.0% EUI reduction (for electrically heated buildings) or 40.0% EUI reduction (for non-electrically heated buildings) from the Mass Save baseline. Mass Save Sponsors must approve any exceptions, and any EUI target shall not be greater than 75 in this pathway.⁴
2. Include ZNE or ZNE ready goal and the EUI target in the project documents, including the Owner Project Requirements (OPR)

¹ Energy Use Intensity (EUI): A measure of a building’s gross annual energy consumption (excluding parking garages) relative to its gross square footage (excluding parking garages; penthouse square footage should also not be included, as it is not conditioned space). EUI is calculated as KBtu per square foot per year.

² The Mass Save Sponsors are National Grid, Eversource, Unitil, Columbia Gas, Cape Light Compact, Liberty Utilities, Blackstone Gas Company, and Berkshire Gas. To determine your Mass Save Program Sponsor(s), please visit <https://www.masssave.com/en/saving/business-rebates>.

³ Zero Net Energy Building: A building that produces as much clean, renewable energy as it uses when measured over a one-year period. Zero Net Energy Ready Building: Projects that are not able to add renewables on site right away but achieve the EUI Target set for the project.

⁴ Electricity generating renewables, such as Photovoltaics (PV) or wind turbine technology, do not contribute towards the site EUI target.

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3. Agree to cost share the services of the Mass Save ZNE expert
4. Continuously monitor the predicted EUI of the project with iterative energy modeling throughout each phase of design. Design team's energy model should meet the requirements of ASHRAE 90.1 G2.2.
5. Commission the building to levels equivalent to the LEED BD&C Version 4 Fundamental Commissioning and Verification Prerequisite and the LEED BD&C Enhanced Commissioning credit (Option 1, Path 1) and Envelope Commissioning credit (Option 2)
6. Establish a plan for determining how the building's site EUI will be calculated once the building is operational, and identify the responsible parties
7. Ensure electric vehicle charging stations are separately metered
8. Ensure any on site generation is separately metered
9. Ensure any unconditioned spaces are separately metered
10. Meet the requirements of ASHRAE 90.1-2016, para. 8.4.3 related to metering and data storage
11. Commit to continued engagement with Mass Save Sponsor(s) through a one-year post commissioning, post occupancy period

Key Mass Save Sponsor Commitments:

1. Cost share with the customer the services of a ZNE expert (50% of fee up to \$10,000 cost share) to help the project team develop a roadmap to low EUI and ZNE success.
2. Offer project incentives on a dollar per square foot basis up to \$2.25/sf. See Table 1 below.
3. Offer \$3,000 toward zero net energy or Passive House certification.
4. Offer up to \$15,000 in Design Team Incentives. See Table 2 below.
5. Offer an optional Verification Incentive to help customers achieve their predicted EUI upon operation. See Table 1 below.

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This document outlines the roles and responsibilities of each party to set transparent expectations for all parties participating in the Program. Under no circumstances does this Memorandum require customers or design teams to incorporate any particular EUI reduction strategy, nor does this document bind the customer or design team to a particular EUI target. All assistance offered by Sponsors through this Program is offered in an advisory capacity only.

The Mass Save Sponsors understand that the following customer:

_____ (“The Customer”)

will undertake the following (check one)

- new construction
- major renovation,
- addition

_____ (“Premises”)

This project is being designed by the following design professionals (collectively, the “Design Team”):

_____ (“Architect”)

_____ (“Electrical Engineer”)

_____ (“Mechanical Engineer”)

Participating Mass Save Sponsors:

_____ (“Electric Sponsor”)

_____ (“Gas Sponsor”)

IMPORTANT:

Customers participating in this pathway may not also participate in the Mass Save *upstream* programs where incentives for HVAC, domestic hot water, food service and lighting equipment are offered directly to distributors. To ensure participation in only one Mass Save program pathway, designers must include language in project documents informing contractors that this project is participating in a Mass Save downstream program pathway, and that they may not pursue or accept any HVAC, domestic hot water, food service or lighting upstream incentives for this project.

Detailed Process:

Step 1 – Customer Engagement with Mass Save

Customers may reach out to Mass Save Sponsors even before they select the Owner’s Project Manager (OPM) and Designer. Very early engagement allows Mass Save Sponsors to provide guidance on language to include in OPM and designer services Requests for Services (RFSs) related to zero net energy and low EUI targets. Once the design team has been selected and zero net energy is a clear goal, the customer will re-engage with Mass Save Sponsors in conceptual/early feasibility or early schematic design. Initial conversations will focus on EUI target setting and confirmation that customer and design team goals align with the program requirements.

Step 2 – EUI Target Setting and Developing a Roadmap to Meet the EUI Target

The target EUI for projects participating in this pathway is a site EUI of 25.0 or less or an alternative percent reduction target in accordance with key customer commitment number 1 above.

- Projects pursuing an EUI of 25 or less – Mass Save Sponsors will engage a ZNE specialist to provide technical assistance and ZNE planning throughout design
- Projects pursuing the 25.0% or 40.0% reduction scenarios – Mass Save Sponsors will engage a ZNE specialist to help determine a 25.0% or 40.0% EUI reduction target. The specialist will also help the design team with developing strategies and a pathway for getting the design to achieve the target.

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Once the Mass Save Sponsors confirm the customer is eligible for participation in this ZNE pathway, customers will be required to sign an Engineering Services Agreement (ESA) and commit to cost sharing the services of the ZNE specialist.

Step 3 – Design

Once the EUI target is established, it should be written into the project documents, including the OPR, where it will serve as a touchstone throughout the rest of design and construction. The project team will pursue the EUI target throughout design and will conduct the iterative energy modeling necessary to ensure the design remains on track to achieve the target EUI.

In addition to the feasibility and early schematic design technical support and ZNE road mapping services, the Mass Save ZNE specialist will review the project documents at the end of Schematic Design and at mid design development, and then will provide reports back to the team with any further recommendations and considerations.

Customer must make final cost share payments to the ZNE specialist once the ZNE specialist's work is complete at the end of design development.

Customer must ensure a commissioning contract is in place that meets the requirements of this Program. Provide a copy of the commissioning scope of services to Mass Save Sponsor(s).

If the customer is pursuing an EUI target through the 25.0% or 40.0% reduction from Mass Save baseline option, the EUI target will be estimated during the early feasibility and schematic design phases, but will not be locked in for purposes of incentives until the Mass Save Sponsor confirms its baseline EUI based on the 100% Design Development set. Once Mass Save Sponsors have reviewed that set, Mass Save Sponsors will lock in the target EUI. The target EUI will remain locked for purposes of incentives unless there are major design changes between 100% design development and 100% construction documents, including, but not limited to, HVAC system type changes and space type changes.

Step 4 – Planning for EUI Data Collection and Corrective Action

Customers must consider how they will determine the post occupancy EUI of the project in coordination with their Mass Save Sponsor(s) and determine who will be responsible for collecting the data. Thought should be given to corrective action if at post occupancy the project is straying from the final design EUI. The project must comply with ASHRAE 90.1-2016, para. 8.4.3 related to metering and data storage, and it is recommended that the project team consider submetering in accordance with the LEED BD&C v4 Energy and Atmosphere Advanced Energy Metering credit, which requires submetering of any individual energy end uses that represent 10% or more of the total annual consumption of the building.

An optional Verification Incentive is available to help customers identify issues that may arise related to energy savings post construction (please request the Mass Save Sponsor's scope of work for more details). The Mass Save Sponsors will reimburse 50% or up to \$10,000 of the fee associated with this work. Customers must decide during design if they wish to pursue this incentive so that a contract can be put in place.

Step 5 – Mass Save Incentive Pre-Approval

At the end of design, the design team must complete a final energy model representative of the final design. If the design team's energy model affirms the design will achieve the target EUI, the Mass Save Sponsor will pre-approve an incentive of \$1.25/sf. If the customer has a contract in place for the Verification Incentive scope, this incentive component will be pre-approved as well.

An additional \$1.00/sf incentive will be available after the one-year post occupancy period if the project achieves the target EUI in practice (see Step 7 for details on when the post occupancy period begins). If the design team's model does not achieve the target EUI (either a 25.0 EUI or a 25.0%/40.0% reduction in EUI from the Mass Save baseline), the project will shift out of the Path 1 ZNE/Deep Energy Savings participation pathway but continue participating with Mass Save Sponsors in the Path 2 Whole Buildings EUI Reduction Pathway (contact your Mass

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Save Sponsor for more details).

Mass Save Sponsors will require customers to sign:

1. Custom application, formally requesting Mass Save incentives, and
2. The Mass Save Minimum Requirements Document (MRD), which lays out the energy-using equipment and system details that will lead the project to achieve the target EUI.

Customers must commit to constructing the building as it was designed and as it was documented in the MRDs. Major deviations from the design and specific equipment included in the design could jeopardize the project's ability to achieve the target EUI and could jeopardize the customer's opportunity to obtain full incentives.

At the end of design, Mass Save Sponsors will also request pdfs of the Final Design Documents. Mass Save Sponsors will conduct further analysis at their own expense to determine more granular information regarding Mass Save program energy savings. Mass Save Sponsors will share the design documents with at least one additional vendor at their discretion at this time.

Table 1. Summary of Customer Incentives*	
Construction Incentive	\$1.25/sf
Post Occupancy Incentive	\$1.00/sf
ZNE or PH Certification Incentive	\$3,000
Optional Verification Incentive	50% of fee up to \$10,000

*Customer incentives are capped at 100% of the combined incremental cost of the EUI reduction strategies included in the project. Projects must be cost-effective to receive the full customer incentive and are subject to each Mass Save Sponsor's program budget.

Step 6 – Construction Completion and Construction Phase Incentive Payment

A few weeks before substantial completion, customers must provide a set of approved submittals, invoices and photographs corresponding with major equipment that is key in attaining the predicted EUI. Sponsor(s) may also request a copy of the project's schedule of values.

All projects participating in the Program are subject to inspection by each participating Mass Save Sponsor. Customers may be asked to arrange for these post inspections to take place once the building is ready for occupancy.

Upon Mass Save Sponsor review of submittals, invoices and photographs, and upon completion of the post inspection, Mass Save Sponsor(s) will make the \$1.25/sf construction incentive payment to the customer and will make the design team incentive payment. Where equipment and systems installed deviate substantially from equipment and systems shown in the design documents, Mass Save reserves the right to adjust the customer and design team incentive amounts.

The design team is eligible for a Design Team Incentive (DTI) at construction completion if the customer's construction payment is approved. DTI rates, offered per Table 2 below, encourage the integrated design and continuous iterative energy analysis that is necessary to achieve the EUI target.⁵ Mass Save Sponsors pay the DTIs to the design team lead (an invoice is required), who may disperse them to other team members as appropriate.

⁵ Where the project has a contract that may restrict payments to the design team (as can happen with some municipal projects), it is the responsibility of the design team lead to work with the customer to ensure that the design team can obtain design team incentive payments per this program offering.

Table 2. Design Team Incentives

Calculated at \$0.20/sf and capped at \$15,000, but not less than \$8,000 per project

Step 7 – Post Occupancy Incentive, Verification Incentive, and Certification Incentive

Once the building is functioning in a steady state (at anticipated occupancy and operating as intended), the customer and the Mass Save Sponsor(s) agree to begin the Mass Save Performance Period, which will last for one year. At the end of the Mass Save Performance Period, the customer is responsible for supplying the post occupancy energy usage (including utility bills, delivered fuel usage, and on-site generation), which is subject to Mass Save Sponsor review.

As described in Step 4, customers may optionally choose to pursue a Verification Incentive from Mass Save Sponsors. Regardless of whether the customer pursues the Verification Incentive, the Mass Save Performance Period as it relates to the post occupancy incentive will begin once the customer affirms:

- The metering system is set up and operating properly per ASHRAE 90.1-2016, para. 8.4.3 and as verified by the commissioning agent.
- All corrective action the customer intends to take as a result of the Verification Team’s scope of work has been completed.
- The occupancy and use of the building have reached a “steady state.”

If, at the end of the Mass Save Performance Period, the building achieves an operational EUI, which, when adjusted for weather by the Mass Save Sponsors, achieves the target EUI, the Mass Save Sponsors will pay the customer the additional \$1.00/sf incentive for this Program. The post occupancy EUI is adjusted for weather so that customers are not unfairly penalized for particularly harsh weather and are not unfairly benefitted by particularly mild weather.

If the customer opts to certify the project as net zero in accordance with LEED Zero or the International Living Future Institute’s (ILFI’s) Living Building Challenge 4.0 (including Zero Carbon, Zero Energy, CORE, Petal or Living Certification), the New Buildings Institute’s (NBI’s) zero energy standards, or if they receive Passive House certification from either PHIUS or PHI, Mass Save Sponsors will pay a \$3,000 certification incentive.

Disclaimers

Except for payment of incentives as set forth hereunder, the Mass Save Sponsors do not make any representations, warranties, promises or guarantees in connection with the Program, energy conservation measures (ECMs), EUI reduction strategies, energy savings, benefits, adequacy or safety of ECMs or other items, or any work, services or other item performed in connection with the Program including, without limitation, the warranty of merchantability or fitness for a particular purpose. Also, other than the (i) energy cost savings realized by Customer, (ii) energy or ancillary service market revenue achieved through market sensitive dispatch, (iii) alternative energy credits, and (iv) renewable energy credits (altogether, the “Customer Credits”), the Mass Save Sponsors have unilateral rights to apply for any credits or payments resulting from the Program or ECMs (the “Sponsor Credits”). Such Sponsor Credits include but are not limited to credits and payments for: (a) ISO-NE capacity, (b) forward capacity credits, (c) other electric or natural gas capacity and avoided cost payments or credits, and (d) demand response program payments. Customer waives, and agrees not to seek, any right to any Sponsor Credit. The Mass Save Sponsors are not responsible for the payment of any taxes assessed by federal, state or local governments on either benefits conferred on the customer by the Sponsor(s) or design incentives paid to the design team.

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By signing below, the customer represents that he/she (1) shall be the sole and lawful customer of the Premises and (2) has read, understands, accepts and agrees to the terms and conditions for participation in the Program outlined above.

Customer Signature: _____

Customer Printed Name: _____

Date: _____

Email: _____

Phone: _____

Architect Signature: _____

Architect Printed Name and Company Affiliation: _____

Date: _____

Email: _____

Phone: _____

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Process Checklist

Path 1: ZNE/Deep Energy Savings Program

Pre-Design Phase

- If possible, engage Mass Save Sponsor(s) before hiring an Owner's Project Manager (OPM) and design team. The Mass Save Sponsors can offer request for proposal or request for services (RFP/RFS) language and questions to help customers select a designer or OPM with zero net energy (ZNE) project experience.
- Incorporate zero net energy (ZNE) goals and/or low Energy Use Intensity (EUI) goals into the RFP/RFS for OPM services and designer services

Feasibility and Early Schematic Design Phases

- Once design team is hired, re-engage Mass Save Sponsor(s) to ensure this Program is a good fit
- Sign Mass Save Memorandum of Understanding (MOU)
- Sign an Engineering Services Agreement (ESA) confirming customer is willing to cost share the services of a ZNE expert that Mass Save sponsor(s) would bring to the project
- Establish EUI target and a roadmap for achieving the target
- Add ZNE goal and EUI target to Owner Project Requirement (OPR) and provide Mass Save Sponsor(s) with a copy
- Conduct iterative energy modeling throughout design to ensure the project is tracking toward the EUI target
- Establish a plan for calculating site EUI once the building is operational; identify responsible parties and consider tools that will flag unexpectedly high energy use (e.g., submetering)
- Ensure that a commissioning contract is in place that meets the program requirements and provide copy of commissioning scope to Mass Save Sponsor(s)
- If pursuing the Verification Incentive, establish a contract with the Verification Team to complete this work and provide a copy of the contract that includes the scope of work necessary to obtain the incentive to Mass Save Sponsors.

Mid Design

- Continue to conduct iterative energy modeling throughout design to ensure the project is tracking toward the EUI target
- Provide 50% or 100% Design Development set to Mass Save ZNE expert for review and team feedback/discussion
- Designers must include language in project documents informing contractors that this project is participating in a Mass Save downstream program pathway, and that they may not pursue or accept any HVAC, food service, domestic hot water or lighting upstream incentives for this project
- Finalize customer cost share payments to the ZNE specialist upon receipt of the specialists' Design Development Review Report

End of Design – Upon Completion of Design Team's Energy Modeling

- Provide the design team's energy modeling report based on 100% Construction Documents to Mass Save Sponsor(s) showing the predicted EUI of the project's final design. If the EUI target is met, move forward in Path 1 below. If the EUI target is not met, move forward with Path 2 (consult your Mass Save Sponsor).
- Sign the Custom Application in the pre-installation section, formally requesting Mass Save Sponsor incentives
- Sign the Minimum Requirements Documents (MRD) in the pre-installation section – affirming intent to build in accordance with the equipment and systems identified in the MRDs

Construction/End of Construction Phase

- Maintain focus on the project components such that the predicted EUI is maintained as a target throughout construction
- Provide submittals, invoices, photographs and possibly a contractor schedule of values at the end of construction to affirm that major equipment and systems contributing to the predicted EUI have been installed
- Schedule a post installation walk-through with Mass Save Sponsor(s)
- Sign the Custom Application in the post-installation section to confirm project is complete and ready for occupancy
- Sign the Minimum Requirements Document (MRD) in the post installation section to confirm that equipment and systems have been installed as expected to contribute to the predicted EUI.
- Mass Save Sponsor(s) will pay customer's construction incentive if equipment is installed as expected
- Design Team Lead to submit an invoice for the Design Team Incentive
- Mass Save Sponsor(s) will pay the Design Team Incentives if equipment is installed as expected

Mass Save Performance Period

- Once the project reaches a steady state of occupancy and operation, provide Mass Save Sponsor(s) with an affidavit that confirms the metering system is set up and operating properly per ASHRAE 90.1-2016, para. 8.4.3 as verified by the commissioning agent, all corrective action customer intends to take related to energy use has been taken, and the building's occupancy and operation are in a steady state.
- Customer will provide Mass Save Sponsors with one year of post occupancy usage (including utility bills, delivered fuel usage, and on-site generation) after the beginning of the Mass Save Performance Period
- Mass Save Sponsors will review the data and true up the EUI date to adjust for weather
- If weather adjusted EUI meets the target EUI, Mass Save Sponsors will make the \$1.00/sf post occupancy payment
- If customer opted for the optional Verification Incentive, provide Mass Save Sponsors with copies of reports from each review interval
- Mass Save Sponsor(s) will make a \$3,000 certification support payment if customers certify their projects as net zero in accordance with LEED Zero or the International Living Future Institute's (ILFI's) Living Building Challenge 4.0 (including Zero Carbon, Zero Energy, CORE, Petal or Living Certification), the New Buildings Institute's (NBI's) zero energy standards, or if they receive Passive House certification from either PHIUS or PHI

7/29/2020

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Commercial New Construction or Major Renovation

Path 2: Whole Building EUI Reduction Path



Receive Incentives for Medium to Large Building Energy Efficiencies

If your team is beginning the new construction or major renovation of a medium to large commercial or industrial building, the Sponsors of Mass Save are here to help you reduce the building's energy use intensity (EUI).

Energy Use Intensity, or EUI, is defined as the total amount of energy a building uses over the course of a year, divided by its square footage. The EUI is measured in kBtu/sf/year. Similar to the miles per gallon metric used to compare the fuel economy of one vehicle to the next, an EUI metric allows a comparison between the energy efficiency of buildings.

Your team will receive technical assistance to establish and reach an EUI target, as well as financial incentives to meet those goals.

Project Eligibility Requirements*

1. Building must be greater than 50,000 square feet
2. Owner should engage their Mass Save Sponsor(s) before 100% design development
3. Participating projects must aim at meeting at least a 10% EUI reduction from the Mass Save baseline
4. Project teams who engage with their Mass Save Sponsor(s) after the end of design development, may be eligible to participate in the modeling-only portion of this pathway

* Energy-intensive projects less than 50,000 sf in size may also be eligible to participate



About Mass Save:

Mass Save® is a collaborative of Massachusetts' natural gas and electric utilities and energy efficiency service providers including Berkshire Gas, Blackstone Gas, Cape Light Compact, Columbia Gas, Eversource, Liberty Utilities, National Grid, and Until. We empower residents, businesses, and communities to make energy efficient upgrades by offering a wide range of services, rebates, incentives, trainings, and information.

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PATH BENEFITS

Partner with the Sponsors of Mass Save before the 100% design development phase of your project and receive:

- Expert technical assistance to help develop the most cost-effective EUI reduction strategies to reach EUI goals
- Financial incentives based on the percent EUI reduction that the final design achieves beyond the Mass Save baseline
- Cost share with your Sponsor for the technical assistance and energy modeling fees
- Added incentives that assist project teams in achieving low energy use at post occupancy
- Annual energy cost savings as soon as your building is operational
- Design team incentives of up to \$15,000 for integrated, creative design aimed at attaining very low EUIs

Summary of Whole Building EUI Reduction Incentives

Customer Incentives

Percent EUI Reduction	Rate
25.0% and above	\$1.25/sf
20.0% - 24.9%	\$0.75/sf
15.0% - 19.9%	\$0.50/sf
10.0% - 14.9%	\$0.35/sf
Technical Assistance	Up to 75% cost share (capped at \$20,000 per Sponsor)
Verification Incentive	50% of fee, up to \$10,000

Design Team Incentives

Percent EUI Reduction	Rate
25.0% and above	\$0.20/sf, capped at \$15,000
20.0% - 24.9%	\$0.10/sf, capped at \$12,500
15.0% - 19.9%	\$0.05/sf, capped at \$10,000
10.0% - 14.9%	\$0.02/sf, capped at \$7,500

Go to MassSave.com/business, click on the **Find Your Mass Save Sponsor** tool and enter your zip code to connect with your Mass Save Sponsor(s).

About Mass Save:

Mass Save® is a collaborative of Massachusetts' natural gas and electric utilities and energy efficiency service providers including Berkshire Gas, Blackstone Gas, Cape Light Compact, Columbia Gas, Eversource, Liberty Utilities, National Grid, and Unitil. We empower residents, businesses, and communities to make energy efficient upgrades by offering a wide range of services, rebates, incentives, trainings, and information.

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NEW CONSTRUCTION & MAJOR RENOVATIONS

Memorandum of Understanding for Path 2: Whole Building Energy Use Intensity (EUI) Reduction

The Whole Building Energy Use Intensity (EUI) Reduction Program (“Program”) is intended for customers with larger and/or fairly complex projects,¹ who are interested in setting an EUI² reduction target that represents at least 10% improvement over a baseline building EUI. The intent of the incentives and technical assistance offered in this pathway is to provide a holistic energy reduction approach that shifts customer and design team focus to expected performance outcomes as they work through the project design.

Project Eligibility:

1. Projects must have a minimum of 50,000 square feet (sf) of comfort conditioned (heated and cooled) space.³
2. Customer should engage Mass Save Sponsors during the project’s conceptual or schematic design phases, but before 100% Design Development
3. Projects must be new buildings, building additions or complete renovations of existing buildings.⁴ Qualifying major renovations are such that occupancy is not possible during construction and where the project scope includes at least 3 of the following systems: (1) HVAC, (2) domestic hot water (DHW), (3) lighting, (4) envelope, and (5) process equipment.
4. Buildings should be comfort-conditioned (heated and cooled), but partially conditioned buildings such as warehouses and industrial facilities, may be eligible on a case by case basis
5. Core and shell and high-rise multi-family projects may participate, provided they meet the requirements above
6. Participants must be a customer of one of the Mass Save Sponsors

Key Customer Commitments:

1. Participating project teams commit to setting an EUI target⁵ in early design (at least a 10% EUI reduction from the Mass Save baseline) and working toward it throughout the remainder of design
2. Customers agree to including the EUI target in project documents such as Owner Project Requirements (OPR)
3. Customers agree to establishing a plan for determining the building’s post occupancy EUI and identifying a responsible party.
4. Customers must commit to a 25% cost share of the services of a third-party technical assistance vendor (services include energy charrette facilitation, EUI target setting, energy modeling, and mid-design review/feedback).

Key Mass Save Sponsor Commitments:

1. Cost share services of a Technical Assistance (TA) vendor (up to 75% of fee)
2. Assist customer and design team in identifying and evaluating EUI reduction strategies

¹ Examples of complex projects might be labs, health science centers, grocery stores, data centers, etc.

² Energy Use Intensity (EUI): A measure of a building’s gross annual energy consumption (excluding parking garages) relative to its gross square footage (excluding parking garages; penthouse square footage should also not be included, as it is not conditioned space). EUI is calculated as KBtu per square foot per year.

³ Mass Save Sponsors may allow participation in this pathway for energy intensive projects even if they are less than 50,000 sf in size.

⁴ Tenant fit outs are not eligible to participate in this pathway.

⁵ Neither combined heat and power (CHP) nor electricity generating renewables, such as photovoltaic (PV) or wind turbine technology, contribute towards the site EUI target. The EUI target may evolve throughout the design process.



3. Offer construction and post occupancy incentives on a dollar per square foot basis, supporting projects with deeper EUI reductions with higher incentive rates (see Table 1 below)
4. Offer Design Team Incentives to qualifying projects (see Table 2 below)
5. Offer an optional Verification Incentive to help customers and their teams achieve the predicted EUI once the building is operating (see Table 1 below)

This document outlines the roles and responsibilities of each party to set transparent expectations for all parties participating in the Program. Under no circumstances does this Memorandum require customers or design teams to incorporate any particular EUI reduction strategy, nor does this document bind the customer or design team to a particular EUI target. All assistance offered by the Sponsors of Mass Save through this Program is offered in an advisory capacity only.

Mass Save Sponsors understand that the following customer:

_____ (“the Owner”):
will undertake the following (check one)

- new construction
- major renovation,
- addition

_____ (“Premises Address”)
This project is being designed by the following design professionals (collectively, the “Design Team”):

_____ (“Architect”)
_____ (“Electrical Engineer”)
_____ (“Mechanical Engineer”)

Participating Mass Save Sponsors:

_____ (“Electric Sponsor”)
_____ (“Gas Sponsor”)

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IMPORTANT:

Customers participating in this pathway may not also participate in the Mass Save upstream programs where incentives for HVAC, domestic hot water and lighting equipment are offered directly to distributors. To ensure participation in only one Mass Save program pathway for this equipment, designers must include language in project documents informing contractors that this project is participating in a Mass Save downstream program pathway, and that they may not pursue or accept any HVAC, domestic hot water or lighting upstream incentives for this project. Customers can and should participate in upstream offerings for food service equipment only.

Detailed Process:

Step 1—Coordination with Mass Save Sponsors

During schematic design or in pre schematic design, inform your Mass Save Sponsors of your new construction/major renovation project. The Path 2 Whole Building EUI Reduction Program is only available when Mass Save Sponsors are engaged and an energy charrette is scheduled before the end of Design Development. The earlier you contact your Mass Save Sponsors, the better the opportunity for energy savings and incentives.

All customers and architects must sign this Memorandum of Understanding (MOU) and agree to the following steps.

Step 2 – Energy Charrette, EUI Target Setting and Developing a Roadmap to Meeting the EUI Target

Customer and design team participate in an energy charrette with Mass Save Sponsors and their TA vendor.

- All projects participating in this Program must establish an EUI target that represents at least a 10% EUI reduction from the Mass Save baseline at or shortly after the energy charrette, with the understanding the EUI target may evolve over the course of design.
- Mass Save Sponsors will bring on a TA vendor who will:
 - Assist the project team in establishing a preliminary EUI target for the project, if one has not already been determined by the project team
 - Help the design team develop a set of strategies that will lead to a reduction in site EUI for the project relative to the Mass Save baseline EUI
 - Prepare a proposal to develop a baseline energy model (per Mass Save baseline requirements) and two phases of as-designed models:
 - TA vendors will produce the first as designed model and iteration of the baseline model based on either the 50% or 100% Design Development (DD) set. TA vendors will provide a report with feedback and further EUI reduction recommendations for the customer and design team at this time.
 - TA vendors will produce a final baseline and as-designed model based on the 90% Construction Documents (CD) set.

Step 3 – Customer Agrees to Cost Share TA Services

- Mass Save Sponsors will cover the fees for TA services in this Program at up to 75% cost share (each Mass Save Sponsor is capped at \$20,000).
- Customer must commit to 25% of the fee for TA services and must sign an Engineering Services Application (ESA) committing to this cost share.

Step 4 – Customer Must Develop a Plan for Measurement and Verification of the Project's Operational EUI

Setting an EUI target and working toward it during design is an important step toward reducing operational energy use, however customers must establish a plan to evaluate energy use post occupancy

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to be successful in truly achieving a low site EUI. Customers must determine how EUI data will be collected and evaluated post occupancy and assign a responsible party.

Thought should be given to corrective action if at post occupancy the project is straying from the final design EUI. Mass Save Sponsors strongly recommend that the project team consider submetering at minimum in accordance with the LEED BD&C v4 Energy and Atmosphere Advanced Energy Metering credit, which requires submetering of any individual energy end uses that represent 10% or more of the total annual consumption of the building.

An optional Verification Incentive is available to help customers identify issues that may arise related to energy savings post construction (please request the Mass Save scope of work for more details). The Mass Save Sponsors will reimburse 50% or up to \$10,000 of the fee associated with this work. Customers must decide during design if they wish to pursue this incentive so that a contract can be put in place.

Step 5 – Design

Once the EUI target is established, it should be written into the project documents, including the Owner Project Requirements (OPR) where it will serve as a touchstone throughout the rest of design and construction. The project team will pursue the EUI target throughout design and should conduct the iterative energy modeling necessary to ensure that the design remains on track to achieve the target EUI.

Step 6 – Interim Report and Consultation

The TA vendor will produce a model and report based on the 50% or 100% Design Development set, showing measures that are producing site energy savings relative to the Mass Save baseline as well as the predicted EUI of the project. The customer, design team and Mass Save Sponsors will meet at this time with the TA vendor to review results and recommendations for further reducing the project EUI.

Mass Save Sponsors will lock in the target EUIs at each incentive tier at this time, based on the interim report. The target EUIs will remain locked for purposes of incentives unless there are major design changes between 100% Design Development and 100% Construction Documents, including, but not limited to HVAC system type changes and space type changes. Customers are not required to hit any particular target, however at this time, they will know for certain the EUI targets they must hit to achieve each tier of incentive rates.

Step 7 – Mass Save Incentive Pre-Approval

At 90% Construction Documents (CDs), the TA vendor will prepare the final Mass Save energy model and report documenting the final predicted EUI and the percent EUI reduction from the Mass Save baseline. Mass Save Sponsors will issue customer offer letters in accordance with the incentive rates shown in Table 1 below.

Table 1. Customer Incentive Rates*	
% EUI Reduction	Rate
10.0% - 14.9%	\$0.35/sf
15.0% - 19.9%	\$0.50/sf
20.0% - 24.9%	\$0.75/sf
25.0% and above	\$1.25/sf
Optional Verification Incentive	50% up to \$10,000

*Customer incentives are capped at 100% of the combined incremental cost of the EUI reduction strategies included in the project. Projects must be cost-effective to receive the full customer incentive and are subject to each Mass Save Sponsor's program budget.

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Mass Save Sponsors will require customers to sign a Custom Application, formally requesting Mass Save incentives, and customers must also sign the Mass Save Minimum Requirements Document (MRD) that lays out the energy-saving equipment and system details, based on 90% Construction Documents, that will lead the project to achieve the final design’s predicted EUI. Customers must commit to building the building as it was designed and as it was documented in the MRDs. Major deviations from the design and changes in energy system components, equipment efficiencies and control strategies as documented in the MRDs could jeopardize the project’s ability to achieve the target EUI and could jeopardize the customer’s opportunity to obtain full incentives.

At this time, Mass Save Sponsors and customers need to finalize all payments to the TA vendor since the modeling and EUI reduction consultation phase of the project is complete.

Step 8 – Construction Completion, Construction Phase Incentive Payment, Design Team Incentive Payment

A few weeks before substantial completion, customers must provide a set of approved submittals, invoices and photographs corresponding with energy reducing equipment and systems per the MRDs. Sponsors may also request a copy of the project’s schedule of values.

All projects participating in the Program are subject to inspection by each participating Mass Save Sponsor. Customers may be asked to arrange for these post inspections to take place once the building is ready for occupancy.

Upon Mass Save Sponsor review of submittals, photographs, and invoices, and upon completion of the post inspection, Mass Save Sponsor(s) will make the construction incentive payment to the customer. Where equipment and systems installed deviate substantially from equipment and systems shown in the design documents and MRDs, Mass Save reserves the right to adjust the customer and design team incentive amounts.

Select projects are subject to 20% incentive hold-back pending receipt of trend data or other information stipulated in the Minimum Requirements Documents (MRDs). The design team is eligible for a Design Team Incentive if the modeled EUI reduction is at least 10%. It is payable at the end of construction in accordance with the rates in Table 2 below, to encourage the integrated design and continuous iterative energy analysis that is necessary to achieve the EUI target.⁶ Mass Save Sponsors pay the Design Team Incentives to the design team lead (an invoice is required), who may disperse them to other team members as appropriate.

Table 2. Design Team Incentives		
Whole Building EUI Reduction	10.0% to 14.9% EUI Reduction	\$0.02/sf, capped at \$7,500
	15.0% to 19.9% EUI Reduction	\$0.05/sf, capped at \$10,000
	20.0% and 24.9% EUI reduction	\$0.10/sf, capped at \$12,500
	≥ 25.0% EUI reduction	\$0.20/sf capped at \$15,000

⁶ Where the project has a contract that may restrict payments to the design team (as can happen with some municipal projects), it is upon the design team lead to work with the customer to ensure that the design team can obtain design team incentive payments per this Program offering.

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Step 9 – Verification Incentive (optional)

Customers that have chosen to pursue a separate Verification Incentive from Mass Save Sponsors must ensure that their selected consultant completes the scope of

work during the post occupancy period. This incentive is offered to help customers achieve their EUI targets not only in the design, but upon occupancy as well. Provide copies of consultant reports generated at each review interview to Mass Save Sponsors. See your Mass Save Sponsors for details on requirements for this optional incentive.

Engagement with Mass Save Sponsors after Design Development

Project teams and customers who engage with Mass Save Sponsors on qualifying projects after the end of design development, may participate with Mass Save Sponsors as follows:

- Engagement with Mass Save Sponsors after the end of Design Development and before the end of Construction Documents:
 - Project teams may still participate in the modeling-only portion of the Path 2 Whole Building EUI Reduction Program at up to 50% Mass Save Sponsor and 50% customer model cost share.
 - The early EUI benchmarking support, the additional modeling cost share and the design team incentives will not be available for project teams that engage Mass Save Sponsors after 100% Design Development.
 - Customer incentive rates will vary from those published in this document.
- Engagement after 100% Construction Documents:
 - The Path 2 Whole Building EUI Reduction Program as described above is not available, but teams may participate with Mass Save Sponsors by completing appropriate prescriptive and custom applications via the New Construction Systems Path.

Disclaimers:

Except for payment of incentives as set forth hereunder, the Mass Save Sponsors do not make any representations, warranties, promises or guarantees in connection with the Program, energy conservation measures (ECMs), EUI reduction strategies, energy savings, benefits, adequacy or safety of ECMs or other items, or any work, services or other item performed in connection with the Program including, without limitation, the warranty of merchantability or fitness for a particular purpose. Also, other than the (i) energy cost savings realized by Customer, (ii) energy or ancillary service market revenue achieved through market sensitive dispatch, (iii) alternative energy credits, and (iv) renewable energy credits (altogether, the “Customer Credits”), the Mass Save Sponsors have unilateral rights to apply for any credits or payments resulting from the Program or ECMs (the “Sponsor Credits”). Such Sponsor Credits include but are not limited to credits and payments for: (a) ISO-NE capacity, (b) forward capacity credits, (c) other electric or natural gas capacity and avoided cost payments or credits, and (d) demand response program payments. Customer waives, and agrees not to seek, any right to any Sponsor Credit. The Mass Save Sponsors are not responsible for the payment of any taxes assessed by federal, state or local governments on either benefits conferred on the owner by the Sponsor(s) or design incentives paid to the design team.

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By signing below, the owner represents that he/she (1) shall be the sole and lawful owner of the Premises and (2) has read, understands, accepts and agrees to the terms and conditions for participation in the Program outlined above.

Owner Signature: _____

Owner Printed Name: _____

Date: _____

Email: _____ **Phone:** _____

Architect Signature: _____

Architect Printed Name and Company Affiliation: _____

Date: _____

Email: _____ **Phone:** _____

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Process Checklist

Whole Building EUI Reduction Program

Early Design

- During concept design or early schematic (but before the end of Design Development), engage Mass Save Sponsor(s) and schedule an energy charrette
- Sign Mass Save Memorandum of Understanding (MOU)
- Sign an Engineering Services Agreement (ESA) confirming customer is willing to cost-share the services of a Technical Assistance (TA) vendor
- Establish EUI target. Insert site EUI target here if known: _____
- Include EUI target in the Owner Project Requirement (OPR) and provide Mass Save Sponsor(s) with a copy
- Establish a plan for calculating site EUI once the building is operational; identify responsible parties and consider tools that will flag unexpectedly high energy use at post occupancy (e.g., submetering)
- If pursuing the Verification Incentive, establish a contract with the Verification Team to complete this work and provide a copy of the contract that includes the scope of work necessary to obtain the incentive to Mass Save Sponsors

Mid Design

- Provide 50% or 100% Design Development set to TA vendor for review and team feedback/discussion
- Designers must include language in project documents informing contractors that this project is participating in a Mass Save downstream program pathway, and that they may not pursue or accept any HVAC, domestic hot water or lighting upstream incentives for this project. Upstream incentives for food service equipment are allowed and encouraged.

End of Design – Upon Completion of Energy Modeling

- Provide 90% Construction Documents to the TA vendor to provide a final report showing the predicted EUI of the project's final design. The EUI results will determine the level of incentives to be paid.
- Sign the Custom Application in the pre-installation section formally requesting Mass Save incentives
- Sign the Minimum Requirements Documents (MRD) in the pre installation section, affirming intent to build in accordance with the equipment and system specifications stated in the MRDs
- Finalize payment to Mass Save TA Vendor once energy model and report are complete

Construction/End of Construction Phase

- Maintain focus on the project components such that the predicted EUI is maintained as a target throughout construction
- Provide submittals, invoices, photographs and possibly a contractor schedule of values at the end of construction to affirm that equipment and systems were installed as stated in the MRDs
- Schedule a post installation walk-through Mass Save Sponsors
- Sign the Custom Application in the post-installation section to confirm project is complete and ready for occupancy
- Sign the Minimum Requirements Document (MRD) in the post-installation section to confirm that equipment and systems have been installed as expected to contribute to the predicted EUI. Note any changes.
- Mass Save Sponsors will pay customer's construction incentive if equipment is installed as expected
- Design Team Lead to submit an invoice for the design team incentive

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- Mass Save Sponsors will pay the Design Team Incentives if equipment is installed as expected

Post Construction

- If pursuing the Verification Incentive, provide copies of the Verification Team's reports at each reporting interval indicated in the scope of work to Mass Save Sponsors

7/29/2020

WE ARE MASS SAVE®:



Stoneham High School Feasibility Study

Community Forum 02

Hosted by the Stoneham School Building Committee (SSBC)

Join us for a community meeting to learn about and share your thoughts on a new or renovated school project! We **WANT** to hear from you - **I like..., I wish..., I wonder...!**

QUICK RECAP /

Catch up on what you might have missed:

- Feasibility Study process and schedule
- Condition of the facilities
- Educational vision of the future

REVIEW DESIGN OPTIONS /

Give feedback on ideas for:

- Renovation
- Renovation and addition
- New constructionn

LEARN ABOUT PROJECT COST /

Evaluate the preliminary cost models:

- Information on the cost for each option
- MSBA partnership

SHARE YOUR THOUGHTS /

Tell us what you think of the options:

- What are the advantages and disadvantages
- Which meet the educational and community needs best

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Join us by **CLICKING** on the link:

<https://global.gotomeeting.com/join/942765229>

or **CALLING**

+1 (224) 501-3412 Access Code 942-765-229

Follow the meeting on **Facebook Live**

 6:30pm  September 23, 2020  Online



email: SSBC@Stoneham-Ma.gov
website: Stoneham-Ma.Gov/hsbc

Project Minutes

Project: Stoneham High School Feasibility Study
 Prepared by: Joel Seeley
 Re: Educational Mission Subcommittee Meeting
 Location: Remote Locations
 Distribution: Attendees (MF)

Project No.: 20033
 Meeting Date: 8/21/2020
 Time: 8:45am
 Meeting No: 1

Attendees:

PRESENT	NAME	AFFILIATION
✓	Jeanne Craigie	Town Moderator
✓	Josephine Thomson	Community Member
✓	Nicole Nial	School Committee Member
	Lisa Gallagher	Community Member, School Secretary, Past member of Middle School Building Committee
✓	John Macero	Superintendent of Schools, Secretary of School Building Committee
✓	Bryan Lombardi	Stoneham High School Principal
✓	Brooke Trivas	Perkins and Will
✓	Joel Seeley	SMMA

Item #	Action	Discussion
1.1	B. Lombardi J. Seeley	<p>The Educational Mission Subcommittee discussed its role to review the Educational Program being written by the High School Vision Committee and make a recommendation to the School Building Committee.</p> <p>Subcommittee Discussion:</p> <ol style="list-style-type: none"> 1. The subcommittee is to be provided documentation developed to date. The Educational Program is currently being written, a draft will be provided to the subcommittee for review. B. Lombardi and J. Seeley to coordinate on a date. 2. J. Seeley to forward the MSBA Educational Program samples and template to the subcommittee for review. 3. B. Lombardi and J. Seeley to coordinate on a date the Educational Mission Subcommittee can attend a meeting of the High School Vision Committee.
1.2	Record	B. Trivas reviewed the Organizational Diagrams presented at the 8/17/20 SBC meeting, attached.

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes

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STONEHAM HIGH SCHOOL

Building Committee Meeting

8.31.2020

AGENDA

1\ Educational Programming Update

2\ Design Alternatives Review



→
Aerial View of
Stoneham High School

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Educational Programming Update

Building Committee Meeting

Educational Programming Update




Educational Program for Stone...


Educational Program Template

1.1.1 Educational Program - Requirements

The Administration in accordance with the Department of Education (DOE) and the State Board of Education (SBE) has developed the following requirements for the Educational Program for Stone Mountain High School. The program is designed to provide a high-quality, challenging, and relevant educational experience for all students. The program will be based on the Georgia Standards of Excellence (GSE) and the Georgia Career and Technical Education (CTE) standards. The program will be designed to meet the needs of all students, including those with special needs and those who are at risk of dropping out of school. The program will be designed to provide a safe and supportive learning environment for all students. The program will be designed to provide a variety of learning opportunities, including classroom instruction, experiential learning, and online learning. The program will be designed to provide a variety of assessment opportunities, including formative assessment, summative assessment, and portfolio assessment. The program will be designed to provide a variety of support services, including counseling, tutoring, and career guidance. The program will be designed to provide a variety of enrichment opportunities, including clubs, sports, and community service. The program will be designed to provide a variety of leadership opportunities, including student government, peer tutoring, and community service. The program will be designed to provide a variety of career opportunities, including internships, job shadowing, and career counseling. The program will be designed to provide a variety of community service opportunities, including volunteerism, service projects, and community service learning. The program will be designed to provide a variety of leadership opportunities, including student government, peer tutoring, and community service. The program will be designed to provide a variety of career opportunities, including internships, job shadowing, and career counseling. The program will be designed to provide a variety of community service opportunities, including volunteerism, service projects, and community service learning.


Educational Program Template...

The focus is on providing a high-quality, challenging, and relevant educational experience for all students. The program will be based on the Georgia Standards of Excellence (GSE) and the Georgia Career and Technical Education (CTE) standards. The program will be designed to meet the needs of all students, including those with special needs and those who are at risk of dropping out of school. The program will be designed to provide a safe and supportive learning environment for all students. The program will be designed to provide a variety of learning opportunities, including classroom instruction, experiential learning, and online learning. The program will be designed to provide a variety of assessment opportunities, including formative assessment, summative assessment, and portfolio assessment. The program will be designed to provide a variety of support services, including counseling, tutoring, and career guidance. The program will be designed to provide a variety of enrichment opportunities, including clubs, sports, and community service. The program will be designed to provide a variety of leadership opportunities, including student government, peer tutoring, and community service. The program will be designed to provide a variety of career opportunities, including internships, job shadowing, and career counseling. The program will be designed to provide a variety of community service opportunities, including volunteerism, service projects, and community service learning.


Other considerations

Other considerations include the following:

- The program will be designed to provide a high-quality, challenging, and relevant educational experience for all students.
- The program will be based on the Georgia Standards of Excellence (GSE) and the Georgia Career and Technical Education (CTE) standards.
- The program will be designed to meet the needs of all students, including those with special needs and those who are at risk of dropping out of school.
- The program will be designed to provide a safe and supportive learning environment for all students.
- The program will be designed to provide a variety of learning opportunities, including classroom instruction, experiential learning, and online learning.
- The program will be designed to provide a variety of assessment opportunities, including formative assessment, summative assessment, and portfolio assessment.
- The program will be designed to provide a variety of support services, including counseling, tutoring, and career guidance.
- The program will be designed to provide a variety of enrichment opportunities, including clubs, sports, and community service.
- The program will be designed to provide a variety of leadership opportunities, including student government, peer tutoring, and community service.
- The program will be designed to provide a variety of career opportunities, including internships, job shadowing, and career counseling.
- The program will be designed to provide a variety of community service opportunities, including volunteerism, service projects, and community service learning.

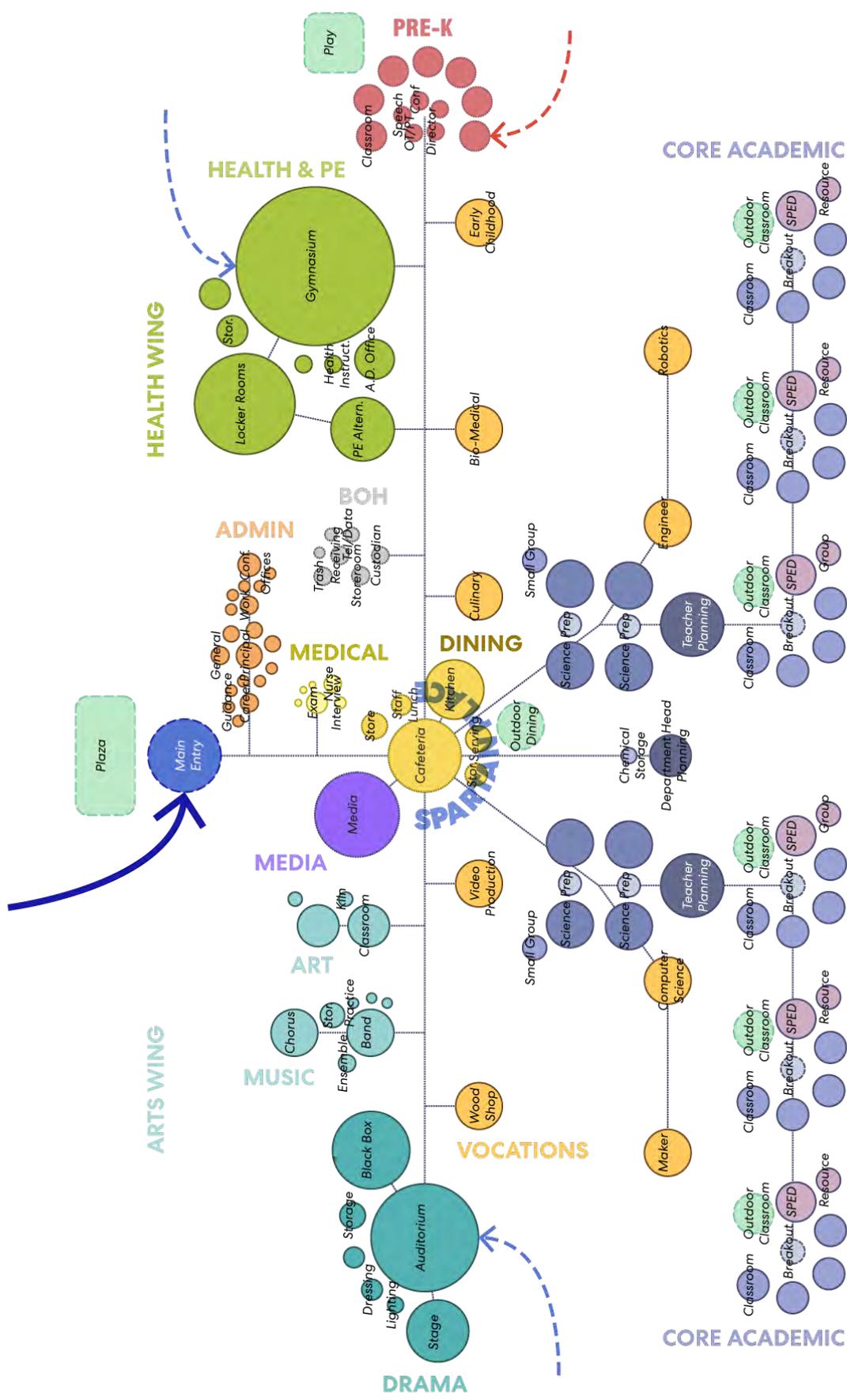

Questions

Question	Answer	Comments	Other
What is the purpose of the program?	To provide a high-quality, challenging, and relevant educational experience for all students.		
What are the program's goals?	To provide a safe and supportive learning environment for all students. To provide a variety of learning opportunities, including classroom instruction, experiential learning, and online learning. To provide a variety of assessment opportunities, including formative assessment, summative assessment, and portfolio assessment. To provide a variety of support services, including counseling, tutoring, and career guidance. To provide a variety of enrichment opportunities, including clubs, sports, and community service. To provide a variety of leadership opportunities, including student government, peer tutoring, and community service. To provide a variety of career opportunities, including internships, job shadowing, and career counseling. To provide a variety of community service opportunities, including volunteerism, service projects, and community service learning.		

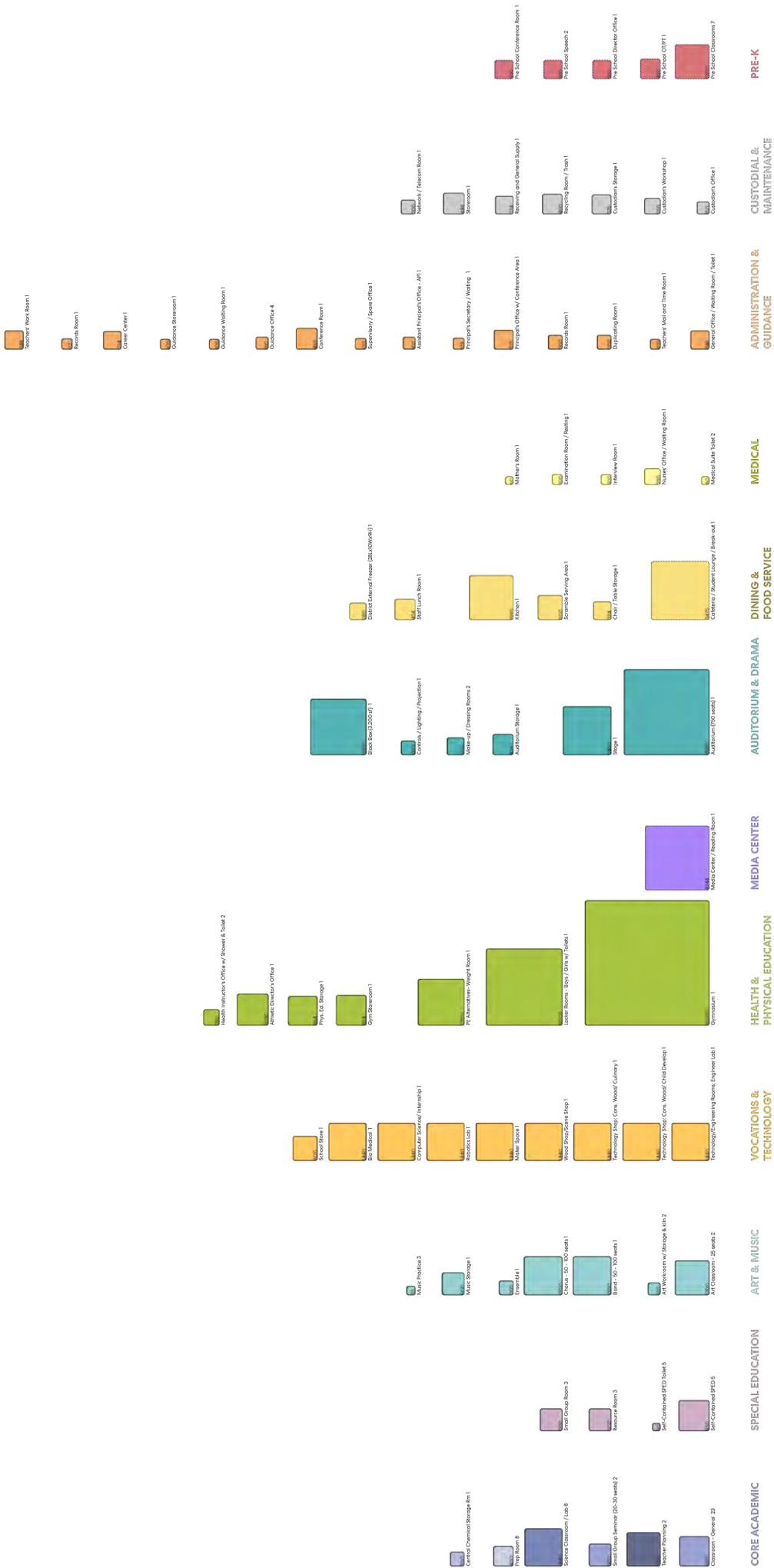

SHS diagrams



Educational Programming Update



Educational Programming Update



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Design Alternatives Review

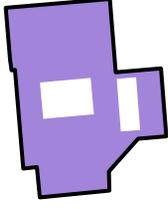
Building Committee Meeting

Design Alternatives Review

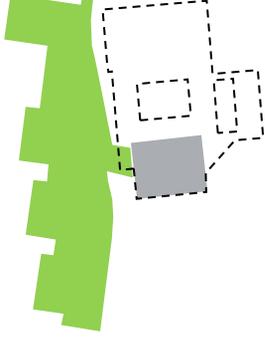
CODE UPGRADES

- *NO Educational upgrades*
- *Code Upgrades*
- *System Upgrades*
- *Exterior Envelope Repairs*
- *Interior Repairs*

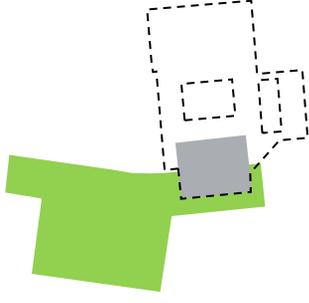
RENOVATION ONLY



RENOVATION ADDITION

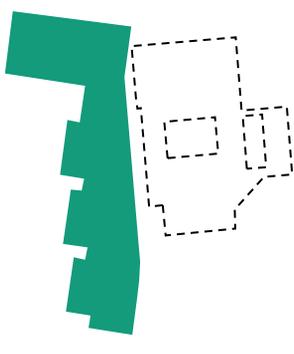


- **Scheme 1**

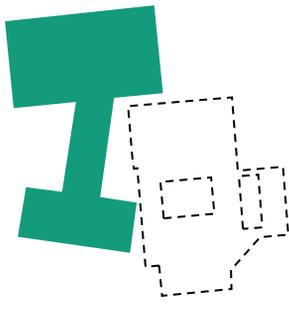


- **Scheme 2**

NEW CONSTRUCTION



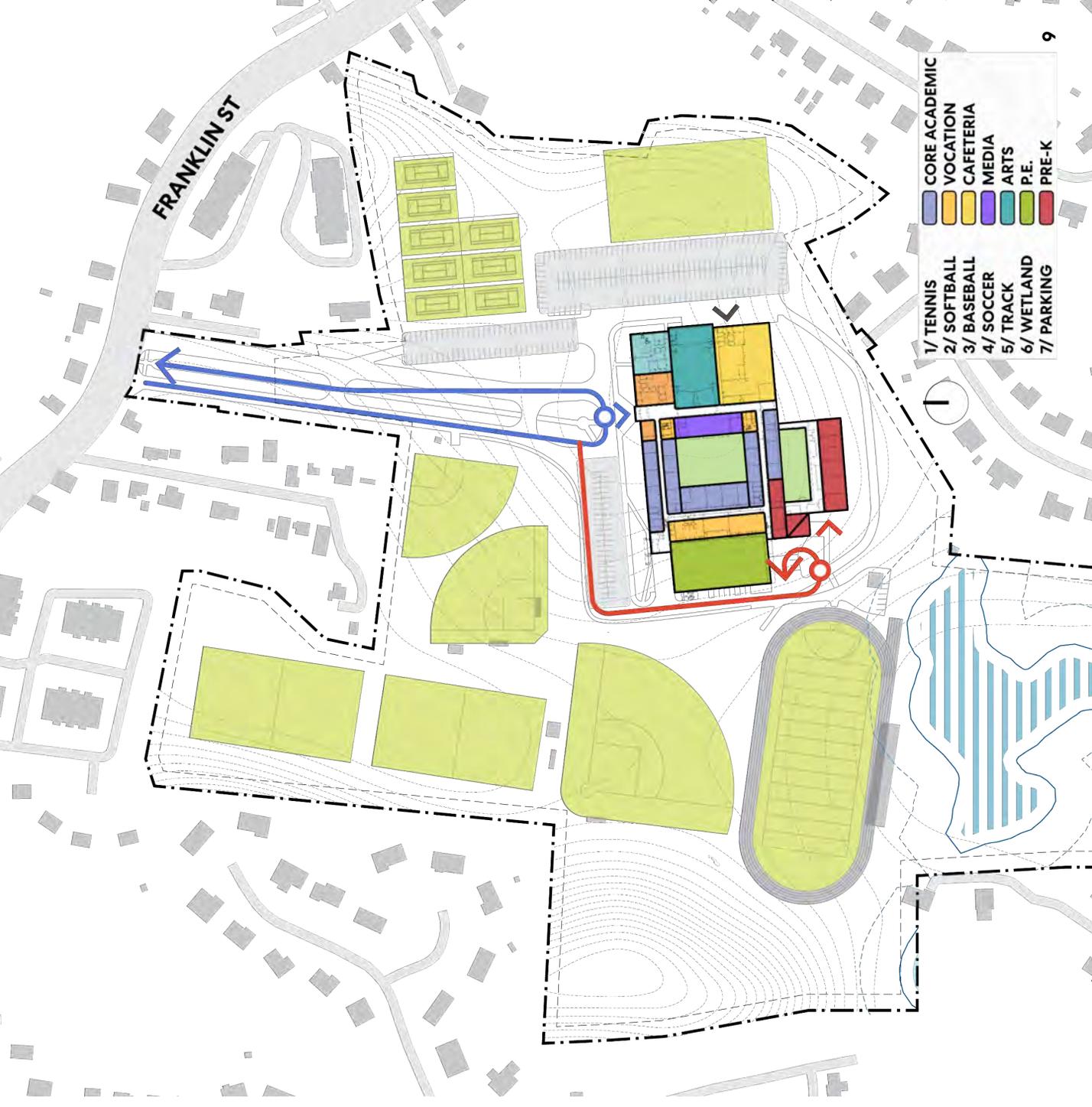
- **Scheme 1**



- **Scheme 2**

Design Alternatives Review – Renovation Only

- **Pros:**
 - No disruption to site
 - Adequate square footage
 - Does not require relocation of culverted stream
- **Cons:**
 - Does not meet 21c educational vision
 - Occupied phased construction (longer construction duration)
 - Difficult to meet ZNE goal



Design Alternatives Review – Renovation Addition 1

- **Pros:**
 - Realized Stoneham's 21c educational vision
 - Minimal disruption of educational spaces during construction
 - Retains existing field house size (bigger than MSBA template)
 - Maximizes visibility of new building from Franklin St
 - Contiguous fields for athletic planning
 - Separate community entries
 - Optimized building orientation for ZNE goal
- **Cons:**
 - Parking distant from stadium
 - Two-phased construction
 - Tight construction area
 - Loss of fields during construction
 - Requires rerouting of culverted stream



Design Alternatives Review – Renovation Addition 2

- **Pros:**
 - Realized Stoneham's 21c educational vision
 - Minimal disruption of educational spaces during construction
 - Retains existing field house size (bigger than MSBA template)
 - Pedestrian connection from community to expeditionary trail
 - Separate community entries
 - Optimized building orientation for ZNE goal
 - Ease of access to fields
- **Cons:**
 - Loss of visibility of new building from Franklin st
 - Two-phased construction
 - Tight construction area
 - Loss of fields during construction
 - Requires rerouting of culverted stream



Design Alternatives Review – New Construction 1

- **Pros:**
 - Realized Stoneham's 21c educational vision
 - Single-phased construction
 - Maximizes visibility of new building from Franklin St
 - Pedestrian connection from community to expeditionary trail
 - Separate community entries
 - Parking near main entry and stadium
 - Optimized orientation of stadium
- **Cons:**
 - Tight construction area
 - Loss of fields and stadium use during construction
 - Relocated stadium
 - Northeast parking needs retaining
 - Requires rerouting of culverted stream



Design Alternatives Review – New Construction 2

- **Pros:**
 - Realized Stoneham's 21c educational vision
 - Single-phased construction
 - Maximizes visibility of new building from Franklin St
 - Pedestrian connection from community to expeditionary trail
 - Separate community entries
 - Contiguous fields for athletic planning
 - Parking near main entry and stadium
 - Optimized orientation of stadium
- **Cons:**
 - Tight construction area
 - Loss of fields & stadium use during construction
 - Relocated stadium
 - Northeast parking needs retaining
 - Requires rerouting of culverted stream



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Q&A

Building Committee Meeting