

Study of the Lincoln School



Final Report 5 February 2015

Dore & Whittier Architects, Inc.

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EXECUTIVE SUMMARY

Project History

Prior to selecting Dore & Whittier Architects for this study, the Town of Lincoln and the School Committee commissioned several previous studies. In 2009, the Massachusetts School Building Authority (MSBA) invited the Lincoln School Committee to collaborate on a Feasibility Study and a Schematic Design under the MSBA process. That process concluded when the Town vote fell short of the 2/3rds majority necessary to secure funding. Subsequent public outreach clarified some aspects of the preferred option that resulted in the unsuccessful vote and raised questions concerning the costs, design strategies, and the necessity of specific features. The School Committee appointed a School Building Advisory Committee (SBAC) in May 2013 to propose potential "pathways" towards addressing the needs of the School. The SBAC report, issued in November 2013, identified two L-shaped "pathways." The first assumed MSBA funding and recommended that specific needs of the School be addressed. The second pathway assumed no MSBA funding. At the time, the SBAC did not have the capacity to hire a cost estimator or other consultants to help define this second pathway. The SBAC, therefore, was unable to bring forward specific recommendations for what should be done in the absence of MSBA funding.

Study Overview

The annual Town Meeting in March, 2014 approved reconstituting the School Building Advisory Committee and appropriated funds for an additional study. As a result of this process, the Lincoln School Committee reappointed the SBAC in April 2014. In June of 2014, the Town of Lincoln, through the School Committee, sought services of a qualified designer to study possible approaches to the renovation of and/or additions to the Lincoln School. In July 2014, the Lincoln School Committee hired Dore & Whittier Architects to conduct this study.

The study was designed to accomplish the following:

- Compile repair recommendations from multiple previous studies, develop multiple design solutions for selected items, and prepare cost estimates for all recommendations as stand-alone projects.
- Develop an incremental range of conceptual options and associated cost estimates so that the Town could be presented with choices some of which could be selected with MSBA participation and others that could be selected without MSBA.

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¹ Incremental refers to cost increments. For purposes of this study, these increments were based on prioritizing facility needs and assembling them into actionable projects, and exploring educational enhancements both one-at-a-time and in groups of enhancements. For more information, refer to Task Three.

- Employ a process that fully engages a wide variety of stakeholders and the general public to ensure that their input and feedback is incorporated into design efforts and to grow support from the community throughout the process,²
- Position the Town of Lincoln with the confidence and credibility to reengage the MSBA or to secure local funding for further design services and the construction of a selected pathway.

The study was structured around five tasks to help the Design Team and the SBAC achieve these goals.

- 1. Synthesize the work of others completed to date,
- 2. Create component cost estimates,
- 3. Model several options,
- 4. Evaluate the options, and
- 5. Compile a report and present the findings to the town and the School Committee.

In general, this report follows the task structure of the study. The body of the report details the processes and outcomes from each of these major tasks. What follows in this Executive Summary are brief narrative and graphic summaries of each of the major tasks undertaken. It concludes with a series of general findings and recommendations.

Task One – Synthesize the Work of Others Completed to Date

Task one focused on synthesizing all of the work of others completed to date — reviewing all existing documentation and developing a scope of actionable repairs and enhancements for cost estimation. Dore & Whittier created two documents — one which identified facility needs and one which identified educational enhancements — based on careful review of past reports, MSBA correspondence, and existing construction documents. The Design Team synthesized 143 individual repair projects that addressed facility needs and 28 educational enhancements. The SBAC, working with Dore & Whittier, categorized each of the facility needs scopes as either an immediate need, near term need, deferrable need, or as a design alternate. Dr. McFall, Superintendent of Lincoln Public Schools categorized the educational enhancements as high, moderate, or modest educational improvement or as a design alternate.

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² By intention, this study's process was designed to engage the Lincoln Community to the greatest extent possible. The process included four public forums and the State of the Town meeting. On average, approximately 100 community members attended each of the public forums. Estimates suggest that approximately 250 community members attended the State of the Town meeting. It should be noted, however, that this report only documents the input and feedback of those in attendance. Those in attendance may or may not be representative of the entire Lincoln community.

Although Dore & Whittier was not hired to perform a facility assessment, a review of these existing study documents, and several building visits, revealed that the existing facility is in need of significant investment if it is to continue its service into the long-term future. Some elements, such as the existing roof, may need continued repair and/or replacement even before any major project can be undertaken. The cost of any such work would likely be borne fully by the Town of Lincoln.

In addition and as noted in previous studies, the Lincoln School was built in compliance with relevant building codes in place at the time of construction but is not in compliance with a number of current building codes. Non-compliance of current codes does not affect the ability to keep the school in operation; however, the scale of certain capital improvement projects could trigger upgrades to portions of the building to comply with current building codes. These triggers were considered during the pricing exercise in Task Two.

Task Two – Component Cost Estimates

Dore & Whittier's cost estimator, PM&C, prepared conceptual cost estimates based on the facility needs and educational enhancement documents developed in Task One. Scope line items were priced as individual projects. Cost estimates included hard costs and soft costs to determine overall project costs. When organized by the categorizations developed by the SBAC in Task One, the costs were as follows:

Facilities Needs

TOTAL PROJECT COSTS for IMMEDIATE FACILITIES NEEDS =	\$ 8.39 M ³
TOTAL PROJECT COSTS for NEAR TERM FACILITIES NEEDS =	\$19.13 M
TOTAL PROJECT COSTS for DEFERRABLE FACILITIES NEEDS =	\$ 7.70 M
SUB-PROJECT COST for FACILITIES NEEDS =	\$35.22 M

Educational Enhancements

TOTAL PROJECT COSTS for HIGH IMPROVEMENT EDUCATIONAL ENHANCEMENTS =	\$ 19.8 M
TOTAL PROJECT COSTS for MODERATE IMPROVEMENT EDUCATIONAL ENHANCEMENTS =	\$1.8 M
TOTAL PROJECT COSTS for MODEST IMPROVEMENT EDUCATIONAL ENHANCEMENTS =	\$ 1.2 M
SUB-PROJECT COST for EDUCATIONAL ENHANCEMENTS =	\$22.8 M

GRAND PROJECT COST TOTAL =

\$58.02 M⁴

³ Once identified, the Design Team determined that the Immediate Facilities Needs would trigger several additional code upgrades. These code upgrades were incorporated into the cost estimates for Option 1A. Please refer to the tables in Task Two and the options information in Task Three in the body of the report for additional information.

Public Forum #1 - September 16th, 2014

This study's first public forum occurred during Task Two. During the public presentation, Dore & Whittier reviewed progress to date, introduced educational possibilities, and presented preliminary cost figures. During the exercises that followed the presentations, community members expressed a desire to further explore the alignment of facilities with education, the cost impacts of potential projects to the Town, site sensitivity, safety and security, and long-term solutions to the current building issues.

Task Three – Model Several Plan Options

With the tools gathered from Tasks One and Two, Dore & Whittier developed options in incremental steps. It is important to note that not all facility needs were included in all the options developed, but rather, grouped together to represent actionable projects. Similarly, not all 28 educational enhancements were included in every option. Specifically, the options in the second family included single educational enhancements and selected combinations of educational enhancements, but never all 28. Only the third family of options included all 28 educational enhancements. Over the course of the study and in several iterations, Dore & Whittier revised options based on feedback from the public. At the end of the study, options were organized into three families - one family that addressed only facility needs, one family that provided à la carte educational enhancements in incremental steps, and one that addressed all the facility needs and provided all the educational enhancements. The methodology used to prepare these estimates is explained in detail in the body of the report. Please refer to Task Three for additional information. In short, all costs are communicated in total projects costs and without consideration of MSBA participation. The summary that follows represents the study's final iteration of options.

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⁴ A sum of the project sub-total is approximately \$58 M. It is evidence that cost saving may be available by pursuing full options rather that piecemeal projects priced individually as in Task One.

⁵ All costs are in total project costs. Total project costs include materials, labor, overhead and profit for the contractors, professional design fees, permitting costs, insurance, phasing and swing space, escalation, and several contingencies given the conceptual nature of this study. Total project costs represent the entire cost of the project. These costs assume a project is fully funded by the Town of Lincoln without the support of the MSBA. All costs are conceptual. While every effort has been made to be as precise as possible, actual costs of a selected project may vary from these estimates. Dore & Whittier calculated total project costs for Options 1A & 1B based on the detailed scoping documents in Task One. Dore & Whittier calculated total project costs for Options 2A, 2B, 2C, 2D, 2E, 2F, 2G, 3A, 3B, and 3C using conceptual floor plans, scaled floor area take-offs, and cost per square foot estimates for four levels of construction: Light Renovation, Medium Renovation, Heavy Renovation, and New Construction.

⁶ An estimated escalation was included in the total project cost calculation for each option based on the assumption that a feasibility study would be started in early 2016. The estimated escalation was determined by estimating when bidding for projects would occur and assumed to be 4% per year.

Option One - Facility Needs Only

The Option One family provided selective renovation to address facility needs only. Variations within this family were based upon the priority of needs addressed (Immediate or Near Term).

- Option 1A addressed only immediate facility needs identified in Task One as well as upgrades required due to code triggers.
 - o Total Project Cost: \$12.2 Million
- Option 1B addressed both immediate and near term facility needs as well as upgrades required due to code triggers.
 - o Total Project Cost: \$29.2 Million

Option Two – À La Carte Educational Enhancements

The Option Two Family addressed the immediate and near term facility needs from Option 1B as well as an à la carte approach to incorporating educational enhancements. Options 2A through 2D explored individual educational enhancements, while options 2E, 2F, and 2G explored combinations of educational enhancements. None of the options in this family explored providing all 28 educational enhancements identified. Only Option 2F included the deferrable facility needs.

- Option 2A addressed immediate and near term facility needs and provided acoustical treatment to classrooms but no other educational enhancements.
 - Total Project Cost: \$29.5 Million
- Option 2B addressed immediate and near term facility needs and provided small group rooms but no other educational enhancements.
 - o Total Project Cost \$29.8 Million
- Option 2C addressed immediate and near term facility needs and provided improvements to the second grade classroom wing via new construction but no other educational enhancements.
 - o Total Project Cost: \$32.0 Million
- Option 2D addressed immediate and near term facility needs and provided a main kitchen,
 a warming kitchen, and new cafeterias for the Smith and Brooks Schools but no other
 educational enhancements. In this option, the cafeteria for the Brooks school connected
 the Brooks School to the Reed Gym helping to address a safety at security concern at that
 location.
 - Total Project Cost : \$36.6 Million

 Option 2E addressed immediate and near term facility needs and provided a main kitchen, a warming kitchen, and new cafeterias for the Smith and Brooks Schools as well as acoustical treatment in classrooms. In this option, the cafeteria for the Brooks school connected the Brooks School to the Reed Gym helping to address a safety at security concern at that location.

o Total Project Cost: \$36.9 Million

Option 2F addressed immediate and near term facility needs and provided a main kitchen, a warming kitchen, and new cafeterias for the Smith and Brooks Schools, acoustical treatment in classrooms, improvements to the second grade classrooms via new construction, and addressed all of the deferrable needs not addressed in previous options. In this option, the cafeteria for the Brooks school connected the Brooks School to the Reed Gym helping to address a safety at security concern at that location.

o Total Project Cost: \$47.6 Million

Option 2G provides a main kitchen, a warming kitchen, and new cafeterias for the Smith
and Brooks Schools, acoustical treatment in classrooms, and resizes the second grade
classrooms via new construction, but does not include the deferrable facility needs. In this
option, the cafeteria for the Brooks school connected the Brooks School to the Reed Gym
helping to address a safety at security concern at that location.

Total Project Cost: \$39.9 Million

Option Three - Comprehensive Renovations and Additions

The Option Three family addressed all of the facility needs and educational enhancements provided in the second family of options, as well as additional enhancements associated with 21st Century learning environments (the remaining of the 28 educational enhancements except the design alternates). The different options in this family varied based upon their balance of renovation and new construction.

• Option 3A renovates as much of the existing building as possible to provide educational enhancements with strategic additions. (88% renovation, 12% new construction)

Total Project Cost: \$54.7 Million

Option 3B renovates approximately 77% of the existing building, demolishes strategic
portions of the Smith school, and places major additions at the Smith and Brooks Schools.
(77% renovation, 23% new construction)

Total Project Cost: \$55.8 Million

- Option 3C renovates the major anchors of the existing school: the 1994 construction, the Smith Gymnasium, the Brooks Auditorium, and the Reed Gym. All other portions of the existing buildings were demolished and replaced with all new construction. (52% renovation, 48% new)
 - o Total Project Cost: \$58.8 Million
- Option 3D provides an all new facility on the existing site (for cost comparative purposes only). No illustration was developed for this option. The cost estimate was based on typical per square foot costs for eastern Massachusetts. (100% new construction)
 - o Total Project Cost: \$66.3 Million

The illustrations on the following page summarize the options. All costs are total project costs. Should the Town of Lincoln pursue MSBA participation⁷, eligible⁸ costs to the Town may be reduced by approximately 40%. Final options are available in Task Three.

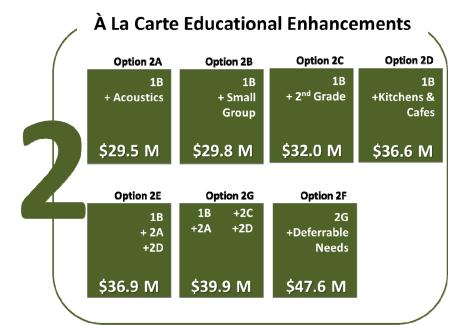
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⁷ MSBA participation will require that both facilities needs and educational needs comply with their guidelines. Although Dore & Whittier does not want to speculate about which options the MSBA may or may not participate in, those options which only address facility needs, are not likely to garner MSBA participation.

⁸ MSBA grants are subject to several provisions that deem certain costs ineligible for reimbursement.

Facilities Sprinklers Fire Alarm Roofing Precast Concrete Boilers & Boiler Room Emergency Generator Code Triggers Building Envelope Elect. Infrastructure Classroom Lighting Plumbing Intrusion Alarm Heating/Ventilating

Hazardous Materials





Comprehensive Educational Enhancements

Option 3A Option 3B Option 3C Option 3D

Renov. New New New \$54.7 M \$55.8 M \$58.8 M \$66.3 M

Public Forum #2 - October 16th, 2014

This study's second public forum occurred during Task Three and focused on sharing the first iterations of options and further development on cost estimates. During the public presentation, Dore & Whittier reviewed progress to date and presented preliminary cost figures. Superintendent Dr. McFall presented the Districts educational vision. During the exercises that followed the presentations, community members expressed a desire to further explore the alignment of facilities with education, challenged the cost of facility needs items, and requested that Dore & Whittier explore organizing options differently to emphasize clear cost increments.

State of the Town - November 15th, 2014

Lincoln's State of the Town meeting represented an opportunity to share the study's progress to a wider audience than had attended the first two public forums. Dore & Whittier prepared a thirty minute presentation, supplemental hand-outs, and facilitated an exercise intended to invite comments and feedback from those in attendance. The key outcome from this important public engagement was a sentiment expressed by those in attendance to support a significant school project even if the Town should choose not to pursue MSBA participation. The data below summarizes the exercise where this sentiment was expressed. Included in this data is a summary of hand-written responses to the prompts "I like...", "I wish...", "I wonder...". Fully transcribed results are available in Appendix IV. These sentiments were later corroborated in Public Forum #3.

EXERCISE #1 – Participants placed a dot on the option they would support assuming Lincoln chose to fully fund a project without the participation of the MSBA. Total Participants = 188

- **6** Facility Needs Only Options 1A & 1B \$12.2M - \$29.2M – Fully Funded by Lincoln
- A La Cart Educational Enhancements Options 2A, 2B, 2C, 2D, 2E, and 2F \$29.5M \$47.6M Fully Funded by Lincoln
- 144 Comprehensive Educational Enhancements Options 3A, 3B, 3C, and 3D \$54.7M \$66.3M Fully Funded by Lincoln

EXERCISE #2 – Participants commented on the three families of options by responding to three prompts, "I like...", I wish...", and "I wonder...". This open ended exercise documented a wide range of individuals' thoughts.

It would be disingenuous to suggest that participants' responses neatly gelled into a community-wide consensus. This summary only strives to capture some of the overarching themes of these comments.

- The third family of options received the highest volume of hand-written responses followed by the second family of options. The first family options received the fewest number of hand-written responses.
- In general, the responses suggested a community-wide desire to pursue school and community center projects concurrently, if not as a single investment.⁹
- **Education**. Responses suggested that maximizing the educational impact of any facility investment is perceived as a key desired outcome.
- **Energy efficiency**. Responses suggested that energy efficiency is also a key desired outcome of any facility investment.
- **Cost**. Responses suggested that, while there may be support for a significant school project, the cost impact to individual households must be clearly understood and communicated to the broad community.
- While the exercise, specifically asked participants to respond assuming no MSBA participation, responses suggested a general agreement to pursue MSBA participation.¹⁰

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⁹ A single investment implies a single Town warrant article. While such a strategy is not prohibited under the MSBA process, combining school functions and community center functions as a single project, and funded through the same Town warrant article, would significantly complicate MSBA's process. Pursuing a school project and a community center project concurrently, but with two separate warrant articles, where the community center project is completely outside the MSBA process, would greatly simplify the MSBA process, but would require the Town to take two votes.

¹⁰ At the time of the State of the Town meeting, Dore & Whittier had not yet prepared estimated design and construction timelines for WITH and WITHOUT MSBA participation. Those in attendance were not yet aware that the MSBA process would likely delay completion of a project by approximately 18 months.

Task Four – Evaluate the Models

Task Four focused on the evaluation of the options. Members of the SBAC chose not to evaluate the options in a committee setting but, rather, to rely on direct feedback from members of the Lincoln community.

Public Forum #3 – December 2nd, 2014

Dore & Whittier presented a revised set of options and cost estimates in detail that included revisions based on feedback gathered from previous public meetings. After a brief question and answer period, Dore & Whittier facilitated a series of small group exercises intended to confirm which key variables possessed the highest priority, to identify the pros and cons of each option, and to develop an understanding of which options seemed to be the most appealing to the community. The evaluation did not result in a short list of options, but, rather, a clarified understanding of the town's threshold for spending and a preference for a project that addresses both facility needs and educational enhancements.

Key Variables Exercise (Numbers indicate individual priorities of variables)

- 1. Maximize educational enhancements (120 points)
- Minimize cost to town/ return on money spent (27/19¹¹ = 46 points)
- 3. Meet 2030 Energy By-Law (18 points)
- 4. Maximize Community Use (16 points)
- 5. Maximize Preservation of Existing Building (10 points)
- 6. Minimize Time to Occupancy (5 points)

Evaluation of Options Exercise (Numbers indicate individual preferences for options)

Options 1A & 1B: With MSBA Participation – N/A

Without MSBA Participation - 1

Option 2A: With MSBA Participation – N/A

Without MSBA Participation - 0

Option 2B: With MSBA Participation – N/A

Without MSBA Participation - 2

Option 2C: With MSBA Participation – N/A

Without MSBA Participation – 2

Option 2D &2E: With MSBA Participation – N/A

Without MSBA Participation - 17

Option 2F: With MSBA Participation – 7

Without MSBA Participation - 17

¹¹ "Return on money spent" was a participant-added variable. Due to its similarity with "minimize cost to Town", its results were included in this variable. Forty-six points represents the sum of the two together.

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Option 2G: New Concept at Meeting, not evaluated

Option 3A: With MSBA Participation – 4

Without MSBA Participation - 4

Option 3B: With MSBA Participation – 10

Without MSBA Participation – 19

Option 3C: With MSBA Participation – 44

Without MSBA Participation - 11

Option 3D: With MSBA Participation – 7

Without MSBA Participation – 2

The outcomes of Public Forum #3 corroborate results of previous public engagement opportunities in the following ways:

- Appears to be support (from at least those in attendance) for a significant project that not
 only addresses all the immediate and near term facility needs, but also provides most if not
 all of the educational enhancements.
- Any further development of options should respect the central green, retain existing trees, restrict interventions to the existing building's footprint, and reflect Lincoln's aesthetic values all to the greatest extent possible.
- Based on the estimated Town shares, there appears to be support (from at least those in attendance) for a school project where the Town contribution is approximately \$29M -\$40M.

Task Five – Prepare Report & Make Presentations

Dore & Whittier made a final presentation of this Executive Summary at Public Forum #4 held January 13th, 2015. Dore & Whittier also made a formal presentation of the entire study to the School Committee on February 5th.

General Findings & Recommendations

- Dore & Whittier confirms that the existing building requires a significant financial investment (from a strictly facility point-of-view) to continue to serve as an educational facility for the long-term future. We cannot recommend a piecemeal approach to these items as doing so may result in emergency work, may result in an inability to occupy portions of the building until repairs are complete, may have unexpected code implications, and would be more expensive over a long time horizon than other approaches.
- Dore & Whittier confirms that classroom spaces can benefit from acoustical treatments to improve speech intelligibility.

- Dore & Whittier confirms that the existing building lacks several critical program spaces including dedicated kitchen and cafeterias, spaces to serve special education with appropriate access to natural daylight and ventilation, small group rooms, and 2nd grade classrooms that lack parity with other classrooms in the building and are below MSBA guidelines for area.
- Dore & Whittier recommends the School Committee consider other educational enhancements to improve the educational experience of all students, to support the educational vision of the District, in general, and to better align the Lincoln School facility with best practices in 21st century school design.
- Dore & Whittier recommends exploring opportunities to improve energy efficiency in any facility investment.
- There appears to be viable addition/renovation options that respect the central green, respect the existing trees, conform to the area of the site occupied by the existing building, and align well with the principles of 21st century educational practices.
- There appears to be support (by at least those who participated in this process) for a significant school construction project that both addresses facility needs and provides educational enhancements regardless of MSBA participation assuming the Town's financial contribution is approximately \$29M \$40M.
- Due to submission deadlines associated with the MSBA process, Dore & Whittier recommends that the School Committee prepare a Statement of Interest in the event the Town expresses a desire to pursue MSBA participation.
- Dore & Whittier recommends further studies and processes related to the Lincoln School project be designed to continue the thoughtful engagement of the Lincoln community.

At this stage, the town of Lincoln has three potential pathways forward. First, the Town of Lincoln and Lincoln Public Schools can continue the current practice of addressing facility needs through annual capital expenditures. Should the Town and Lincoln Public Schools pursue this action, the individual scope items identified in Task One would likely be accomplished one-at-a-time over the course of many years.

Second, the Lincoln School Committee can prepare a revised Statement of Interest and seek MSBA participation. If invited to conduct a second Feasibility Study under the MSBA process¹², this

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MSBA process will, necessarily, look slightly different.

¹² The MSBA process is assumed to require the completion of a full feasibility study. The sequence of steps and deliverables for an MSBA feasibility study are clearly outlined in MSBA's Module 3. Such a feasibility study may be shortened slightly by shortening the portion of the process associated with facilities assessments with MSBA's approval. MSBA's process, however, would likely require the full definition of an educational program and the full exploration of preliminary alternatives. A full exploration of preliminary alternatives means that renovation only, renovation/addition, and all new construction alternatives must be explored. While the options developed for Dore & Whittier's study will have some value in this process, these preliminary alternatives explored as part of the

pathway would require the appropriation of funds to secure the professional services of an Owner's Project Manager and a Designer, which would not be reimbursable by the MSBA. Should the Town of Lincoln pursue this pathway, a selected preferred option would likely resemble Option 2F or any of the third family of Options.

Finally, The Town of Lincoln can pursue a process to develop a school building project independently without participation by the MSBA. This pathway would also require the appropriation of funds to secure an Owner's Project Manager and Designer. These funds, however, might best be used for an abbreviated feasibility study which would refine a short list of options, allow the Town to select a single preferred option, and would include the preparation of a full schematic design. Selecting this pathway gives the Town of Lincoln and the Lincoln School Committee the greatest flexibility. Any option could be pursued on this pathway depending on the financial appetite of the Lincoln community and the financial capacity of the Town of Lincoln.

TASK ONE – ANALYZE WORK COMPLETED TO DATE

Overview

At a Special Town Meeting in November 2012, the majority of those present approved the project identified as the preferred alternative from the MSBA Feasibility Study but failed to reach the 2/3 majority required for funding approval. Subsequent public outreach clarified some aspects of the preferred option that resulted in the unsuccessful vote and raised questions concerning the costs, design strategies, and the necessity of specific features. The School Committee appointed a School Building Advisory Committee (SBAC) in May 2013 to propose potential "pathways" towards addressing the needs of the School. The SBAC report, issued in November 2013, identified two L-shaped "pathways." At the time, the SBAC did not have the capacity to hire a cost estimator or other consultants to assist with defining this second pathway. The SBAC, therefore, was unable to bring forward specific recommendations for what should be done in the absence of MSBA funding.

On December 8, 2013, the MSBA informed the Lincoln Public Schools that it would not be invited into its funding pipeline for a renovation project during its upcoming application cycle. This resulted in a town process to determine the next steps for the School project. The annual Town Meeting in March, 2014 approved reconstituting the School Building Advisory Committee and appropriated funds for an additional study. As a result of this process, the Lincoln School Committee reappointed the SBAC in April 2014. In June of 2014, the Town of Lincoln, through the School Committee, sought services of a qualified designer to study possible approaches to the renovation of and/or additions to the Lincoln School. In July 2014, the Lincoln School Committee hired Dore & Whittier Architects to conduct this study.

Task One focused on developing the necessary understanding of previous studies, reports, existing facility conditions, and educational goals to compile two preliminary sets of capital improvement scopes — one which addressed facility needs and one which provided desired educational enhancements. As such, this major first task was composed three sub-tasks:

- 1.1 Review of Existing Information
- 1.2 Development of Preliminary Cost Estimation Scope
- 1.3 Development of Scoping Documents

1.1 Review of Existing Information¹

Dore & Whittier reviewed the following previous studies, letters of correspondence, reports, and drawings:

- Existing Conditions Drawings prepared by HMFH for 1994 renovation
- Construction Drawings prepared by HMFH, 1994
- Preliminary Design Submission to the MSBA prepared by OMR, 2011
- Preferred Schematic Report Submission to the MSBA prepared by OMR, 2011
- Schematic Design Submission to the MSBA prepared by OMR, 2012
- Lincoln School Repair Analysis Report commissioned by Lincoln Finance Committee and prepared by CDR|Maguire, 2012
- Letter to MSBA, 11.16.12
- MSBA Letter to Lincoln, 12.14.2012
- Letter to MSBA, 2.15.2013
- MSBA Letter to Lincoln, 3.12.13
- Report of the School Building Advisory Committee prepared by the School Building Advisory Committee, November 2013

Dore & Whittier's review of these documents revealed that, in general, there was agreement among the various reports related to the condition of the existing facility. The building is assumed to be in compliance with relevant building codes in place at the time of construction. It is not, however, in compliance with current building codes for structural loading or bracing, accessibility, energy efficiency, egress, fire suppression, emergency lighting, or ventilation. In addition and with the exception of the Reed Gym's roof, the existing roofing system has exceeded its useful life and is in need of complete replacement. Finally, the existing Smith boiler room continues to experience flooding which poses a risk to the operation of the Smith boiler. The detailed scopes identified in Task 1.2 compiles the work necessary to address these facility needs.

Several of these reports also indicated that multiple educational enhancements would improve the District's ability to deliver its educational programs and services. First, the majority of the classrooms possess little or no acoustical treatment. No dedicated cafeteria spaces exist. Gymnasiums serve as both physical education space and cafeterias. Kitchens exist in former gymnasium storage spaces. Many spaces for the delivery of special education services exist in former storage closets and are without access to appropriate ventilation or natural daylight. A safety and security condition exists between the Brooks Auditorium and the Reed Gym. Doors to the Brooks School and the Reed Gym must be left unlocked during the school day where there is

¹ Digital copies of these documents are available through the Lincoln Public Schools website, http://www.lincnet.org/. Hard copies are available at the Lincoln Public Library.

little administrative presence. The existing building also lacks break out and collaboration spaces associated with 21st century learning environments. Task 1.2 also compiles a set of scopes associated with providing these educational enhancements.

1.2 Development of Preliminary Cost Estimation Scope

Although Dore & Whittier was not tasked with performing a facilities assessment, our Project Team compiled two sets of scopes for preliminary cost estimates based on our review of existing documents and multiple site visits. Together with our consultants, we compiled a first set of scopes necessary to address the facility's needs. We also compiled a second set of scopes associated with providing the identified educational enhancements. For each scope item, Dore & Whittier developed a strategy (and in some cases, multiple strategies) that served as the basis for these preliminary cost estimates. The SBAC directed Dore & Whittier to approach these scope items as individual projects, as an à la carte menu, so that actionable options could be built from these lists. Such an approach also responded to challenges from the Lincoln community about the credibility of cost estimates from previous studies for similar scope.

Once compiled, Dore & Whittier worked with the SBAC to categorize each facility needs scope item as an Immediate Need, a Near Term Need, a Deferrable Need, or a design Alternate. For clarity, the SBAC developed definitions for each of these categories of need.

Immediate Needs



Existing buildings are not required to be brought into compliance with current codes except when new work is performed and under certain conditions based on code triggers. Therefore, none of the facility needs items are required in order to continue to occupy the facility. Facility needs items in this category are not required by code, but have been identified as critical to the occupation of the school. Most items in this category are related to building systems that are expected to fail in the near future and whose failure would result in further damage to the building, would require emergency repairs, and/or result in an inability to occupy a portion of the facility until the issue is resolved. Other items in this category are related to life safety.

Near Term Needs



Members of the SBAC and the Design Team believe these items are necessary to continue to occupy the facility for the long-term future (approximately 25-30 years), but addressing these items could be delayed until a later date compared with the immediate needs items.

It should be noted that several items in this category were triggered in the building codes by items in the immediate needs category. In order to avoid these triggers (a strategy **not recommended** by Dore & Whittier), the Town would need to reduce the scope undertaken in the immediate needs category.

Deferrable Needs



Members of the SBAC and the Design Team believe these items are also necessary to continue to occupy the facility for the long-term future. These items, however, could be deferred even further into the future than the near term needs.

Alternates



Several items represent design alternates for specific issues. They represent different design strategies to address the same issue and have been developed to give the Town of Lincoln choices. In developing a total cost for any actionable options, the calculation would include only one of the variants for each issue.

Dr. McFall categorized the educational enhancements based on their qualitative impact on the delivery of education. Educational enhancements were categorized as High Improvement, Moderate Improvement, Modest Improvement, and design Alternates. In total, Dore & Whittier compiled 143 facilities scope items and 28 educational enhancements. For clarity, the two sets of scopes, the categories identified, and their cost estimates are included in the Task Two section of this report.

1.3 Development of Scoping Documents

In order to estimate these items as accurately as possible, Dore & Whittier developed quantities for scope items. Some quantities were based on area and length take-offs from scaled construction drawings. Other quantities were based on field survey counts of actual conditions conducted during multiple site visits. Every effort was made to be as precise as possible without destructive testing and with the information available. It is important to note, however, that limits on precision exist for studies of this kind. Without detailed design drawings sent out for bid, quantities and cost estimates are conceptual. Area and length take-offs, as well as field notes are included for reference in Appendix I of this report.

Task One General Findings & Recommendations

Several previous studies identified significant facility needs and several desired educational enhancements. Dore & Whittier did not perform an existing conditions analysis, but confirmed both the facilities needs and the rationale for the educational enhancements. After compiling comprehensive sets of scopes for both the facilities needs and the educational enhancements, members of the SBAC, with assistance from Dore & Whittier, categorized individual scope items as Immediate Need, Near Term Need, Deferrable Need, or Alternates. The following table communicates this categorization.

Number of Scope Items in Each Category	Immediate Need	Near Term Need	Deferrable Need	Alternate
Facilities Needs	11	70	37	25

Number of Scope Items in Each Category	High Improvement	Moderate Improvement	Modest Improvement	Alternate		
Educational Enhancements	15	3	2	8		

Based on the scopes identified as Immediate Needs, Dore & Whittier recommended further exploration of code triggers based on completed preliminary cost estimates.

TASK ONE	Lincoln Public Schools – Lincoln School K-8 Study
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TASK TWO – COMPONENT COST ESTIMATES

Overview

Dore & Whittier's cost estimator, PM&C¹, prepared conceptual cost estimates based on the two sets of scopes defined in Task One – one set that addressed facility needs and one set that provided the desired educational enhancements. PM&C prepared these estimates based on the following assumptions and methodology:

- Individual scope line items were estimated as stand-alone projects. This methodology was selected by the SBAC in an effort to understand the cost of each item, but such a methodology may not be actionable as a real construction project for each item. Typical construction techniques (particularly for work done above ceilings) often impact other building elements. In such cases, it is often prudent and more cost effective to group certain scope items to be completed at the same time. Similarly, building codes require that any new work performed must comply with current building codes. However, portions of the building codes also contain triggers that effect building elements not intended to be part of the scope of work. When a code trigger is tripped, the building code requires that additional work be performed to bring other existing building elements into compliance with current codes even if they were not intended to be part of the original work.
- Each line item estimate is based on a quantity determined either from scaled construction documents or a field-verified measurement. Dore & Whittier attempted to limit the number of lump sum² quantities. However, some lump sum quantities were necessary in the cost estimate worksheets.
- Each estimate represents a total project cost calculated using the following typical methodology:

Hard Costs (Materials, Labor, Contractor Overhead and Profit, Contingencies)

A: Direct Construction Cost = Cost Quantity x Unit Cost

B: General Conditions Cost = $A \times 17\%$

General conditions consist of a construction contingency, permitting fees, bonds, insurance, and contractor overhead and profit.

C: Design Contingency = A x 10%

¹ PM&C, Project Management & Cost, served as Dore & Whittier's cost estimation consultant for this study. Peter Bradley, Principal, prepared the estimates and specializes in cost estimation services for public K-12 school projects in Massachusetts.

² Lump sum refers to a method of estimating where actual quantities cannot be determined.

Given the conceptual nature of this study, the design contingency represents the level of uncertainty of specific design choices (i.e. product/system selection, design layout)

D: Owner's Contingency = A x 10%

An owner's contingency is typical in most construction projects and represents the owner's choice and ability to change their mind about design and construction decisions.

E: Total Construction Cost = A + B + C + D

Soft Costs (Designer Fees, Consultant Fees, Testing Services, Commissioning)

F: Soft Costs = $E \times 25\%$

G: Escalation = $(E + F) \times .04$

Total Project Cost

H: Total Project Cost = E + F + G

- Each estimate assumes no work could begin prior to November 2015. Therefore, each estimate includes one year of escalation at 4%. For any work begun beyond November of 2015, additional escalation must be added at a rate of 3%-5% per year.
- Costs associated with phasing and swing space were excluded from these preliminary cost estimates.

Copies of scoping documents and field notes are provided in Appendix I for reference. What follows are the sets of scopes and cost estimate details for both the facilities needs and the educational enhancements. Also included in this information is the categorization of scope by the SBAC.

Indicates a code compliance item triggered by Immediate Needs Scope.

Φ O A +
 Immediate Near Term Deferred Needs Needs Needs Needs In CIP

Line #	Item#	Scope Description Loc	ocation	System Category	SBAC Priority	In CIP Calculation	Scope Source	QΤΥ	Units	\$/UNIT	Direct Cost	General Conditions Cost ¹	Design Contingency	Owner's Contingency	Total Construction Cost	Soft Costs	Total Project Cost ²	Comments	Take-off Document
1	F-2	Remove existing roofing and trim components at Brooks School down to existing deck. Replace with new tappered to insulation and single-ply roofing system (to meet current Energy Code). Base roof material white EPDM. Replace all trim components.	Brooks	Arch - Building Exterior	•	+	CDR Maguire	47,800	SF	\$17	\$824,550	\$140,174	\$82,455	\$82,455	\$1,129,634	\$282,408	\$1,468,524		Roof Plan
55		lgenerator equipment. Existing generator as back-	rooks/ Smith	Electrical/ Life Safety	•	+	CDR Maguire	1	Lump Sum	\$480,000	\$480,000	\$81,600	\$48,000	\$48,000	\$657,600	\$164,400	\$854,880 No	eed KW number	N/A
58	F-52	fully addressable but needs additional and	rooks/ ith/ Link & Reed	Code Compliance	•	+	CDR Maguire	137,500	SF	\$2	\$275,000	\$46,750	\$27,500	\$27,500	\$376,750	\$94,188	\$489,775		N/A
59	F-53	Install mutil-zone automatic fire suppression Smit	rooks/ ith/ Link & Reed	Code Compliance	•	+	CDR Maguire	137,500	SF	\$7	\$962,500	\$163,625	\$96,250	\$96,250	\$1,318,625	\$329,656	\$1 714 213 ne	icludes \$50K for w water service; no new ceilings included	Floor Plan
73	F-63	Remove existing flat roofing and trim components at Link Building down to existing deck. Replace with new insulation and single-ply, light-colored EPDM roofing system (to comply with current Energy codes). Replace all trim components.	Link	Arch - Building Exterior	•	+	CDR Maguire	24,300	SF	\$17	\$419,175	\$71,260	\$41,918	\$41,918	\$574,270	\$143,567	\$746,551		Roof Plan
76	F-64	Remove existing sloped roofing, gutters, and downsports at Link Building down to existing subtrate. Replace with new asphalt singles. Remove and replace all rotten wood fascia (to comply with current Energy Codes). Replace all trim components.	Link	Arch - Building Exterior	•	+	CDR Maguire	6,100	SF	\$21	\$126,270	\$21,466	\$12,627	\$12,627	\$172,990	\$43,247	\$224,887		Roof Plan
78		Remove existing precast concrete exterior wall panels at Reed Gym and replace with insulated metal panel system.	ed Gym	Arch - Building Exterior	•	+	CDR Maguire	7,200	SF	\$60	\$432,000	\$73,440	\$43,200	\$43,200	\$591,840	\$147,960	\$769,392		
89	F-79	Remove existing roofing and trim components at Smith School down to existing deck. Replace with new tappered to insulation and single-ply roofing system (to comply with current Energy Codes). Base roof material white EPDM. Replace all trim components.	Smith	Arch - Building Exterior	•	+	CDR Maguire	42,900	SF	\$17	\$740,025	\$125,804	\$74,003	\$74,003	\$1,013,834	\$253,459	\$1,317,985		Roof Plan
92	F-80	Remove existing sloped roofing, gutters, and downsports at Link Building down to existing subtrate. Replace with new asphalt singles (to comply with current Energy Codes). Remove and replace all rotten wood fascia. Replace all trim components.	Smith	Arch - Building Exterior	•	+	CDR Maguire	4,100	SF	\$21	\$84,870	\$14,428	\$8,487	\$8,487	\$116,272	\$29,068	\$151,153		Roof Plan
124	F-110	Remove and replace existing boilers and air handling units in Smith Boiler Room with highefficiency condensing boilers. (includes construction of a new space above grade)	Smith	Mechanical	•	+	CDR Maguire	1	LS	\$343,100	\$343,100	\$58,327	\$34,310	\$34,310	\$470,047	\$117,512	\$611,061 a	Includes dditional SF for unknown conditions	Floor Plan

Indicates a code compliance item triggered by Immediate Needs Scope.

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 Immediate Near Term Deferred Needs Needs Needs Needs In CIP

Line #	Item#	Scope Description	Location	System Category	SBAC Priority	In CIP Calculation	Scope Source	QТΥ	Units	\$/UNIT	Direct Cost	General Conditions Cost ¹	Design Contingency		Total Construction Cost	Soft Costs To	ital Project Cost ²	Comments	Take-off Document
125	F-111	Remove and replace existing mechanical equipment pumps with energy efficient VFD pumping equipment at Smith Boiler Room.	Smith	Mechanical	•	+	CDR Maguire	1	Lump Sum	\$25,000	\$25,000	\$4,250	\$2,500	\$2,500	\$34,250	\$8,563	\$44,525		N/A
10	F-10	Upgrade classroom and toilet sinks to be ADA and MAAB compliant.	Brooks	Code Compliance	Ф	+	CDR Maguire	27	Sinks	\$2,700	\$72,900	\$12,393	\$7,290	\$7,290	\$99,873	\$24,968	\$129,835		Floor Plan
11	F-10a	Upgrade toilet fixtures to be ADA and MAAB compliant.	Brooks	Code Compliance	Ф	+	CDR Maguire	6	Toilets	\$4,800	\$28,800	\$4,896	\$2,880	\$2,880	\$39,456	\$9,864	\$51,293	Assume reduction in count to accommodate wider stall. Assume some floor work to access piping. Assume patch and repair finishes	Floor Plan
12	F-11	Provide vaccuum breakers and back-flow preventers at cross connections.	Brooks	Code Compliance	Ф	+	CDR Maguire	1	Lump Sum	\$7,500	\$7,500	\$1,275	\$750	\$750	\$10,275	\$2,569	\$13,358		N/A
13		Remove and replace natural gas piping to science classrooms. Equip with individual safety shut-offs in each science room.	Brooks	Code Compliance	Ф	+	CDR Maguire	3	Classrooms	\$19,250	\$57,750	\$9,818	\$5,775	\$5,775	\$79,118	\$19,779	\$102,853		Floor Plan
14	F-13	Provide dedicated non-potable hot and cold water distribution to existing science classrooms. Provide backflow devices at lab sinks.	Brooks	Code Compliance	Ф	+	CDR Maguire	3	Classrooms	\$15,000	\$45,000	\$7,650	\$4,500	\$4,500	\$61,650	\$15,413	\$80,145		N/A
15	F-14	Install an emergency mixing valve and tepid water system to supply emergency eyewash	Brooks	Code Compliance	Ф	+	OMR Feasibility	3	Classrooms	\$10,000	\$30,000	\$5,100	\$3,000	\$3,000	\$41,100	\$10,275	\$53,430		N/A
16	F-15	Upgrade interior door widths and clear floor space to comply with accessibility requirements throughout facility.	Brooks	Code Compliance	Ф	+	SBAC Components	7	Locations	\$2,500	\$17,500	\$2,975	\$1,750	\$1,750	\$23,975	\$5,994	\$31,168		Floor Plan
17	F-17	Upgrade points of egress to comply with accessibility requirements.	Brooks	Code Compliance	Ф	+	SBAC Components	2	Locations	\$5,000	\$10,000	\$1,700	\$1,000	\$1,000	\$13,700	\$3,425	\$17,810		Floor Plan
22	F-22	Remove existing exit signs and emergency lighting. Replace with code compliant components connected to emergency power systems and not reliant on battery units.	Brooks	Electrical	Ф	+	OMR Feasibility	47,800	SF	\$1	\$59,750	\$10,158	\$5,975	\$5,975	\$81,858	\$20,464	\$106,415		Floor Plan
49	F-44	Provide structural upgrades to comply with current codes. Scope to include bracing of unreinforced masonry walls to support coderequired lateral loads, reinforcing of roof structures to support code-required snow and drift loads. Other scope details to be determined once preferred alternatives selected.	Brooks	Code Compliance	Ф	+	CDR Maguire	47,800	SF	\$12	\$573,600	\$97,512	\$57,360	\$57,360	\$785,832	\$196,458	\$1,021,582		EDG to provide narrative and sketches as necessary
50		Install chemical waste and venting systems at existing science classrooms. Provide treatment tank.	Brooks	Code Compliance	Ф	+	CDR Maguire	3	Locations	\$11,700	\$35,100	\$5,967	\$3,510	\$3,510	\$48,087	\$12,022	\$62,513		N/A

Indicates a code compliance item triggered by Immediate Needs Scope.

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 Immediate Near Term Deferred Needs Needs Needs Needs In CIP

Line #	Item#	Scope Description	Location	System Category	SBAC Priority	In CIP Calculation	Scope Source	QTY	Units	\$/UNIT	Direct Cost	General Conditions Cost ¹	Design Contingency	Owner's Contingency	Total Construction Cost	Soft Costs	Total Project Cost ²	Comments	Take-off Document
81	F-69	Upgrade door widths and clear floor space to comply with accessibility requirements. Convert to uneven leaves within existing frame.	Reed Gym	Code Compliance	Ф	+	SBAC Components	12	Locations	\$2,400	\$28,800	\$4,896	\$2,880	\$2,880	\$39,456	\$9,864	\$51,293		Floor Plan
82	F-71	Upgrade points of egress to comply with accessibility requirements.	Reed Gym	Code Compliance	Ф	+	SBAC Components	2	Locations	\$5,000	\$10,000	\$1,700	\$1,000	\$1,000	\$13,700	\$3,425	\$17,810		Floor Plan
101	F-87	Upgrade classroom and toilet sinks to be ADA and MAAB compliant.	Smith	Code Compliance	Ф	+	CDR Maguire	39	Locations	\$650	\$25,350	\$4,310	\$2,535	\$2,535	\$34,730	\$8,682	\$45,148	Verify in Field	Floor Plan
102	F-87a	Upgrade toilet fixtures to be ADA and MAAB compliant.	Smith	Code Compliance	Ф	+	CDR Maguire	8	Toilets	\$800	\$6,400	\$1,088	\$640	\$640	\$8,768	\$2,192	\$11,398	Verify in Field	Floor Plan
103	F-88	Provide vaccuum breakers and back-flow preventers at cross connections.	Smith	Code Compliance	Ф	+	CDR Maguire	3	Locations	\$3,000	\$9,000	\$1,530	\$900	\$900	\$12,330	\$3,083	\$16,029		N/A
104	F-89	Upgrade interior door widths and clear floor space for occupied spaces to comply with accessibility requirements.	Smith	Code Compliance	Ф	+	SBAC Components	21	Locations	\$2,500	\$52,500	\$8,925	\$5,250	\$5,250	\$71,925	\$17,981	\$93,503		Floor Plan
105	F-91	Upgrade points of egress to comply with accessibility requirements.	Smith	Code Compliance	Ф	+	SBAC Components	23	Locations	\$2,000	\$46,000	\$7,820	\$4,600	\$4,600	\$63,020	\$15,755	\$81,926	Requires field visit	Floor Plan
106	F-91a	Upgrade interior door widths and clear floor space to comply with accessibility requirements in Smith Classrooms only.	Smith	Code Compliance	Ф	+	SBAC Meeting	13	Locations	\$2,500	\$32,500	\$5,525	\$3,250	\$3,250	\$44,525	\$11,131	\$57,883		Floor Plan
107	F-92	Provide accesible lift for Stage in Smith Gymnasium.	Smith	Code Compliance	Ф	+	D&W	1	Locations	\$30,000	\$30,000	\$5,100	\$3,000	\$3,000	\$41,100	\$10,275	\$53,430		
110	F-95	Remove existing exit signs and emergency lighting. Replace with code compliant components connected to emergency power systems and not reliant on battery units.	Smith	Electrical	Ф	+	OMR Feasibility	49,600	SF	\$1	\$62,000	\$10,540	\$6,200	\$6,200	\$84,940	\$21,235	\$110,422	Requires field visit	: Floor Plan
141	F-124	Provide structural upgrades to comply with current codes. Scope to include bracing of unreinforced masonry walls to support coderequired lateral loads, reinforcing of roof structures to support code-required snow and drift loads. Other scope details to be determined once preferred alternatives selected.	Smith	Code Compliance	Ф	+	CDR Maguire	49,600	SF	\$12	\$595,200	\$101,184	\$59,520	\$59,520	\$815,424	\$203,856	\$1,060,051		EDG to provide narrative and sketches as necessary
5	F-3a	Remove and replace existing uninsulated windows, curtain wall systems, and associated transite panels (ACMs) in the Brooks School and replace with double glazed insulated and thermally broken, R2.5 aluminum systems.	Brooks	Arch - Building Exterior	Ф	+	CDR Maguire, D&W	6,800	SF	\$133	\$904,400	\$153,748	\$90,440	\$90,440	\$1,239,028	\$309,757	\$1,610,736		Ext. Elev.
6	F-4	Fur out interior and install 4" closed cell spray foam. Painted gypsum finish interior surface.	Brooks	Arch - Building Exterior	Ф	+	D&W	11,200	SF	\$11	\$128,576	\$21,858	\$12,858	\$12,858	\$176,149	\$44,037	\$228,994	Wall area - window opening	Floor Plan

Indicates a code compliance item triggered by Immediate Needs Scope.

Φ O A +
 Immediate Near Term Deferred Needs Needs Needs Needs In CIP

Line #	Item#	Scope Description	Location	System Category	SBAC Priority	In CIP Calculation	Scope Source	QTY	Units	\$/UNIT	Direct Cost	General Conditions Cost ¹ C	Design Contingency	Owner's Contingency	Total Construction Cost	Soft Costs	Total Project Cost ²	Comments	Take-off Document
7	F-5	Use existing exterior wall as back up (at existing Auditorium only). Install air/vapor barrier, 4"of rigid insulation, 4" brick veneer on steel angles clipped to existing structure.	Brooks	Arch - Building Exterior	Ф	+	D&W	7,200	SF	\$52	\$371,520	\$63,158	\$37,152	\$37,152	\$508,982	\$127,246		Applies to existing Brooks Auditorium, Smith Gym and Reed Gym.	
18		Provide new electrical distribution panels to add electrial plug-load capacity to Brooks School.	Brooks	Electrical	Ф	+	CDR Maguire	47,800	SF	\$6	\$286,800	\$48,756	\$28,680	\$28,680	\$392,916	\$98,229	\$510,791		N/A
20	F-712	Remove and replace existing lighting with new LED fixtures and controls in classrooms only.	Brooks	Electrical	Ф	+	CDR Maguire	20,300	SF	\$10	\$192,850	\$32,785	\$19,285	\$19,285	\$264,205	\$66,051	\$343,466		Floor Plan
36	F-34a	Remove existing unit ventilators in 17 classrooms. Replace with centralized air distribution system with induction units.	Brooks	Mechanical	Ф	+	CDR Maguire	39,300	SF	\$17	\$648,450	\$110,237	\$64,845	\$64,845	\$888,377	\$222,094	\$1,154,889		Floor Plan
39	F-35	Remove and replace the heating and ventilating equipment at the existing auditorium with a dedicated packaged system using displacement air delivery and an associated packaged energy recovery unit.	Brooks	Mechanical	Ф	+	CDR Maguire	8500	SF	\$30	\$250,750	\$42,628	\$25,075	\$25,075	\$343,528	\$85,882	\$446,586		
40	F-36	Remove and replace existing exhaust systems serving bathrooms.	Brooks	Mechanical	Ф	+	CDR Maguire	753	SF	\$27	\$19,955	\$3,392	\$1,995	\$1,995	\$27,338	\$6,834	\$35,539	Floor Plan	
41	F-3/	Remove and replace existing hot water distribution system.	Brooks	Mechanical	Ф	+	CDR Maguire	47,800	SF	\$4	\$191,200	\$32,504	\$19,120	\$19,120	\$261,944	\$65,486	\$340,527	N/A	
42	F-38	Remove and replace existing pneumatic mechanical controls with new direct digital controls (non proprietary system)	Brooks	Mechanical	Ф	+	OMR Feasibility	47,800	SF	\$5	\$224,660	\$38,192	\$22,466	\$22,466	\$307,784	\$76,946	\$400,119		N/A
45	F-/1()	Remove and replace domestic water distribution system in its entirety.	Brooks	Plumbing	Ф	+	CDR Maguire	47,800	SF	\$3	\$165,000	\$28,050	\$16,500	\$16,500	\$226,050	\$56,513	\$293,865		N/A
46		Remove and replace all water closets and urinals with new low flow (1.28 Gal/Flush) fixtures.	Brooks	Plumbing	Ф	+	OMR Feasibility	21	locations	\$7,952	\$167,000	\$28,390	\$16,700	\$16,700	\$228,790	\$57,198	\$297,427		Floor Plan
47		Remove and replace all lavatory faucets with low flow (.5 Gal/min) faucets with electronic metering.	Brooks	Plumbing	Ф	+	OMR Feasibility	16	locations	\$1,800	\$28,800	\$4,896	\$2,880	\$2,880	\$39,456	\$9,864	\$51,293		Floor Plan
48		Remove and replace domestic hot water heaters including thermostatic mixing valves.	Brooks	Plumbing	Ф	+	OMR Feasibility	1	Location	\$25,000	\$25,000	\$4,250	\$2,500	\$2,500	\$34,250	\$8,563	\$44,525		N/A
52	F-/1 /	Complete intrusion alarm system. Partial system installed at Smith.	Brooks/ Smith	Electrical	Ф	+	OMR Feasibility	137,500	SF	\$1	\$137,500	\$23,375	\$13,750	\$13,750	\$188,375	\$47,094	\$244,888		N/A

Indicates a code compliance item triggered by Immediate Needs Scope.

Φ O A +
 Immediate Near Term Deferred Needs Needs Needs Needs In CIP

Line #	Item#	Scope Description	Location	System Category	SBAC Priority	In CIP Calculation	Scope Source	QTY	Units	\$/UNIT	Direct Cost	General Conditions Cost ¹	Design Contingency	Owner's Contingency	Total Construction Cost	Soft Costs	Total Project Cost ²	Comments	Take-off Document
53	F-4X	Provide a new central paging system integrated with IP-based telephone system.	Brooks/ Smith	Electrical	Ф	+	OMR Feasibility	137,500	SF	\$1	\$68,750	\$11,688	\$6,875	\$6,875	\$94,188	\$23,547	\$122,444		N/A
54		Have video intercom system at entry doors and have upgraded PA system recently	Brooks/ Smith	Electrical	Ф	+		137,500	SF	\$1	\$103,125	\$17,531	\$10,313	\$10,313	\$141,281	\$35,320	\$183,666		N/A
60	F-54	Covert two existing accessible spaces to van accessible by removing and replacing existing signage.	Brooks/ Smith	Site/Landscape	Ф	+	OMR Feasibility	2	Locations	\$900	\$1,800	\$306	\$180	\$180	\$2,466	\$617	\$3,206		Site Plan
61	ト-カカ	Upgrade existing sidewalk ramps throughout the site to be accessible.	Brooks/ Smith	Site/Landscape	Ф	+	OMR Feasibility	750	SF	\$30	\$22,500	\$3,825	\$2,250	\$2,250	\$30,825	\$7,706	\$40,073		Site Plan
62	F-56	Remove and replace existing paving and curbs througout site.	Brooks/ Smith	Site/Landscape	Ф	+	OMR Feasibility	1	LS	\$402,490	\$402,490	\$68,423	\$40,249	\$40,249	\$551,411	\$137,853	\$716,834	See site plan	Site Plan
63	F-5/	Provide accessible route to playground apparatus.	Brooks/ Smith	Site/Landscape	Ф	+	OMR Feasibility	9,400	SF	\$20	\$188,000	\$31,960	\$18,800	\$18,800	\$257,560	\$64,390	\$334,828		Site Plan
64	F-5X	Provide accessible route to playground from parking lot for north play ground.	Brooks/ Smith	Site/Landscape	Ф	+	OMR Feasibility	678	FT	\$100	\$67,800	\$11,526	\$6,780	\$6,780	\$92,886	\$23,222	\$120,752		Site Plan
72	F-62a	Remove existing carpet and replace with VCT in classrooms.	Link	Arch - Interior Finishes	Ф	+	CDR Maguire	4,400	SF	\$7	\$28,600	\$4,862	\$2,860	\$2,860	\$39,182	\$9,796	\$50,937		Floor Plan
77	F-65	Remove and replace all airhandling units, condensing units, and refrigerant piping at the Link Building and multipurpose spaces.	Link	Mechanical	Ф	+	CDR Maguire	26,500	SF	\$30	\$795,000	\$135,150	\$79,500	\$79,500	\$1,089,150	\$272,288	\$1,415,895		
80	F-68	Use existing exterior CMU wall as back up. Remove existing brick veneer. Install air/vapor barrier, 4"of rigid insulation, 4" brick veneer on steel angles clipped to existing foundation.	Reed Gym	Arch - Building Exterior	Ф	+	SBAC II	5,500	SF	\$52	\$283,800	\$48,246	\$28,380	\$28,380	\$388,806	\$97,202	\$505,448		Ext. Elev.
83		Remove and replace the existing electrical switch gear for the Reed Gym	Reed Gym	Electrical	Ф	+	OMR Feasibility	1	Lump Sum	\$15,000	\$15,000	\$2,550	\$1,500	\$1,500	\$20,550	\$5,138	\$26,715		N/A
85	F-74	Remove and replace existing Heating and Ventilating equipment in Fieldhouse with DX cooling coils and condensing unit.	Reed Gym	Mechanical	Ф	+	CDR Maguire	14,200	SF	\$8	\$113,600	\$19,312	\$11,360	\$11,360	\$155,632	\$38,908	\$202,322		N/A
86	F-75	Remove and replace all shower valves and piping in the Locker Rooms.	Reed Gym	Plumbing	Ф	+	OMR Feasibility	2,200	SF	\$12	\$26,400	\$4,488	\$2,640	\$2,640	\$36,168	\$9,042	\$47,018		Floor Plan
88		Remove and replace domestic hot water heaters including thermostatic mixing valves.	Reed Gym	Plumbing	Ф	+	OMR Feasibility	1	Lump Sum	\$40,000	\$40,000	\$6,800	\$4,000	\$4,000	\$54,800	\$13,700	\$71,240		N/A
94	F-81a	Remove and replace existing insulated windows and curtain wall systems in 1963 portion of Smith School and replace with double glazed insulated and thermally broken, R2.5 aluminum systems. Remove and replace damaged and/or rotten wood trim.	Smith	Arch - Building Exterior	Ф	+	CDR Maguire	748	SF	\$133	\$99,484	\$16,912	\$9,948	\$9,948	\$136,293	\$34,073	\$177,181		Ext. Elev.
95		Fur out interior and install 4" closed cell spray foam. Painted gypsum finish interior surface.	Smith	Arch - Building Exterior	Ф	+	D&W	14,332	SF	\$11	\$164,531	\$27,970	\$16,453	\$16,453	\$225,408	\$56,352	\$293,030		Floor Plan

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96	F-82b	At Smith Gymnasium only, remove exterior brick veneer. Install air/vapor barrier, 4"of rigid insulation, 4" brick veneer on steel angles clipped to existing structure(punched window openings and curtain wall similar to existing acounted for above.)	Smith	Arch - Building Exterior	Ф	+	D&W	2,059	SF	\$52	\$106,244	\$18,062	\$10,624	\$10,624	\$145,555	\$36,389		Applies to existing Brooks Auditorium, Smith Gym and Reed Gym.	Ext. Elev.
97		Clean and prepare existing surfaces for repainting. Repaint all interior existing painted surfaces.	Smith	Arch - Interior Finishes	Ф	+	CDR Maguire	49,600	SF	\$2	\$74,400	\$12,648	\$7,440	\$7,440	\$101,928	\$25,482	\$132,506		Floor Plan
99	F-85	Remove existing carpet and replace with VCT in classrooms.	Smith	Arch - Interior Finishes	Ф	+	CDR Maguire	1,200	SF	\$7	\$7,800	\$1,326	\$780	\$780	\$10,686	\$2,672	\$13,892	Requires field visit	Floor Plan
100		Remove and replace 2700 SF of 12"x12" acoustical treaments. Replace with 2x2 ACP ceilings.	Smith	Arch - Interior Finishes	Ф	+	CDR Maguire	15,300	SF	\$7	\$100,980	\$17,167	\$10,098	\$10,098	\$138,343	\$34,586	\$179,845	Requires field visit	Ceiling Plan
108	F-93	Provide new electrical distribution panels to add electrial plug-load capacity to Smith School.	Smith	Electrical	Ф	+	CDR Maguire	49,600	SF	\$4	\$198,400	\$33,728	\$19,840	\$19,840	\$271,808	\$67,952	\$353,350		N/A
127	F-112a	Remove existing unit ventilators in 21 classrooms. Replace with centralized air distribution system with induction units.	Smith	Mechanical	Ф	+	CDR Maguire	49,600	SF	\$17	\$843,200	\$143,344	\$84,320	\$84,320	\$1,155,184	\$288,796	\$1,501,739		Floor Plan
130	F-113	Remove and replace unit ventilators, condensing units, and refrigerant piping at Administrative Suite and replace with new.	Smith	Mechanical	Ф	+	CDR Maguire	1	Locations	\$20,000	\$20,000	\$3,400	\$2,000	\$2,000	\$27,400	\$6,850		Consult with GGD on system selection	N/A
131	F-114	Remove and replace existing exhaust systems serving bathrooms.	Smith	Mechanical	Ф	+	CDR Maguire	1,400	SF	\$26	\$36,400	\$6,188	\$3,640	\$3,640	\$49,868	\$12,467	\$64,828		Floor Plan
132	F-115	Remove and replace existing hot water distribution system.	Smith	Mechanical	Ф	+	CDR Maguire	49,600	SF	\$4	\$198,400	\$33,728	\$19,840	\$19,840	\$271,808	\$67,952	\$353,350		N/A
133	F-116	Remove and replace existing pneumatic mechanical controls with new direct digital controls.	Smith	Mechanical	Ф	+	OMR Feasibility	1	Lump Sum	\$358,000	\$358,000	\$60,860	\$35,800	\$35,800	\$490,460	\$122,615	\$637,598		N/A
136	F-118	Remove and replace domestic water distribution system in its entirety.	Smith	Plumbing	Ф	+	CDR Maguire	49,600	SF	\$3	\$172,000	\$29,240	\$17,200	\$17,200	\$235,640	\$58,910	\$306,332		Floor Plan
137	F-119	Remove and replace the duplex ejector cover serving the Smith boiler room.	Smith	Plumbing	Ф	+	CDR Maguire	1	Lump Sum	\$1,500	\$1,500	\$255	\$150	\$150	\$2,055	\$514	\$2,672		N/A
138	F-121	Remove and replace all water closets with new low flow (1.28 Gal/Flush) fixtures.	Smith	Plumbing	Ф	+	OMR Feasibility	58	Locations	\$1,100	\$63,800	\$10,846	\$6,380	\$6,380	\$87,406	\$21,852	\$113,628		Floor Plan
139	F-122	Remove and replace all lavatory faucets with low flow (.5 Gal/min) faucets with electronic metering.	Smith	Plumbing	Ф	+	OMR Feasibility	52	Locations	\$330	\$17,160	\$2,917	\$1,716	\$1,716	\$23,509	\$5,877	\$30,562		Floor Plan
140	L_1 1 2	Remove and replace domestic hot water heaters including thermostatic mixing valves.	Smith	Plumbing	Ф	+	OMR Feasibility	49,600	SF	\$1	\$49,600	\$8,432	\$4,960	\$4,960	\$67,952	\$16,988	\$88,338		N/A
142	F-125	Abate Hazardous Materials	Smith/ Link/ Brooks/ Reed	Hazardous Materials	Ф	+	OMR Feasibility	137,500	SF	\$2	\$330,000	\$56,100	\$33,000	\$33,000	\$452,100	\$113,025	\$587,730		EDG to provide narrative and sketches as necessary

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143	F-126	Remove and replace existing boilers and air handling units in Brooks Boiler Room with highefficiency condensing boilers.	Brooks	Mechanical	Ф	+	CDR Maguire	1	LS	\$165,000	\$165,000	\$28,050	\$16,500	\$16,500	\$226,050	\$56,513	\$293,865	Includes additional SF for unknown conditions	Floor Plan
8	F-6	Clean and prepare existing surfaces for repainting. Repaint all interior existing painted surfaces.	Brooks/ Smith/ Link/ Reed Gym	Arch - Interior Finishes	0		CDR Maguire	137,500	SF	\$1	\$171,875	\$29,219	\$17,188	\$17,188	\$235,469	\$58,867	\$306,109		Floor Plan
9	F-7	Remove existing carpet throughout facility	Brooks	Arch - Interior Finishes	0		CDR Maguire	3,400	SF	\$3	\$8,500	\$1,445	\$850	\$850	\$11,645	\$2,911	\$15,139	Includes floor prep	Floor Plan
19	F-21	Remove and replace existing lighting with new LED fixtures and controls throughout facility.	Brooks	Electrical	0		CDR Maguire	47,800	SF	\$9	\$430,200	\$73,134	\$43,020	\$43,020	\$589,374	\$147,344	\$766,186		Floor Plan
21	F-21b	Remove and replace existing lighting with new LED fixtures and controls in corridors only.	Brooks	Electrical	0		CDR Maguire	8,400	SF	\$10	\$79,800	\$13,566	\$7,980	\$7,980	\$109,326	\$27,332	\$142,124		Floor Plan
23	F-23	Upgrade technology infrastructure and electronics conistent with Category 6AUTP cabling and gigabit connectivity.	Brooks	Electrical	0		OMR Feasibility	47,800	SF	\$4	\$167,300	\$28,441	\$16,730	\$16,730	\$229,201	\$57,300	\$297,961		N/A
24	F-25	Install a double convection oven at Kitchen.	Brooks	FFE	0		CDR Maguire	1	Lump Sum	\$15,000	\$15,000	\$2,550	\$1,500	\$1,500	\$20,550	\$5,138	\$26,715		N/A
25	F-26	Install new exhaust hood that meets overhang requirements of NFPA 96 at Kitchen	Brooks	FFE	0		CDR Maguire	1	Lump Sum	\$50,000	\$50,000	\$8,500	\$5,000	\$5,000	\$68,500	\$17,125	\$89,050	Includes new kitchen exhaust ductwork	N/A
26	F-27	Install a fire suppression system at Kitchen.	Brooks	FFE	0		CDR Maguire	1	Lump Sum	\$14,000	\$14,000	\$2,380	\$1,400	\$1,400	\$19,180	\$4,795	\$24,934		N/A
27	F-28	Install a 3-compartment reach-in-freezer at Kitchen.	Brooks	FFE	0		CDR Maguire	1	Lump Sum	\$6,500	\$6,500	\$1,105	\$650	\$650	\$8,905	\$2,226	\$11,577		N/A
28	F-29	Install one warming cabinet to hold food at a safe temperature between lunches.	Brooks	FFE	0		CDR Maguire	1	Lump Sum	\$2,500	\$2,500	\$425	\$250	\$250	\$3,425	\$856	\$4,453		N/A
29	F-30	Install a new 3-door reach-in refrigerator at Kitchen.	Brooks	FFE	0		CDR Maguire	1	Lump Sum	\$5,500	\$5,500	\$935	\$550	\$550	\$7,535	\$1,884	\$9,796		N/A
31	F-31a	Refurbish all science casework and countertops with new.	Brooks	FFE	0		SBAC II	128	LF	\$110	\$14,080	\$2,394	\$1,408	\$1,408	\$19,290	\$4,822	\$25,076	Assume wall mounted cabinets and base cabinets	
32	F-32	Remove existing televisions with VCRs from classrooms.	Brooks	FFE	0		OMR Feasibility	17	Locations	\$75	\$1,275	\$217	\$128	\$128	\$1,747	\$437	\$2,271		Floor Plan
33	F-33	Provide all classrooms with LCD projectors and interactive white boards.	Brooks	FFE	0		OMR Feasibility	13	Locations	\$4,000	\$52,000	\$8,840	\$5,200	\$5,200	\$71,240	\$17,810	\$92,612		Floor Plan
51	F-46	Remove and replace existing clock system with new digital system.	Brooks/ Smith	Electrical	0		OMR Feasibility	18	Classrooms	\$750	\$13,500	\$2,295	\$1,350	\$1,350	\$18,495	\$4,624	\$24,044		N/A
57	F-51	Reinforce existing structure to support solar panels (incremental cost if being replaced): Reed, Auditorium, flat portion of Brooks, South facing portion of Smith. Calculate solar power potential.	Brooks/ Smith	Energy Efficiency	0		CDR Maguire	36,900	SF	\$3	\$92,250	\$15,683	\$9,225	\$9,225	\$126,383	\$31,596	\$164,297		EDG to provide narrative and sketches as necessary

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65	F-59 Remove and replace trash barrels throughout site.	Brooks/ Smith	Site/Landscape	0		OMR Feasibility	1	Lump Sum	\$7,500	\$7,500	\$1,275	\$750	\$750	\$10,275	\$2,569	\$13,358		Site Plan
66	F-60 Remove and replace bicycle racks throughout site.	Brooks/ Smith	Site/Landscape	0		OMR Feasibility	1	Lump Sum	\$10,000	\$10,000	\$1,700	\$1,000	\$1,000	\$13,700	\$3,425	\$17,810		Site Plan
67	F-61 Remove and replace benches throughout site.	Brooks/ Smith	Site/Landscape	0		OMR Feasibility	1	Lump Sum	\$12,500	\$12,500	\$2,125	\$1,250	\$1,250	\$17,125	\$4,281	\$22,263		Site Plan
68	Addressing grading, irrigation, drainage at central fieldfield replacement subgrade, new seed, better drainage	Brooks/ Smith	Site/Landscape	0			1	Lump Sum	\$427,308	\$427,308	\$72,642	\$42,731	\$42,731	\$585,412	\$146,353	\$761,036	See site plan	Site Plan
69	Addressing grading, irrigation, drainage at T-Ball F-61b fieldsfield replacement subgrade, new seed, better drainage	Brooks/ Smith	Site/Landscape	0			1	Lump Sum	\$350,000	\$350,000	\$59,500	\$35,000	\$35,000	\$479,500	\$119,875	\$623,350	See site plan	Site Plan
70	Addressing grading, irrigation, drainage at baseball fieldsfield replacement subgrade, new seed, better drainage	Brooks/ Smith	Site/Landscape	0			1	Lump Sum	\$420,000	\$420,000	\$71,400	\$42,000	\$42,000	\$575,400	\$143,850	\$748,020	See site plan	Site Plan
84	F-73 Remove and replace existing Heating and Ventilating equipment in Fieldhouse without DX cooling coils.	Reed Gym	Mechanical	0		CDR Maguire	14,200	SF	\$6	\$85,200	\$14,484	\$8,520	\$8,520	\$116,724	\$29,181	\$151,741		N/A
87	F-75a Gut renovation of girls locker rooms for improved organization and performance.	Reed Gym	Plumbing	0		OMR Feasibility	1,200	SF	\$200	\$240,000	\$40,800	\$24,000	\$24,000	\$328,800	\$82,200	\$427,440		Floor Plan
98	F-84 Remove existing carpet throughout facility.	Smith	Arch - Interior Finishes	0		CDR Maguire	3,600	SF	\$3	\$9,000	\$1,530	\$900	\$900	\$12,330	\$3,083	\$16,029 Re	quires field visit	Floor Plan
109	F-94 Remove and replace existing lighting with new LED fixtures and controls.	Smith/ Brooks	Electrical	0		CDR Maguire	137,500	SF	\$10	\$1,306,250	\$222,063	\$130,625	\$130,625	\$1,789,563	\$447,391	\$2,326,431		Ceiling Plan
111	Upgrade technology infrastructure and electronics conistent with Category 6AUTP cabling and gigabit connectivity.	Smith	Electrical	0		OMR Feasibility	49,600	SF	\$4	\$173,600	\$29,512	\$17,360	\$17,360	\$237,832	\$59,458	\$309,182		Floor Plan
112	F-98 Install a single convection oven.	Smith	FFE	0		CDR Maguire	1	Lump Sum	\$5,000	\$5,000	\$850	\$500	\$500	\$6,850	\$1,713	\$8,905		N/A
113	F-99 Install a two-compartment steamer	Smith	FFE	0		CDR Maguire	1	Lump Sum	\$12,000	\$12,000	\$2,040	\$1,200	\$1,200	\$16,440	\$4,110	\$21,372		N/A
114	F-100 Install a four-burner range	Smith	FFE	0		CDR Maguire	1	Lump Sum	\$3,000	\$3,000	\$510	\$300	\$300	\$4,110	\$1,028	\$5,343		N/A
115	F-101 Install new exhaust hood that meets overhang requirements of NFPA 96	Smith	FFE	0		CDR Maguire	1	Lump Sum	\$50,000	\$50,000	\$8,500	\$5,000	\$5,000	\$68,500	\$17,125	\$89,050		N/A
116	F-102 Install a fire suppression system in Kitchen.	Smith	FFE	0	+	CDR Maguire	1	Lump Sum	\$14,000	\$14,000	\$2,380	\$1,400	\$1,400	\$19,180	\$4,795	\$24,934		Floor Plan
117	F-103 Install a 3-compartment reach-in-freezer.	Smith	FFE	0		CDR Maguire	1	Lump Sum	\$6,500	\$6,500	\$1,105	\$650	\$650	\$8,905	\$2,226	\$11,577		N/A
118	F-104 Install one warming cabinet to hold food at a safe temperature between lunches.	Smith	FFE	0		CDR Maguire	1	Lump Sum	\$2,500	\$2,500	\$425	\$250	\$250	\$3,425	\$856	\$4,453		N/A
119	F-105 Install a new 3-door reach-in refrigerator.	Smith	FFE	0		CDR Maguire	1	Lump Sum	\$5,500	\$5,500	\$935	\$550	\$550	\$7,535	\$1,884	\$9,796		N/A
120	F-106 Remove existing televisions with VCRs from classrooms.	Smith	FFE	0		OMR Feasibility	17	Locations	\$75	\$1,275	\$217	\$128	\$128	\$1,747	\$437	\$2,271 Re	quires field visit	Floor Plan
121	F-107 Provide all classrooms with LCD projectors and interactive white boards.	Smith	FFE	0		OMR Feasibility	15	Locations	\$4,000	\$60,000	\$10,200	\$6,000	\$6,000	\$82,200	\$20,550	\$106,860		Floor Plan

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2	F-2a	Remove existing roofing and trim components at Brooks School down to existing deck. Replace with new tappered to insulation and single-ply roofing system (to meet Energy 2030 goal). Base roof material white TPO, Replace all trim components.	Brooks	Arch - Building Exterior	А		SBAC Meeting	47,800	SF	\$18	\$836,500	\$142,205	\$83,650	\$83,650	\$1,146,005	\$286,501	\$1,489,807		Roof Plan
3	F-2b	Remove existing roofing and trim components at Brooks School down to existing deck. Replace with new tappered to insulation and single-ply roofing system (to meet Energy 2030 goal). Base roof material white PVC, Replace all trim components.	Brooks	Arch - Building Exterior	А		SBAC Meeting	47,800	SF	\$19	\$884,300	\$150,331	\$88,430	\$88,430	\$1,211,491	\$302,873	\$1,574,938		Roof Plan
4	F-3	Remove and replace existing uninsulated windows, curtain wall systems, and associated transite panels (ACMs) in the Brooks School and replace with triple glazed insulated and thermally broken, R5 vinyl systems.	Brooks	Arch - Building Exterior	А		CDR Maguire	6,800	SF	\$148	\$1,006,400	\$171,088	\$100,640	\$100,640	\$1,378,768	\$344,692	\$1,792,398		Ext. Elev.
30	F-31	Remove and replace all science casework and countertops with new.	Brooks	FFE	Α		CDR Maguire	128	LF	\$450	\$57,600	\$9,792	\$5,760	\$5,760	\$78,912	\$19,728	\$102,586 mo	Assume wall bunted cabinets d base cabinets	Floor Plan
34	F-33a I	Provide all classrooms with LCD screens and wireless screen casting display capability.	Brooks	FFE	Α		SBAC Meeting	18	Locations	\$5,000	\$90,000	\$15,300	\$9,000	\$9,000	\$123,300	\$30,825	\$160,290		Floor Plan
35	F-34	Remove existing unit ventilators in 17 classrooms. Replace with centralized air distribution system with DW cooling coils, condensing units, and VAV boxes.	Brooks	Mechanical	А		CDR Maguire	39,300	SF	\$16	\$609,150	\$103,556	\$60,915	\$60,915	\$834,536	\$208,634	\$1,084,896		Floor Plan
37	F-34b	Remove existing unit ventilators in 17 classrooms. Replace with new unit ventilators and CHW units.	Brooks	Mechanical	Α		CDR Maguire	39,300	SF	\$14	\$550,200	\$93,534	\$55,020	\$55,020	\$753,774	\$188,444	\$979,906		Floor Plan
38	F 24c	Augment 17 existing unit ventilators with split ducting system for cooing.	Smith	Mechanical	Α		CDR Maguire	39,300	SF	\$12	\$471,600	\$80,172	\$47,160	\$47,160	\$646,092	\$161,523	\$839,920		Floor Plan
43	F-39	Remove and replace domestic water distribution system serving potable water fixtures only.	Brooks	Plumbing	Α		CDR Maguire	51	Locations	\$2,451	\$125,000	\$21,250	\$12,500	\$12,500	\$171,250	\$42,813	\$222,625		N/A
44		Replace piping at water bubblers only (including new bubblers at code required locations).	Brooks	Plumbing	Α		SBAC Meeting	11	Locations	\$4,100	\$45,100	\$7,667	\$4,510	\$4,510	\$61,787	\$15,447	\$80,323		Floor Plan
56	F-50a	Provide and connect new life safety power generator equipment as primary and sized to compliment existing generator for sufficient capactity	Brooks/ Smith	Electrical/ Life Safety	А			1	Lump Sum	\$300,000	\$300,000	\$51,000	\$30,000	\$30,000	\$411,000	\$102,750		ed KW number naller than F-50)	N/A
71	F-62	Remove existing carpet throughout facility	Link	Arch - Interior Finishes	Α		CDR Maguire	5,000	SF	\$3	\$12,500	\$2,125	\$1,250	\$1,250	\$17,125	\$4,281	\$22,263		Floor Plan

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74	F-63a	Remove existing flat roofing and trim components at Link Building down to existing deck. Replace with new insulation and single-ply, light-colored PVC roofing system (to comply with 2030 Challenge). Replace all trim components.	Link	Arch - Building Exterior	А		CDR Maguire	24,300	SF	\$19	\$449,550	\$76,424	\$44,955	\$44,955	\$615,884	\$153,971	\$800,649		Roof Plan
75	F-63b	Remove existing flat roofing and trim components at Link Building down to existing deck. Replace with new insulation and single-ply, light-colored TPO roofing system (to comply with 2030 Challenge). Replace all trim components.	Link	Arch - Building Exterior	А		CDR Maguire	24,300	SF	\$18	\$425,250	\$72,293	\$42,525	\$42,525	\$582,593	\$145,648	\$757,370		Roof Plan
79	F-66a	Remove existing precast concrete exterior wall panels at Reed Gym and replace with EIFS system.	Reed Gym	Arch - Building Exterior	Α		D&W	7,200	SF	\$30	\$216,000	\$36,720	\$21,600	\$21,600	\$295,920	\$73,980	\$384,696		
90	F-79a	Remove existing roofing and trim components at Smith School down to existing deck. Replace with new tappered to insulation and single-ply roofing system (to meet Energy 2030 goal). Base roof material white TPO, Replace all trim components.	Smith	Arch - Building Exterior	А		SBAC Meeting	42,900	SF	\$18	\$750,750	\$127,628	\$75,075	\$75,075	\$1,028,528	\$257,132	\$1,337,086		Roof Plan
91	F-79b	Remove existing roofing and trim components at Smith School down to existing deck. Replace with new tappered to insulation and single-ply roofing system (to meet Energy 2030 goal). Base roof material white PVC, Replace all trim components.	Smith	Arch - Building Exterior	А		SBAC Meeting	42,900	SF	\$19	\$793,650	\$134,921	\$79,365	\$79,365	\$1,087,301	\$271,825	\$1,413,491		Roof Plan
93	F-81	Remove and replace existing windows, curtain wall systems, and associated transite panels (ACMs) in the Smith School and replace with triple glazed insulated and thermally broken, R5 vinyl systems.	Smith	Arch - Building Exterior	А		CDR Maguire	5,588	SF	\$148	\$827,024	\$140,594	\$82,702	\$82,702	\$1,133,023	\$283,256	\$1,472,930		Ext. Elev.
122	F-109	relocation to a space above grade)	Smith	Mechanical	А		CDR Maguire	1	Lump Sum	\$150,000	\$150,000	\$25,500	\$15,000	\$15,000	\$205,500	\$51,375	\$267,150		N/A
123	F-109a	Remove and replace existing boilers and air handling units in Smith Boiler Room with highefficiency condensing boilers. (Excludes relocation to a space above grade, but includes waterproofing solution for continued use of basement)	Smith	Mechanical	А		SBAC Meeting	1	LS	\$175,000	\$175,000	\$29,750	\$17,500	\$17,500	\$239,750	\$59,938	\$311,675		Floor Plan
126	F-112	Remove existing unit ventilators in 21 classrooms. Replace with centralized air distribution system with DW cooling coils, condensing units, and VAV boxes.	Smith	Mechanical	А		CDR Maguire	49,600	SF	\$16	\$793,600	\$134,912	\$79,360	\$79,360	\$1,087,232	\$271,808	\$1,413,402		Floor Plan
128	F-112b	Remove existing unit ventilators in 21 classrooms. Replace with new unit ventilators and CHW units.	Smith	Mechanical	Α		CDR Maguire	49,600	SF	\$14	\$694,400	\$118,048	\$69,440	\$69,440	\$951,328	\$237,832	\$1,236,726		Floor Plan

		Indicates a code compliance item triggered by Immediate Needs Scope.			• Immediate Needs	Φ Near Term Needs	o Deferred Needs	A Alternates	+ Included in CIP			17%	10%	10%		25%			
Line #	Item#	Scope Description	Location	System Category	SBAC Priority	In CIP Calculation	Scope Source	QTY	Units	\$/UNIT	Direct Cost	General Conditions Cost ¹	Design ontingency	Owner's Contingency	Total Construction Cost	Soft Costs	Total Project Cost ²	Comments	Take-off Document
129	F-112c	Augment existing unit ventilators with split ducting system for cooing.	Smith	Mechanical	Α		CDR Maguire	49,600	SF	\$12	\$595,200	\$101,184	\$59,520	\$59,520	\$815,424	\$203,856	\$1,060,051		Floor Plan
134	⊢ _11/	Remove and replace domestic water distribution system serving potable water fixtures only.	Smith	Plumbing	Α		CDR Maguire	49,600	SF	\$3	\$148,800	\$25,296	\$14,880	\$14,880	\$203,856	\$50,964	\$265,013		Floor Plan
135	F-117a	Replace piping at water bubblers only (including new bubblers at code required locations).	Smith	Plumbing	Α		SBAC Meeting	18	Locations	\$4,100	\$73,800	\$12,546	\$7,380	\$7,380	\$101,106	\$25,277	\$131,438		Floor Plan

SBAC TOTAL IMMEDIATE NEEDS SCOPE \$8,392,945

SBAC TOTAL NEAR TERM NEEDS SCOPE \$19,131,279

SBAC TOTAL CAPITAL IMPROVEMENT SCOPE \$27,524,224

\$7,703,561

FACILITIES SUB-TOTAL \$35,227,784

This identified Capital Improvement scope represents a compilation of scope identified in previous studies and augmented by members of the School Building Advisory Committee (SBAC). This list is intended to serve as an ala carte menu from which the SBAC, and by extension the Town of Lincoln, can assemble more comprehensive projects. Line items have been priced individually with project costs to support this effort, but it should be noted that there are interactions between line items (in terms of Code triggers and cost efficiencies) which can't be fully captured in this format.

¹ General Conditions includes 9% General Conditions, 1% Bond, 1.25% Insurances; 2% GMP contingency and 3% OH&P

² Total Project Cost assumes construction could not begin until November 2015 and, therefore, includes one year of esclation at 4%.

³ Dore & Whittier performed a review of previous studies and other information provided by the Town of Lincoln and Lincoln Public Schools. D&W also performed a visual inspection of the existing facility to quantify certain scope items to the extent possible. Dore & Whittier did not perform any distructive testing. All quantities and costs should be considered conceptual until the Town of Lincoln and Lincoln Public School selects specific projects to pursue. The further investigation and design work that would come with specific construction project would better define scope and more accurately estimate costs.

⁴ No phasing costs are included in any scope items. Costs associated with phasing (and additional escalation costs) are included in comprehensive options.

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Φ O A +
 High Moderate Modest Alternates
 Improvement Improvement

A Included in CIP

17% 10% 10% 25% General Owner's **Total Construction SBAC Priority** Line # Scope Description Location System Category In CIP Calculation Scope Source QTY Units \$/UNIT Direct Cost **Design Contingency** Soft Costs | Total Project Cost² Comments Take-off Document Contingency Cost Conditions Cost E-1c Provide speech amplification equipment **SBAC** Meeting 13 Classrooms \$1,800 \$23,400 \$3,978 \$2,340 \$2,340 \$32,058 \$8,015 \$41,675 Floor Plan Acoustics Construct new entry sequence with better SBACII Memo \$150,000 \$15,000 \$51,375 \$267,150 E-5 connection to administration and visibility from Brooks Safety and Security 1 LS 150000 \$25,500 \$15,000 \$205,500 Programming assumption Construct new full-prep kitchen to serve grades Brooks/ Assumes two \$100,800 Food Service SBACII Memo 2,400 420 \$1,008,000 \$171,360 \$100,800 \$1,380,960 \$345,240 \$1,795,248 based on student Reed Gym servings opulation Assumes two servings @ 15 rogramming assumption \$1,602,900 | Nor pc. | student + 1.5 Brooks/ Construct new cafeteria to serve grades 5-8. Student Dining SBACII Memo 3,000 SF 300 \$900,000 \$153,000 \$90,000 \$90,000 \$1,233,000 \$308,250 based on student Reed Gym population net to gross multiplier. E-11c Provide speech amplification equipment Smith Acoustics SBAC Meeting 21 \$1,800 \$37,800 \$6,426 \$3,780 \$3,780 \$51,786 \$12,947 \$67,322 Floor Plan Classrooms Provide sound-absorbative materials to classrooms to improve acoustics by removing E-11d SBAC Meeting 4,600 SF \$13 \$57,960 \$9,853 \$5,796 \$5,796 \$79,405 \$19,851 \$103,227 Int. Elev. Smith Acoustics 2700 SF of existing acoustical tiles and installing tectum wall panels at Kindergarten Classrooms. Demolition of existing 2nd Grade classrooms 18 Smith SBACII Memo 6,320 SF 10 \$63,200 \$10,744 \$6,320 \$6,320 \$86,584 \$21,646 \$112,559 Existing CAD Floor Plan E-13 Educational toilet facilities, and boiler room Assumes 950 NSF per classroom New construction of four 2nd Grade classrooms, 19 Smith Educational SBACII Memo 7,455 SF \$1,938,300 \$329,511 \$193,830 \$193,830 \$2,655,471 \$663,868 \$3,452,112 similar toilet toilet facilities and boiler room fixture count. and 1.5 Multiplier \$1,851,350 Assumes two servings Construct new full-prep kitchen to serve grades E-15 SBACII Memo 2,475 SF 420 \$1,039,500 \$176,715 \$103,950 \$103,950 \$1,424,115 \$356,029 20 Smith Food Service Construct new entry sequence with better 150000 \$150,000 \$25,500 \$15,000 \$15,000 \$51,375 \$267,150 22 E-18 connection to administration and visibility from Safety and Security SBACII Memo 1 LS \$205,500 parking. Assumes two servings @ 15 Programming assumption \$2,003,625 NSF per E-19 Construct new cafeteria to serve grades K-4. Student Dining SBACII Memo 3,750 SF \$1,125,000 \$191,250 \$112,500 \$112,500 \$1,541,250 \$385,313 based on student student + 1.5 population net to gross multiplier. Assumes approximately rogramming assumption \$605,540 100 NSF space E-20 Small Group Breakout spaces TBD SBACII Memo 1,700 SF \$340,000 \$57,800 \$34,000 \$34,000 \$465.800 \$116,450 Educational 200 based on student per pair of population existing classrooms Assumes 1000 NSF per grade Programming assumption E-21 Classroom-sized Breakout clusters (Hub Areas) TBD Educational SBACII Memo 9,000 SF 230 \$2,070,000 \$351,900 \$207,000 \$207,000 \$2,835,900 \$708,975 \$3,686,670 level at 1.5 net based on Hanscom Model to gross multiplier Assumes within Programming assumption Construction of new, larger Science spaces TBD Educational SBACII Memo 7,200 SF 180 \$1,296,000 \$220,320 \$129,600 \$129,600 \$1,775,520 \$443,880 \$2,308,176 existing based on MSBA Guidelines foortprint Assumes all Programming assumption \$1,602,900 new E-24 Construction of new, larger Art spaces TBD Educational SBACII Memo 3,600 SF 250 \$900,000 \$153,000 \$90,000 \$90,000 \$1,233,000 \$308,250 28 based on MSBA Guidelines construction Provide sound-absorbative materials to classrooms to improve acoustics by removing Φ 1 Brooks Acoustics SBAC Components 10.600 SF \$5 \$57,664 \$9,803 \$5.766 \$5,766 \$79,000 \$19,750 \$102,700 Ceiling Plan 4,700 SF of existing acoustical ceiling treatment and installing suspended ACP.

5	E-2	Reconfiguration of existing Science spaces	Brooks	Educational	Ф	SBACII Memo	5,515	SF	160	\$882,400	\$150,008	\$88,240	\$88,240	\$1,208,888	\$302,222	\$1,571,554 reconfiguration in place	Existing CAD Floor Plan
12	E-11	Provide sound-absorbative materials to classrooms to improve acoustics by removing 4502 SF existing acoustical tiles and installing suspended ACP.	Smith	Acoustics	Ф	SBAC Components	15,600	SF	\$5	\$74,880	\$12,730	\$7,488	\$7,488	\$102,586	\$25,646	\$133,361	Ceiling Plan
10	E-9	Addressing grading, irrigation, drainage at central fieldfield replacement subgrade, new seed, better drainage	Brooks/ Smith	Education	0		1	Lump Sum	427,308	\$427,308	\$72,642	\$42,731	\$42,731	\$585,412	\$146,353	\$761,036 See site plan	Site Plan
11	E-10	Reconfigure existing site circulation pattern to improve bus/parent vehicle/pedestrian conflicts	N/A	Site/Landscape	0	SBACII Memo	1	LS	250000	\$250,000	\$42,500	\$25,000	\$25,000	\$342,500	\$85,625	\$445,250	
2	E-1a	Provide sound-absorbative materials to classrooms to improve acoustics by installing tectum wall panels.	Brooks	Acoustics	Α	SBAC Meeting	5,915	SF	\$12	\$70,980	\$12,067	\$7,098	\$7,098	\$97,243	\$24,311	\$126,415 VIF	Interior Elev.
3	E-1b	Provide sound-absorbative materials to classrooms to improve acoustics by installing fabric-wrapped acoustical wall panels.	Brooks	Acoustics	Α	SBAC Meeting	5,915	SF	\$22	\$130,130	\$22,122	\$13,013	\$13,013	\$178,278	\$44,570	\$231,762 VIF	Interior Elev.
8	E-7	Construction of an enclosed breezeway between Brooks and Reed Gym	Brooks/ Reed Gym	Safety and Security	Α	SBACII Memo	1,500	SF	240	\$360,000	\$61,200	\$36,000	\$36,000	\$493,200	\$123,300	Assumes straight connection, \$641,160 150' long x 10' wide - exterior face to exterior face.	
13	E-11a	Provide sound-absorbative materials to classrooms to improve acoustics by removing 2700 SF existing acoustical tiles and installing tectum wall panels.	Smith	Acoustics	А	SBAC Meeting	20,000	SF	\$12	\$240,000	\$40,800	\$24,000	\$24,000	\$328,800	\$82,200	\$427,440	Int. Elev.
14	E-11b	Provide sound-absorbative materials to classrooms to improve acoustics by removing existing acoustical wall tiles and installing fabric-wrapped acoustical wall panels.	Smith	Acoustics	Α	SBAC Meeting	20,000	SF	\$22	\$440,000	\$74,800	\$44,000	\$44,000	\$602,800	\$150,700	\$783,640	Int. Elev.
17	E-12	Gut renovation of existing 2nd Grade classrooms	Smith	Educational	Α	SBACII Memo	5,150	SF	120	\$618,000	\$105,060	\$61,800	\$61,800	\$846,660	\$211,665	\$1,100,658 renovation in place	Existing CAD Floor Plan
21	E-15a	Construct new warming kitchen to serve grades K-4.	Smith	Food Service	Α	SBACII Memo	2,475	SF	363	\$898,425	\$152,732	\$89,843	\$89,843	\$1,230,842	\$307,711	\$1,600,095 Assumes two servings	
27	E-23	Reconfiguration/Relocation of existing Art spaces.	TBD	Educational	А	SBACII Memo	3,600	SF	150	\$540,000	\$91,800	\$54,000	\$54,000	\$739,800	\$184,950	Assumes within \$961,740 existing foortprint	Programming assumption based on MSBA Guidelines

SBAC TOTAL HIGH IMPORTANCE SCOPE \$19,767,604

SBAC TOTAL MODERATE IMPORTANCE SCOPE \$1,807,615

SBAC TOTAL CAPITAL IMPROVEMENT SCOPE \$21,575,219

SBAC MODEST IMPORTANC SCOPE \$1,206,286

EDUCATIONAL SUB-TOTAL

\$22,781,505

A No phasing costs are included in any scope items. Costs associated with phasing (and

additional escalation costs) are included in comprehensive options.

¹ General Conditions includes 9% General Conditions, 1% Bond, 1.25% Insurances; 2% GMP contingency and 3% OH&P

² Total Project Cost assumes construction could not begin until November 2015 and, therefore, includes one year of esclation at 4%.

³ Dore & Whittier performed a review of previous studies and other information provided by the Town of Lincoln and Lincoln Public Schools. D&W also performed a visual inspection of the existing facility to quantify certain scope items to the extent possible. Dore & Whittier did not perform any distructive testing. All quantities and costs should be considered conceptual until the Town of Lincoln and Lincoln Public School selects specific projects to pursue. The further investigation and design work that would come with specific construction project would better define scope and more accurately estimate costs.

This educational scope represents a compilation of scope identified in previous studies and augmented by members of the School Building Advisory Committee (SBAC). This list is intended to serve as an ala carte menu from which the SBAC, and by extension the Town of Lincoln, can assemble more comprehensive projects. Line items have been priced individually with project costs to support this effort, but it should be noted that there are interactions between line items (in terms of Code triggers and cost efficiencies) which can't be fully captured in this format.

Public Forum #1 – September 16th, 2014

Dore & Whittier facilitated the first public forum on September 16th, 2014. The intent of the meetings was to:

- Inform attendees of SBAC progress since conclusion of MSBA feasibility study
- Introduce Dore & Whittier as the selected design firm for this study
- Present educational possibilities
- Present preliminary cost considerations
- Identify issues for consideration and exploration that are important to those in attendance

Key Elements Presented

The bulk of the presentation focused on the characteristics of 21st educational facilities and several preliminary cost considerations based on the sets of scopes identified in Task One.

Dore & Whittier shared the following five characteristics of 21st century educational facilities:

- First and foremost, facilities must be warm, safe and dry. They must meet the basic needs
 of those occupying the facility. These elements include appropriate thermal comfort and
 control, appropriate acoustical qualities, up to date life safety equipment such as sprinklers
 and egress paths, and general protection from the elements.
- Facilities should provide a variety of places for instruction that support individual learning modalities and multiple intelligences. Such spaces may include classrooms, small group rooms, multipurpose spaces, and hubs among others.
- Facilities should embody the 4Cs of 21st century skills critical thinking, collaboration, communication, and creativity. Such facilities are often outfitted to accommodate studentto-student collaboration, teacher-to-teacher collaboration, student presentations, and places to make things.
- Technology should be ubiquitous throughout the facility and available to all students as tools of their learning experience.
- 21st Century schools possess the ability to adapt to change over time.

As part of the presentation, Dore & Whittier shared an analysis of the existing facility as it compared to MSBA guidelines for individual spaces. Dore & Whittier shared examples of projects from their portfolio of work that exhibit these characteristics and the Hanscom School example currently under construction on Hanscom Air Force Base, which also possesses many of these characteristics.

Dore & Whittier shared their methodology for estimating the preliminary scope of work identified in Task One. They also shared preliminary estimates for three major systems in need of repair or replacement: Roofing, Windows, and Mechanical Systems.

Previous reports identified the existing roof as an area of concern and had recommended a complete replacement of the entire roof down to the existing deck – with the exception of the rood on the Reed Gym. Although Dore & Whittier did not perform an assessment or conduct any destructive testing, a visual observation of the roof during one of its site visits confirmed these recommendations. Dore & Whittier explored three different roofing systems for estimation: an EPDM system, a PVC system, and a TPO system. Estimates ranged from approximately \$2.9M to \$3.1M. For purposes of the actionable options developed in Task Three, SBAC chose to use an EPDM system for cost estimating purposes.

update on cost estimates | roofing scope

	opt 1 EPDM	opt 2 PVC	opt 3 TPO
hard costs +	\$2.3M	\$2.5M	\$2.3M
soft costs @ 25%	\$0.6M	\$0.6M	\$0.6M
total project	\$2.9M	\$3.1M	\$2.9M

Selective window replacement occurred during the 1994 construction project, but many windows are still both single pane and energy inefficient or are in poor condition. The Town of Lincoln adopted a 2030 Energy By-law which requires public facilities in Lincoln to be more energy efficient. Dore & Whittier explored and presented two alternatives for window replacement: one which addressed only the windows not replaced in 1994 to a standard of the current energy building code and one which replaced all the windows (including all those installed in 1994) to the standard of the 2030 Energy By-Law. Project costs associated with each alternative were estimated to be \$.8M and \$2.5M, respectively. For purposes of the actionable options developed in Task Three, SBAC chose to use the alternative that meets the current energy building for cost estimating purposes.

update on cost estimates | window scope

	opt 1 energy 2030 (15,330 SF)	opt 2 poor cond. only (5,306 SF)
hard costs +	\$2.0M	\$0.6M
soft costs @ 25%	\$0.5M	\$0.2M
total project	\$2.5M	\$0.8M

The existing building provides ventilation and heat via unit ventilators in most classrooms. These types of systems are often noisy, energy inefficient, and do not provide cooling capabilities. The Design Team explored four alternatives for updating these systems. Option one removed the existing unit ventilators and replaced them with an overhead air distribution system that provided both ventilation and cooling capabilities via variable air volume units. Option two removed exiting unit ventilators and replaced them with an overhead air distribution system that provided both ventilation and cooling capabilities via induction units. Option three removed and replaced the existing unit ventilators with new, more energy efficient, unit ventilators with cooling capabilities. Option four retained the existing unit ventilators for ventilation, but split ductless systems added to classrooms to provide cooling capabilities. Preliminary project cost estimates for the alternatives ranged from \$2.3M to \$8.1M. For purposes of the actionable options developed in Task Three, SBAC chose to use an overhead system with induction units for cost estimating purposes.

update on cost estimates | mechanical scope

	opt 1	opt 2	opt 3	opt 4
	(full ac w/ VAV)	(full ac w/ induction)	(new UV w/ CHW)	(add split ductless
	\$6.5M	\$6.4M	\$5.9M	\$1.8M
hard costs +	y o . o . v .	70. IIII	75.7III	\$ 1.0M
soft costs @ 25%	\$1.6M	\$1.6M	\$1.5M	\$0.5M
total project	\$8.1M	\$8.0M	\$7.4M	\$2.3M

Finally, Dore & Whittier presented current market conditions in Massachusetts in dollars per square foot for each of four levels of construction. We presented this information to communicate that commercial construction differs from residential construction and from other geographic areas of the country. The information was intended to prepare attendees, and residents of Lincoln in general, for the presentation of estimates that would occur later in the process.

Light Renovation: \$281/SF total project cost
 Medium Renovation: \$375/SF total project cost
 Heavy Renovation: \$394/SF total project cost
 New Construction: \$425/SF total project cost

The Public Forum concluded with a small group exercise intended to invite input from the attendees. At individual tables and on flip chart paper, attendees responded to these three prompts:

- Q1: What key issues should the process explore?
- Q2: What are your priorities? Briefly explain why.
- Q3: How would you define a successful study/project?

The following summarizes the results of this small group exercise. Complete results are provided in Appendix II of this report. Numbers in parentheses indicate how many tables, out of ten tables, reported a similar response.

Question #1: What key issue details should the process explore?

- (6) Education (1) Class Size
- (6) Site Sensitivity (1) Striking balance between school, fields,
 -) Cost greenery, and community
 -) Facilities (1) Minimize impact to students during construction
 - Center Fields (1) Teacher Retention
 - (1) Long term solution [50 years +/-]
 - (1) Minimal Planning Window [10-15 years+/-]
 - (1) Minimize Specialized Facilities
 - (1) Recreational Facilities
 - (1) Integrate Parents/Grandparents into Educational Strategy

- (6) Cost(5) Facilities(4) Flexibility(4) Center Fields(3) Kitchen Facilities(3) Accessibility(2) Safety
- (2) Warm, Safe and Dry(2) Energy Efficiency
- (1) Break Out Spaces

Question #2: What are your priorities and briefly explain why?

- (5) Facilities & Code compliance
- (4) Education
- (4) Cost
- (3) Safety
- (3) Cafeteria
- (3) Flexibility
- (2) Energy Efficiency
- (2) Site
- (2) Warm, Safe and Dry
- (1) 2nd grade classroom size
- (1) Internet access

- (1) Electric upgrades
- (1) Traffic management
- (1) Knowing long term true cost long term costs, life cycle/payback/operating
- (1) Fire Suppression
- (2) Preservation of Center Field
- (1) Safe Parking
- (1) Technology
- (1) Accessibility
- (1) Long term solution [50 years +/-]

Question #3: How would you define a successful study/project?

- (3) Range of options for town to identify as priorities
- (3) Solution that the Lincoln Community can support
- (2) A clear strategy for moving forward with consensus
- (1) Full inspection of current circumstances
- (1) No more study money
- (1) Bring together the community center project and school buildings
- (1) Minimize the amount of Town decisions to get a final outcome (i.e no overrides)
- (1) Articulate educational vision that motivates elements beyond general comfort and safety
- (1) Need single long term solution

Task Two General Findings & Recommendations

Dore & Whittier's cost estimator, PM&C, prepared conceptual cost estimates based on the facility needs and educational enhancement documents developed in Task One. Scope line items were priced as individual projects. Cost estimates included hard costs and soft costs to determine overall project costs. When organized by the categorizations developed by the SBAC in Task One, the costs were as follows:

Facilities Needs

TOTAL PROJECT COSTS for IMMEDIATE FACILITIES NEEDS =	\$ 8.39 M ³
TOTAL PROJECT COSTS for NEAR TERM FACILITIES NEEDS =	\$19.13 M
TOTAL PROJECT COSTS for DEFERRABLE FACILITIES NEEDS =	\$ 7.70 M
SUB-PROJECT COST for FACILITIES NEEDS =	\$35.22 M

Educational Enhancements

TOTAL PROJECT COSTS for HIGH IMPORTANCE EDUCATIONAL ENHANCEMENTS =	\$	19.8	М
TOTAL PROJECT COSTS for MODERATE IMPORTANCE EDUCATIONAL ENHANCEMENTS =		\$1.8	М
TOTAL PROJECT COSTS for MODEST IMPORTANCE EDUCATIONAL ENHANCEMENTS =		\$ 1.2	Μ
SUB-PROJECT COST for EDUCATIONAL ENHANCEMENTS =	9	\$22.8	М

GRAND PROJECT COST TOTAL = $$58.02 \text{ M}^4$

Dore & Whittier explored the code trigger implications of these cost estimates in subsequent tasks.

Those in attendance at Public Forum #1 indicated a desire for the study to consider the following issues:

- Alignment of Facilities with an Education Vision
- Cost impact to the Town of Lincoln
- Sensitivity to the Site (particularly the Central Fields)
- Safety and Security
- Long Term Improvements to the Facility

-

³ Once identified, the Design Team determined that the Immediate Facilities Needs would trigger several additional code upgrades. These code upgrades were incorporated into the cost estimates for Option 1A. Please refer to the tables in Task Two and the options information in Task Three in the body of the report for additional information.

⁴ A sum of the grand project totals is approximately \$58 M. It is evidence that cost saving may be available by pursuing full options rather that piecemeal projects priced individually as in Task One.

TASK THREE – MODEL SEVERAL PLAN OPTIONS

Overview

Task Three focused on the development of options. Members of the School Building Advisory Committee (SBAC) tasked Dore & Whittier to model several options as floor/site plans and requested that all options be based on the following assumptions and restrictions. The full range of options was to:

- Be restricted to the Ballfield Road Campus site no alternative sites were considered
- Represent a wide range of costs in incremental steps
- Address facility needs w/ priority of needs as a variable
- Provide educational enhancements in incremental steps
- Retain basic existing site planning:
 - L-shaped building
 - Sensitivity to central green
 - o Retention of existing trees to the greatest extent feasible
 - Sensitivity to wetlands, river fronts, vernal pools, etc.
- Explore varying levels of renovations & additions in incremental steps
- Explore all new construction for cost comparison purposes only

Task Three also included confirmation of the educational program and two opportunities to present progress of the study to - and invite comment and feedback from - the general public. Task three concluded with the State of the Town Meeting, the second of these opportunities.

3.1 Confirm The Educational Program and Other Goals

The MSBA Feasibility Study conducted in 2012 resulted in an educational program and corresponding space summary. While the current SBAC, the School Committee, and the current superintendent generally agreed this program was appropriate, it is important to note that this educational program was developed and confirmed prior to the hiring of Dr. McFall as superintendent. Since the publication of that MSBA Feasibility Study, the SBAC, in collaboration with the School Committee and Dr. McFall, identified several educational enhancements for consideration, some of which were not included in the MSBA Feasibility Study educational program. These enhancements included:

- Flexible Educational Spaces Variety of sizes and mutli-purpose spaces
 - New Kitchens and Cafeterias¹
 - o Small Group Rooms
 - Hub Spaces
- Improved Second Grade Classrooms
- Safety and Security at the Reed Gym
- Accommodations for Students with Special Needs

Prior to preparing options, Dore & Whittier conducted a site visit to observe teaching and learning and to better understand educational deficiencies. The Design Team also met with members of the faculty, administration, and school committee to present several facility concepts that support 21st teaching and learning practices.

Flexible Educational Spaces

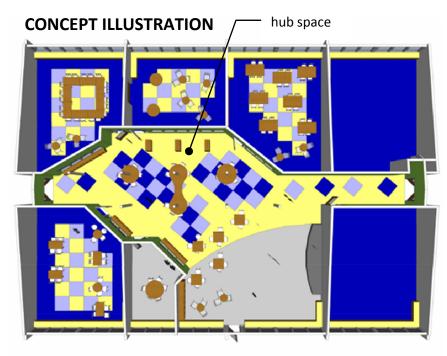
The delivery of education continues to evolve. Unlike architectural and planning strategies of fifty years ago, 21st century educational facilities must be capable of supporting multiple group sizes, students with special needs, and at least some spaces must be adaptable enough to accommodate multiple activities. Flexible educational spaces refers to the presence of instructional spaces, collaboration spaces, and gathering spaces of varying sizes – not just the one-size-fits-all-classroom of fifty years ago.

In the Lincoln School, several critical spaces that would fall into this category are either inappropriate for their use (i.e. windowless storage closets as spaces to serve students with special needs) or they are missing from the facility (i.e. purpose-built kitchens, dedicated but multipurpose cafeterias, small group rooms, and hub spaces). The images that follow illustrate examples of each of these spaces.

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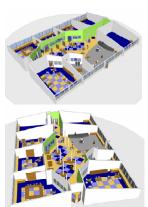
¹ The two existing gymnasiums currently serve as cafeterias. No dedicated cafeteria spaces exist within the existing building. The concept of a multi-purpose cafeteria is one where the space's primary function is for student dining. Effective multi-purpose cafeterias, however, are outfitted in such a way to also serve as large group instruction spaces and geographically located in such a way to allow community use after school hours. Each of the options that contains new cafeterias is based on this concept.





forest avenue elementary school | middle town, RI

K-2 multi-age learning community : fielding/nair international

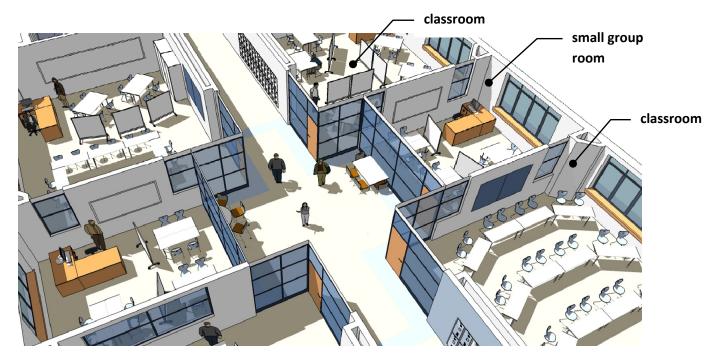






forest avenue elementary school | middle town, RI

K-2 multi-age learning community : fielding/nair international



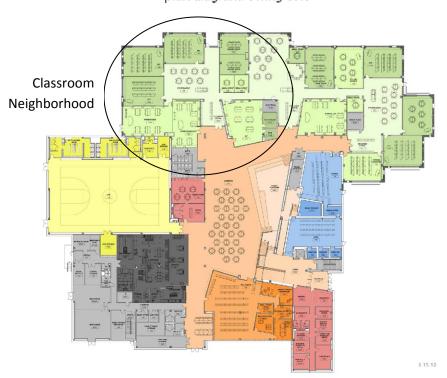
wilmington high school | wilmington, ma

small group break out: dore & whittier architects



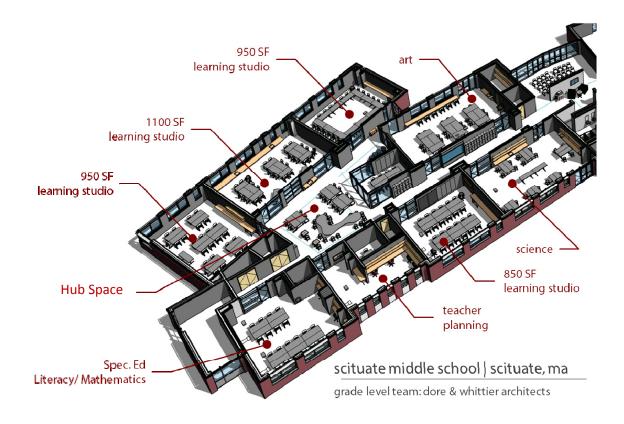
hanscom school | lincoln, ma

plan diagram: ewing cole



hanscom school | lincoln, ma

plan diagram: ewing cole





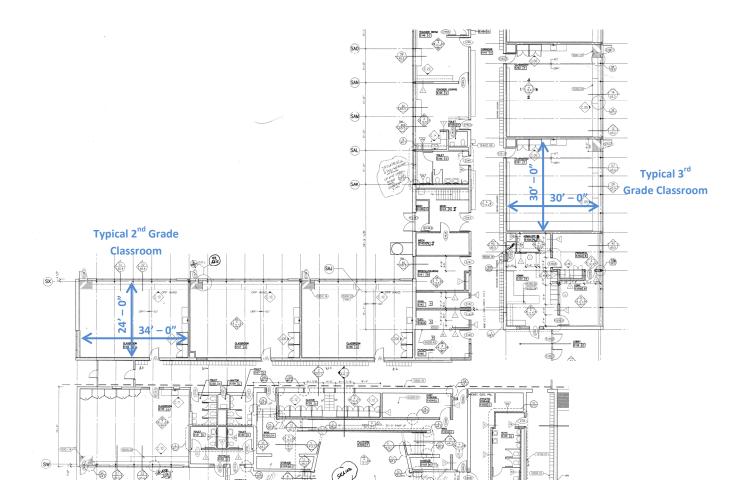
Improved 2nd Grade Classrooms

Previous studies and interviews with faculty and staff indicated a perceived inequity of the existing 2^{nd} Grade classrooms in the Smith building relative to other classrooms in the facility. Dore & Whittier performed a space needs analysis, conducted site visit observations, and took field measurements to confirm these perceived inequities. The 2^{nd} grade classrooms differ from other classrooms in the facility in three ways:

1. They are undersized relative to MSBA guidelines for classrooms. The illustration below depicts a space needs analysis of the existing facility relative to MSBA guidelines. Red indicates spaces that are less than 90% of the state guideline. The 2nd grade classrooms in Smith are the only classrooms that fall into this category.



2. They have an aspect ratio that is longer and narrower than other grade-level classrooms. These proportions make it more challenging to arrange into multiple areas compared to other classrooms.



3. They have not held up against the elements as well as other areas of the facility due to their position on the site and because they were not fully renovated as part of the 1994 project.

Safety & Security at the Reed Gym

In the current configuration, doors to the Reed Gym and the easternmost doors of the Brooks school must remain open during the school day to allow students to pass between the two for both physical education and lunch. With no administrative presence at either of these sets of doors, this presents a safety and security risk. Previous studies, the recent report produced by the SBAC, and Dore & Whittier all agree that a logical solution to this condition is to construct a new cafeteria to connect the Brooks school with the Reed Gym. Such a solution would allow for all exterior doors to remain locked during school hours and would position a multi-purpose space in a location with easy access to parking for community use after school hours.

3.2 Develop Options and Iterate

Dore & Whittier developed a full range of options based on the assumptions and restrictions identified by the SBAC. Dore & Whittier also synthesized the information related to facilities needs from Task One with the educational information from Task Three to form families of options. For consistency, this first iteration of options was based on a 30 year time horizon. Each potential solution, if implemented, was designed to serve the District for approximately 30 years before significant capital investment would be necessary again.² It was an approach that best captured the true long-term costs and best allowed apples to apples evaluation of all the options. Initially, the four families of options consisted of the following:

- Family Number One (Selective Renovation) Addressed facilities needs only. Variations within this family were based on when work was undertaken.
 - o Option 1A responded to facility needs items only upon failure.
 - Option 1B addressed immediate facility needs only, addressed them as an organized package, and responded to the remaining facility needs only upon failure as some point in the future.
 - Option 1C addressed all the facilities needs in an organized project and phased such that all the work could be completed as quickly as possible.
- Family Number Two (Renovations & Additions) Addressed all facility needs plus an á la carte approach to providing educational enhancements. Variations within this family were based on which single educational enhancement was provided.
 - Option 2A addressed all the facility needs and provided new kitchens and cafeterias, but no other educational enhancements.
 - Option 2B addressed all the facility needs and provided small group rooms, but no other educational enhancements.
 - Option 2C addressed all the facility needs and provided improvements to the 2nd
 Grade classrooms, but provided no other educational enhancements.
- Family Number Three (Renovations & Additions) Addressed all facility needs plus provided all educational enhancements. Variations within this family were based on the balance between renovation and new construction.
 - Option 3A addressed all the facility needs and provided all the educational enhancements. This option accomplished this with a major renovation of the existing facility and selective new additions.

² A thirty year time horizon does not assume every building component will serve for thirty years. The thirty year time horizon is only meant to convey a long-term solution as opposed to several short term or delayed solutions. Regular maintenance and selective individual building components may need to be replaced in that time, but major systems (i.e. Mechanical, Electrical, Plumbing, Structural) should not need major replacements over the thirty year time horizon.

- Option 3B addressed all the facility needs and provided all the educational enhancements. This option accomplished this with a major renovation of the existing facility and a major new addition at Brooks.
- Option 3C addressed all the facility needs and provided all the educational enhancements. This option accomplished this with a major renovation of the existing facility and major new additions at both Brooks and Smith.
- Option 3D addressed all the facility needs and provided all the educational enhancements. This option accomplished by a major renovation of only the 1994 construction, the Brooks Auditorium, the Smith Gym, and the Reed Gym. All other portions of the existing building would be demolished and replaced with all new construction – a portion of which would be two stories.
- Family Number Four (All New Construction) Addressed all facility needs plus provided all educational enhancements. (Developed for cost comparative purposes only).

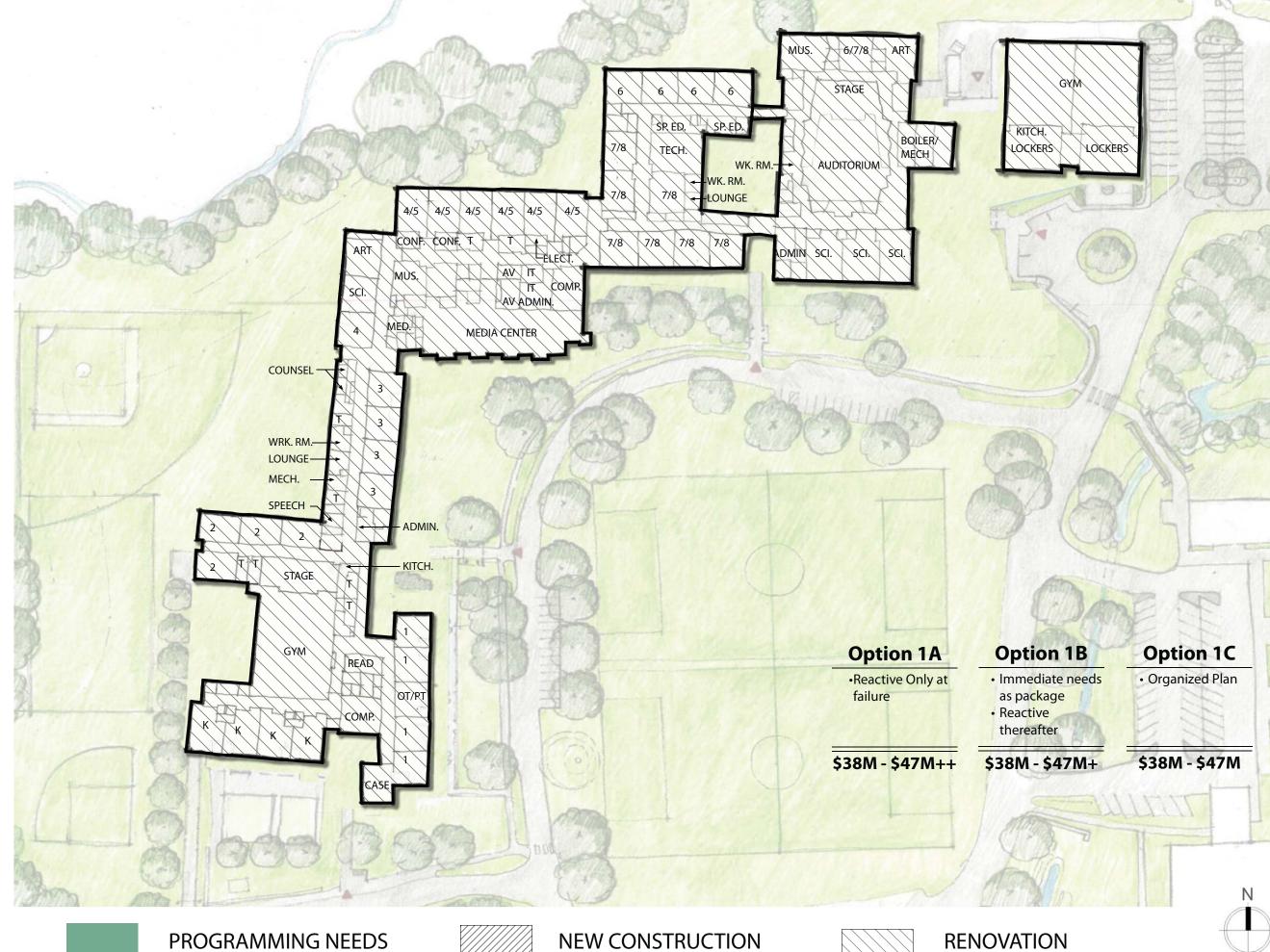
Dore & Whittier developed eleven options based on this family structure and presented these options to the general public at a public forum held on October 16th. Additional information regarding this presentation and community feedback is provided below in the sub-section titled Public Forum #2 and in Appendix III.

The following pages document this initial set of options presented at Public Forum #2.

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ONLY

CAPITAL IMPROVEMENTS



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ONLY

CAFETERIAS

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KITCHENS





NEW CONSTRUCTION

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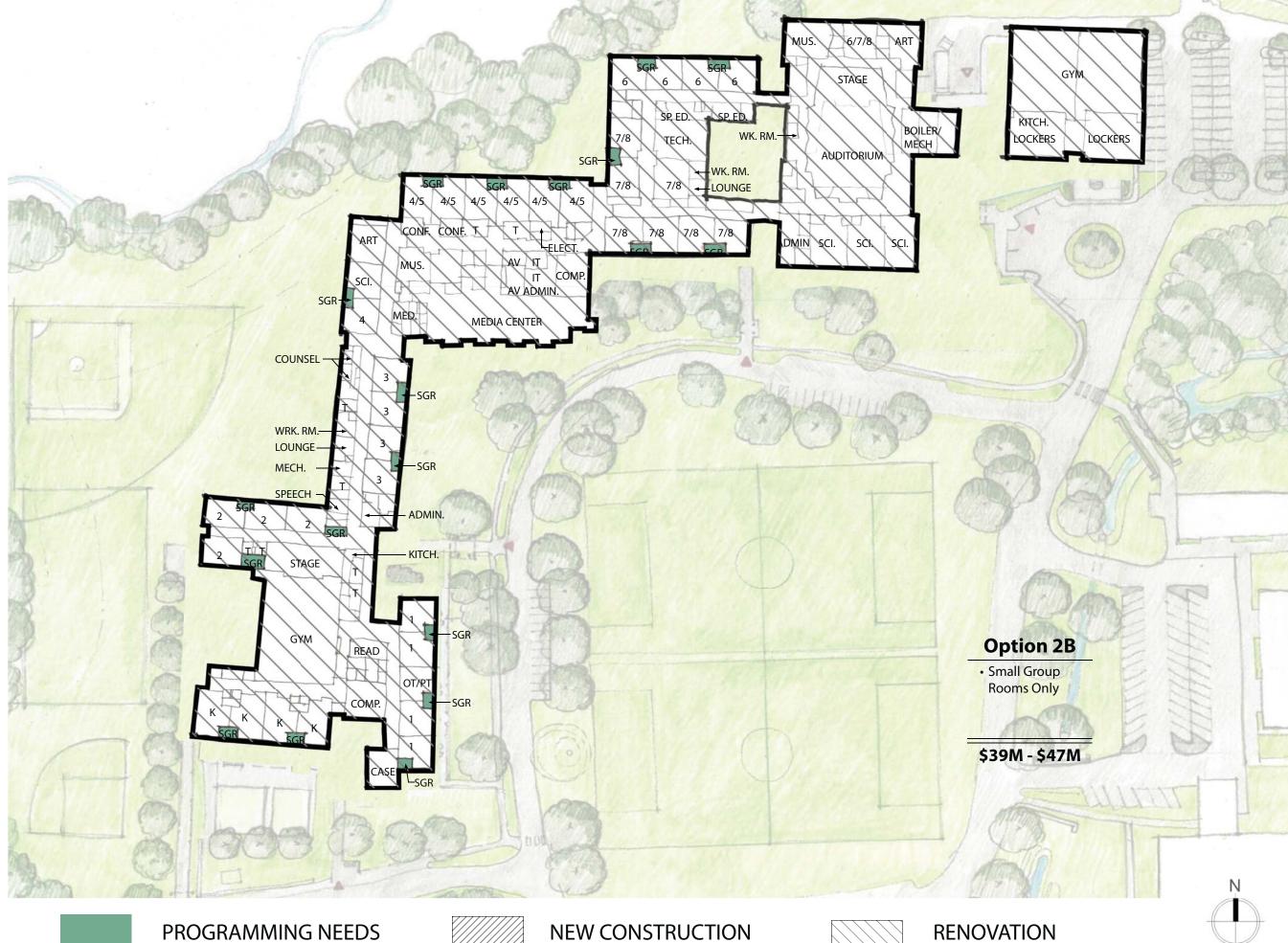


ONLY

ROOMS

GROUP

SMALL



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S

ONLY

UPGRADES

CLASSROOMS

GRADE

SECOND

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BOILER/ MECH WK. RM. LOCKERS AUDITORIUM CONF. CONF. AV ADMIN. COUNSEL -WRK. RM. LOUNGE-MECH. **Option 2C.2** Second Grade Classroom Upgrades Only \$40M - \$48M **PROGRAMMING NEEDS NEW CONSTRUCTION RENOVATION**

4 CLASSROOMS **S**

ONLY

UPGRADES

GRADE

SECOND

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ADDITIONS

SELECTIVE

RENOVATION

MAJOR



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Public Forum #2 – October 16th, 2014

At the Lincoln Public Meeting held on Oct. 16th, Dr. McFall, Superintendent of Lincoln Public Schools, gave a brief presentation of the district's educational vision. Dore & Whittier Architects followed with a presentation outlining a range of conceptual options and costs meant to address facility needs and provide educational enhancements in incremental steps. Illustrations of these options were provided in the sub-section above titled: 3.2 Develop Options and Iterate. Dore & Whittier organized options in four families and ranged from a reactive repairs approach, to heavy renovation, to new construction. Copies of the presentation are provided in Appendix III of this report.

Key Presentation Topics

- Lincoln's Educational Vision
- Initial Conceptual Options
- Facilities Scope Cost Updates

Small Group Exercises

To conclude the meeting, Dore & Whittier invited the approximately one hundred residents of the Town in attendance to react to the presentations and respond the following prompts:

- 1. Which of the programmatic components excited you? Why?
- 2. What additional questions do you have about how the Educational Vision impacts facility design?
- 3. What are your initial thoughts about the range of options presented?
- 4. What about an option(s) excite you? Why?
- 5. What other option(s) or combinations of options should the Design Team explore?
- 6. What questions do you have about the options?

<u>Summary of Public Input</u>

Complete transcriptions of attendees' responses to the prompts are provided in Appendix III of this report. The following bulleted list summarizes these results.

- Attendees consistently expressed a desire to align the educational vision with the building layout.
- Attendees expressed little support for Options 1 and 2.
- Attendees expressed a desire to focus attention on exploring the third family of options as
 it may provide the most value to the town.
- Attendees expressed a desire to continue to explore a full range of options that includes a new construction solution as well as a two story solution on the existing site.
- Attendees expressed interest in seeing the full itemized lists of facility needs and educational enhancements, specifically their associated costs.

- Attendees expressed value in exploring community use of school spaces.
- Attendees expressed value in exploring the Community Center project with the school building project concurrently. It was clear that more information was needed to understand the integration of the Community Center.

Other Outcomes & Next Steps

In addition to the transcribed outcomes, an ad hoc dialogue during the closing summary generated other outcomes worthy of note.

- Anecdotally, attendees expressed an interest in reorganizing the options to better reflect a
 wider selection of cost increments even if this meant not all options represent the same
 time horizon.
- There was a desire expressed for more variations within the á la carte family of options
 that provided educational enhancements. Rather than a simple one-at-a-time approach as
 was presented in the meeting, attendees expressed a desire for combinations of
 educational enhancements without providing the complete list of educational
 enhancements.
- Attendees posed several questions about which options might garner the support of the MSBA. Dore & Whittier responded to these questions by clearly stating:
 - The Town must engage the MSBA to know for certain which options might garner their support. Dore & Whittier cannot speculate.
 - As part of their process, the MSBA requires that viable options address both facility needs and educational needs.

In response to these outcomes, Dore & Whittier collaborated with the SBAC to reorganize the families of options and prepared additional options.

Based on feedback received from Public Forum #2 and with additional input from the SBAC, Dore & Whittier revised the families of options as a second iteration. First, for simplicity, the SBAC reduced the number of families from four to three. The fourth family, for all new construction, was eliminated in favor of including this option in the third family. This simplification clarified that each family was differentiated from the others by how many of the educational enhancements were included. This revised strategy resulted in clearer cost increments between options. The resulting definition of families consisted of the following:

- Family Number One (Facility Needs Only) Addressed facility needs only. Variations within this family were based on the categories of need identified by the SBAC in Task One.
 - Option 1A addressed only the items identified as immediate needs and line items triggered by the building code. It is important to note that this option would require additional capital investment at some point in the future to address the near term and deferrable facility needs that are not reflected in the reported cost. So, the cost reported for this option is for the immediate needs only and does not reflect the true cost of the option over a 30 year time horizon.

- Option 1B addressed only the items identified as immediate and near term needs. It is important to note that this option would require additional capital investment to address the deferrable facility needs at some point in the future that are not reflected in the reported cost. So, the cost reported for this option does not reflect the true cost over a thirty year time horizon.
 - In order to create the most cost-effective options, members of the SBAC did not include the deferrable facilities needs in either Option 1A or Option 1B. As the largest portion of these deferrable needs is site-related, they were included in Option 2F as described below and in all of the Option 3 family of options.
- Family Number Two (Á La Carte Educational Enhancements) Addressed immediate and near term facility needs plus an á la carte approach to providing educational enhancements. Variations within this family were based on which single educational enhancement was provided. Based on feedback from Pubic Forum #2, several options were added to this family – some for individual educational enhancements and others as combinations of the educational enhancements without including all the enhancements.
 - Option 2A addressed the immediate and near term facility needs and provided acoustical treatments to classrooms, but no other educational enhancements.
 - Option 2B addressed the immediate and near term facility needs and provided small group rooms, but no other educational enhancements.
 - Option 2C addressed the immediate and near term facility needs and provided improvements to the 2nd Grade classrooms, but provided no other educational enhancements.
 - Option 2D addressed the immediate and near term facility needs and provided new kitchens and cafeterias, but provided no other educational enhancements.
 - Option 2E addressed the immediate and near term facility needs and provided new kitchens and cafeterias as well as the acoustical treatments for classrooms identified in Option 2A, but provided no other educational enhancements.
 - Option 2F addressed the immediate and near term facility needs and provided new kitchens and cafeterias as well as the acoustical treatments for classrooms identified in Option 2A, improvements to 2nd grade classrooms identified in Option 2C, and the deferrable facility needs, but provided no other educational enhancements.
- Family Number Three (Comprehensive Educational Enhancements) Addressed all the facility needs, including the deferrable facility needs, plus comprehensive provisions for educational enhancements. These options included the following educational enhancements that were not included in any Option 2;
 - o Hub spaces
 - Neighborhood expression
 - o Improved spatial relationships

- o Improvements to Special Education Spaces
- o Improvements to entry sequences
- o Improvements to school offices

Variations within this family were based on the balance between renovation and new construction.

- Option 3A addressed all the facility needs and provided all the educational enhancements. This option accomplished this with a major renovation of the existing facility and selective new additions.
- Option 3B addressed all the facility needs and provided all the educational enhancements. This option accomplished this with a major renovation of the existing facility and a major new addition at both Brooks and Smith.
- Option 3C addressed all the facility needs and provided all the educational enhancements. This option accomplished this with a major renovation of the 1994 construction, the Brooks Auditorium, the Smith Gym, and the Reed Gym. All other portions of the existing building would be demolished and replaced with all new construction – a portion of which would be two stories.
- Option 3D addressed all the facility and provided all the educational enhancements in an all new facility. [Developed for comparative purposes only.]

These revised options were presented to the citizens of Lincoln at the State of the Town meeting held November 15th. Additional information regarding this presentation and community feedback is provided below in the sub-section titled State of the Town and in Appendix IV.

The following pages document the set of options presented at State of the Town. All cost estimates are total project costs and assume no MSBA participation. The Town's share of eligible³ costs may be reduced by approximately 40% assuming MSBA participation.

-

³ MSBA grants are subject to several provisions that deem certain costs ineligible for reimbursement.

Lincoln School: Facility Needs

A formal and detailed presentation of these options will occur on 12/2/14 at 7PM in the Brooks Auditorium.

Option 1A

Option 1A is a *de minimus* project that addresses immediate needs and focuses on systems that are at the end of their useful life and if not addressed in a planned manner could jeopardize the operation of the school until repaired. This option provides no educational enhancements and does not address near term, or deferrable needs.

0-5 years \$12.2 M

Option 1B

Option 1B addresses immediate and nearterm needs as determined by the SBAC. Addressing these needs in a single project would be the most cost effective way of maintaining the school facility. This option provides no educational enhancements and does not address near term, or deferrable needs.

0-10 years \$29.2 M

Educational

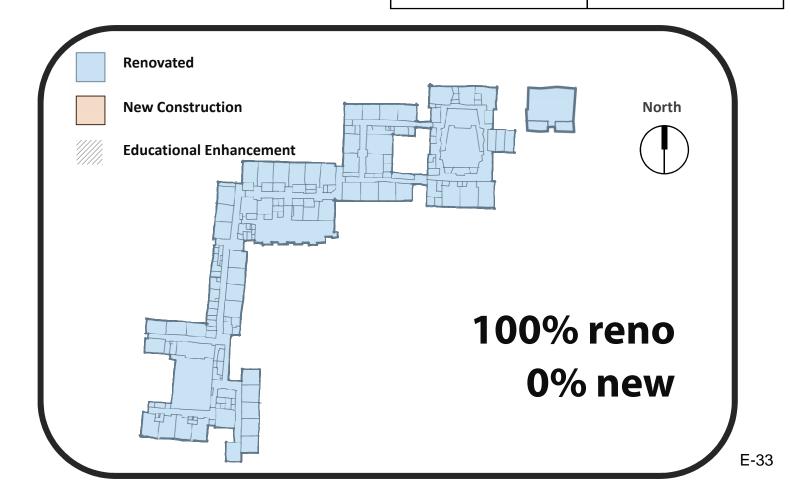
- ☐ Classroom Acoustics
- ☐ Smith Kitchen / Cafeteria
- ☐ Brooks

Kitchen/Cafeteria

- ☐ Small Group Rooms
- ☐ 2nd Grade Classrooms
- ☐ Neighborhoods
- ☐ Hub Spaces
- ☐ Spatial Adjacencies
- ☐ Windowless Offices
- ☐ Acoustical Ceilings Throughout
- ☐ Science Rooms Upgrade
- ☐ Art Rooms Upgrade
- ☐ Improved Entrance Security
- ☐ Improved School Offices

Facilities

- ✓ Sprinklers
- ✓ Fire Alarm
- ✓ Roofing
- ✓ Precast Concrete
- ✓ Boilers & Boiler Room
- ✓ Emergency Generator
- + Code Triggers
- ✓ Building Envelope
- ✓ Elect. Infrastructure
- ✓ Classroom Lighting
- ✓ Plumbing
- ✓ Intrusion Alarm
- ✓ Heating/Ventilating
- ✓ Hazardous Materials
- ☐ Interior Finishes
- ☐ Remaining Lighting
- ☐ Furnishings & Equip.
- ☐ Girls Locker Room
- Paving and Curbing
- 🗖 Play Field Improvement 🕻



Option 2A

Option 2A addresses all facility needs addressed in option 1B and provides acoustical treatments to classrooms as an educational enhancement. It does not provide any other educational enhancements or address deferrable facility needs.

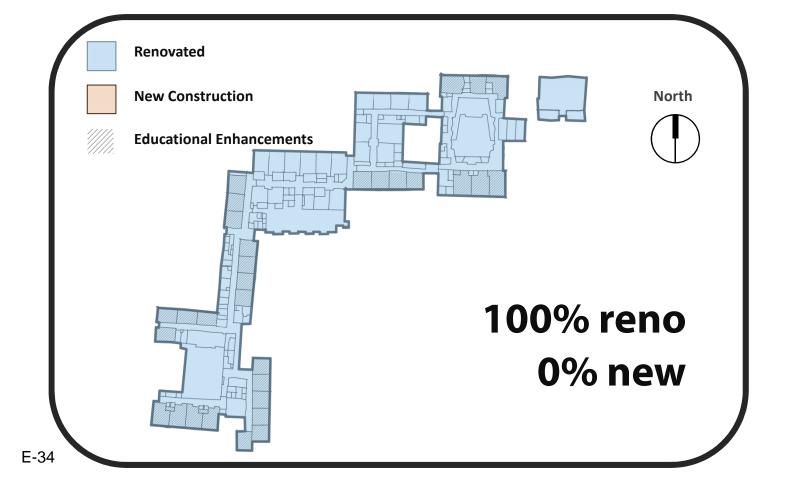
\$29.5 M

Educational

- ✓ Classroom Acoustics
- ☐ Smith Kitchen / Cafeteria
- Brooks
 - Kitchen/Cafeteria
- ☐ Small Group Rooms
- ☐ 2nd Grade Classrooms
- Neighborhoods
- ☐ Hub Spaces
- ☐ Spatial Adjacencies
- Windowless Offices
- ☐ Acoustical Ceilings
 Throughout
- ☐ Science Rooms
 Upgrade
- ☐ Art Rooms Upgrade
- ☐ Improved Entrance Security
- ☐ Improved School Offices

Facilities

- ✓ Sprinklers
- ✓ Fire Alarm
- ✓ Roofing
- ✓ Precast Concrete
- ✓ Boilers & Boiler Room
- ✓ Emergency Generator
- + Code Triggers
- ✓ Building Envelope
- ✓ Elect. Infrastructure
- ✓ Classroom Lighting
- ✓ Plumbing
- ✓ Intrusion Alarm
- ✓ Heating/Ventilating
- ✓ Hazardous Materials
- ☐ Interior Finishes
- ☐ Remaining Lighting
- ☐ Furnishings & Equip.
- ☐ Girls Locker Room
- ☐ Paving and Curbing
- Play Field Improvement



Option 2B

Option 2B addresses all of the facility needs identified in Option 1B and provides small group rooms between pairs of classrooms as an educational enhancement. It does not provide any other educational enhancements or address deferrable facility needs.

\$29.8 M

Educational

- ☐ Classroom Acoustics
- ☐ Smith Kitchen / Cafeteria
- ☐ Brooks
 Kitchen/Cafeteria
- ✓ Small Group Rooms
- ☐ 2nd Grade Classrooms
- ☐ Neighborhoods
- ☐ Hub Spaces
- ☐ Spatial Adjacencies
- Windowless Offices
- ☐ Acoustical Ceilings Throughout
- ☐ Science Rooms Upgrade
- ☐ Art Rooms Upgrade
- ☐ Improved Entrance Security
- ☐ Improved School Offices

Facilities

- ✓ Sprinklers
- ✓ Fire Alarm
- ✓ Roofing
- ✓ Precast Concrete
- ✓ Boilers & Boiler Room
- ✓ Emergency Generator
- + Code Triggers
- ✓ Building Envelope
- ✓ Elect. Infrastructure
- ✓ Classroom Lighting
- ✓ Plumbing
- ✓ Intrusion Alarm
- ✓ Heating/Ventilating
- ✓ Hazardous Materials
- ☐ Interior Finishes
- ☐ Remaining Lighting
- ☐ Furnishings & Equip.
- ☐ Girls Locker Room
- ☐ Paving and Curbing
- ☐ Play Field Improvement

EFERRED

New Construction
Educational Enhancements

100% reno
0% new

E-35

Option 2C

Option 2C addresses all of the needs identified in Option 1B and reconstructs the second grade classrooms as an educational enhancement. It does not provide any other educational enhancements or address deferrable facility needs.

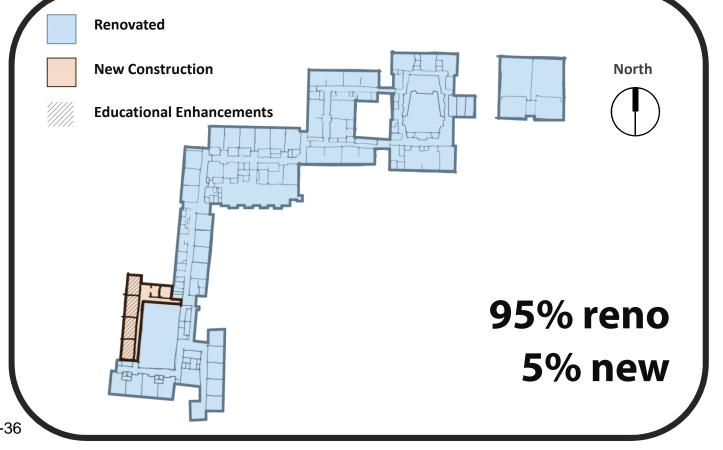
\$32.0 M

Educational

- ☐ Classroom Acoustics
- ☐ Smith Kitchen / Cafeteria
- □ Brooks Kitchen/Cafeteria
- ☐ Small Group Rooms
- ✓ 2nd Grade Classrooms
- Neighborhoods
- ☐ Hub Spaces
- ☐ Spatial Adjacencies
- ☐ Windowless Offices
- ☐ Acoustical Ceilings **Throughout**
- ☐ Science Rooms Upgrade
- ☐ Art Rooms Upgrade
- ☐ Improved Entrance Security
- ☐ Improved School Offices

Facilities

- ✓ Sprinklers
- ✓ Fire Alarm
- ✓ Roofing
- ✓ Precast Concrete
- **Boilers & Boiler Room**
- ✓ Emergency Generator
- + Code Triggers
- ✓ Building Envelope
- ✓ Elect. Infrastructure
- ✓ Classroom Lighting
- ✓ Plumbing
- ✓ Intrusion Alarm
- ✓ Heating/Ventilating
- ✓ Hazardous Materials
- ☐ Interior Finishes
- ☐ Remaining Lighting
- ☐ Furnishings & Equip.
- ☐ Girls Locker Room
- Paving and Curbing
- Play Field Improvement



E-36

Option 2D

Option 2E

Option 2D addresses all the facilities needs identified in Option 1B and provides additions at Brooks and Smith for new cafeterias, a main kitchen, and a warming kitchen as educational enhancements. It does not provide any other educational enhancements or address deferrable facility needs.

\$36.6 M

Option 2E addresses all the facilities needs identified in Option 1B, provides acoustical enhancements to classrooms, and includes additions at Brooks and Smith for new cafeterias, a main kitchen, and a warming kitchen as educational enhancements. It does not provide any other educational enhancements or address deferrable facility needs.

\$36.9 M

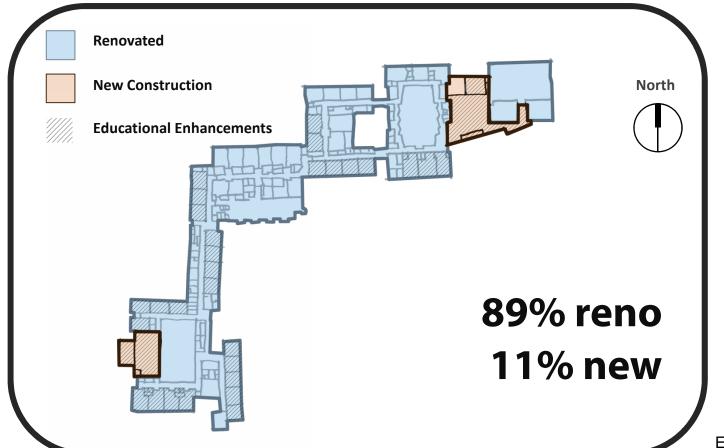
Educational

- ✓ Classroom Acoustics
- ✓ Smith Kitchen /
 Cafeteria
- ✓ Brooks

 Kitchen/Cafeteria
- ☐ Small Group Rooms
- ☐ 2nd Grade Classrooms
- Neighborhoods
- ☐ Hub Spaces
- ☐ Spatial Adjacencies
- Windowless Offices
- ☐ Acoustical Ceilings Throughout
- ☐ Science Rooms Upgrade
- ☐ Art Rooms Upgrade
- ☐ Improved Entrance Security
- ☐ Improved School Offices

Facilities

- ✓ Sprinklers
- ✓ Fire Alarm
- ✓ Roofing
- ✓ Precast Concrete
- ✓ Boilers & Boiler Room
- ✓ Emergency Generator
- + Code Triggers
- ✓ Building Envelope
- ✓ Elect. Infrastructure
- ✓ Classroom Lighting
- ✓ Plumbing
- ✓ Intrusion Alarm
- ✓ Heating/Ventilating
- ✓ Hazardous Materials
- ☐ Interior Finishes
- ☐ Remaining Lighting
- ☐ Furnishings & Equip.
- ☐ Girls Locker Room
- Paving and Curbing
- Play Field Improvement



NEAR-TERM I

DEFERRED

Option 2F

Option 2F addresses all of the facility needs identified in Option 1B and deferrable needs, provides acoustical enhancements to classrooms, provides additions at Brooks and Smith for resized 2nd grade classrooms, new cafeterias, a main kitchen, and a warming kitchen as educational enhancements.

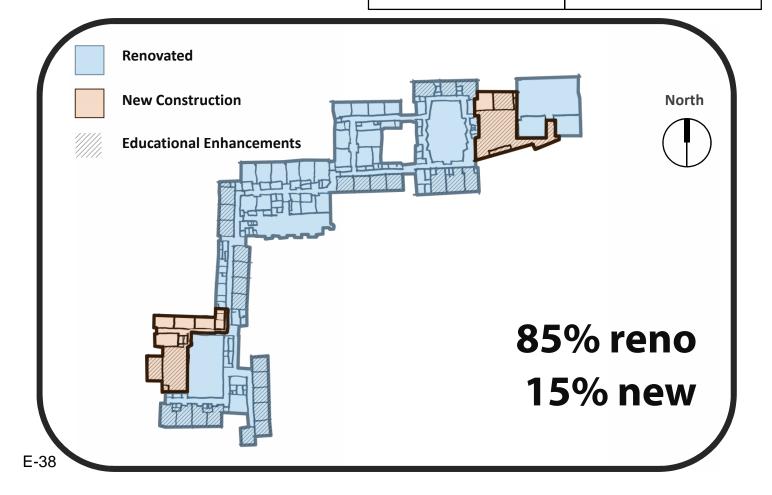
\$47.6 M

Educational

- ✓ Classroom Acoustics
- ✓ Smith Kitchen / Cafeteria
- ✓ Brooks Kitchen/Cafeteria
- ☐ Small Group Rooms
- ✓ 2nd Grade Classrooms
- ☐ Neighborhoods
- ☐ Hub Spaces
- ☐ Spatial Adjacencies
- ☐ Windowless Offices
- ☐ Acoustical Ceilings Throughout
- ☐ Science Rooms Upgrade
- ☐ Art Rooms Upgrade
- ☐ Improved Entrance Security
- ☐ Improved School Offices

Facilities

- ✓ Sprinklers
- ✓ Fire Alarm
- ✓ Roofing
- ✓ Precast Concrete
- ✓ Boilers & Boiler Room
- ✓ Emergency Generator
- + Code Triggers
- ✓ Building Envelope
- ✓ Elect. Infrastructure
- ✓ Classroom Lighting
- ✓ Plumbing
- ✓ Intrusion Alarm
- √ Heating/Ventilating
- ✓ Hazardous Materials
- ✓ Interior Finishes
- ✓ Remaining Lighting
- ✓ Furnishings & Equip.
- ✓ Girls Locker Room
- ✓ Paving and Curbing
- ✓ Play Field Improvement



Lincoln School: Comprehensive

Option 3A

Option 3A addresses all the facility needs and provides all the educational enhancements via comprehensive renovation augmented by new construction. This option reorganizes the Brooks and Smith classrooms to provide flexible learning spaces through the creation of neighborhoods, hub spaces, and small group rooms within the confines of the existing building. Additions at Brooks and Smith add kitchens and cafeterias for both schools.

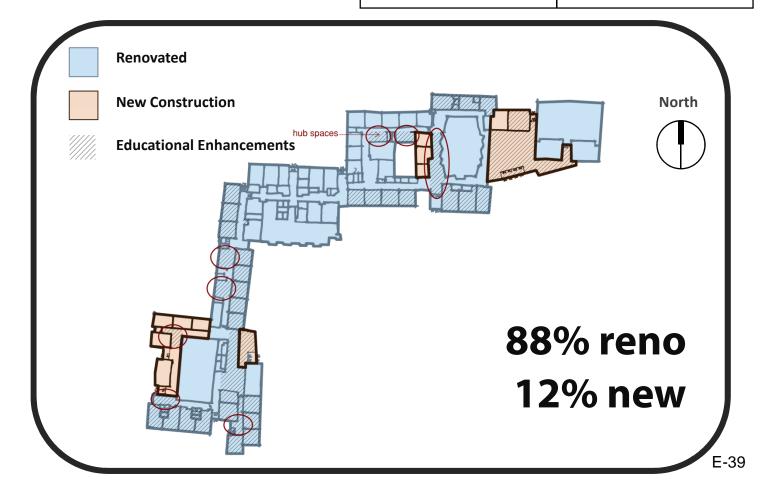
\$54.7 M

Educational

- ✓ Classroom Acoustics
- ✓ Smith Kitchen / Cafeteria
- ✓ Brooks Kitchen/Cafeteria
- ✓ Small Group Rooms
- ✓ 2nd Grade Classrooms
- √ Neighborhoods
- ✓ Hub Spaces
- ✓ Spatial Adjacencies
- ✓ Windowless Offices
- ✓ Acoustical Ceilings Throughout
- ✓ Science Rooms Upgrade
- ✓ Art Rooms Upgrade
- ✓ Improved Entrance Security
- ✓ Improved School Offices

Facilities

- ✓ Sprinklers
- ✓ Fire Alarm
- ✓ Roofing
- ✓ Precast Concrete
- **Boilers & Boiler Room**
- ✓ Emergency Generator
- + Code Triggers
- **Building Envelope**
- ✓ Elect. Infrastructure
- ✓ Classroom Lighting
- ✓ Plumbing
- ✓ Intrusion Alarm
- ✓ Heating/Ventilating
- ✓ Hazardous Materials
- ✓ Interior Finishes
- ✓ Remaining Lighting
- ✓ Furnishings & Equip.
- Girls Locker Room
- ✓ Paving and Curbing
- ✓ Play Field Improvement



Lincoln School: Comprehensive

Option 3B

Option 3B addresses all of the facility needs and provides all the educational enhancements. This options retains and renovates most of the existing building, but demolishes a portion of the 1948 area of the Smith school and constructs a new addition that houses a warming kitchen, cafeteria (multipurpose space) to serve the Smith School, improved school offices, hubs, and small group rooms. A newly constructed addition connects the Brooks Auditorium to the Reed gym that houses a full-prep kitchen and cafeteria (mutli-purpose space), and four classrooms.

\$55.8 M

Educational

- √ Acoustics in Classroom
- ✓ Smith Kitchen / Cafeteria
- ✓ Brooks Kitchen/Cafeteria
- ✓ Small Group Rooms
- ✓ 2nd Grade Classrooms
- ✓ Neighborhoods
- ✓ Hub Spaces
- ✓ Spatial Adjacencies
- ✓ Windowless Offices
- ✓ Acoustical Ceilings Throughout
- ✓ Science Rooms Upgrade
- ✓ Art Rooms Upgrade
- ✓ Improved Entrance Security
- ✓ Improved School Offices

Facilities

- ✓ Sprinklers
- ✓ Fire Alarm
- ✓ Roofing
- ✓ Precast Concrete
- ✓ Boilers & Boiler Room
- ✓ Emergency Generator
- + Code Triggers
- ✓ Building Envelope
- ✓ Elect. Infrastructure
- ✓ Classroom Lighting

NEAR-TERM

EFERRED

- ✓ Plumbing
- ✓ Intrusion Alarm
- ✓ Heating/Ventilating
- ✓ Hazardous Materials
- ✓ Interior Finishes
- ✓ Remaining Lighting
- ✓ Furnishings & Equip.
- ✓ Girls Locker Room
- ✓ Paving and Curbing
- ✓ Play Field Improvement •

Renovated Square Footage

New Construction Square Footage

Educational Enhancements

77% reno
33% new

Lincoln School: Comprehensive

Option 3C

Option 3C addresses all the facility and educational needs via new construction and comprehensive renovation. This option retains and renovates the 1994 construction, the Smith gym, the Brooks auditorium, and the Reed gym. This option rebuilds the Brooks classrooms with optimal spatial adjacencies for hub spaces and small group rooms in an all new, one story addition. A new two story addition houses 2nd, 3rd, and 4th grade classrooms organized into neighborhoods with hub spaces and small group rooms. This addition connects a renovated Link building to the renovated Smith gym.

\$58.8 M

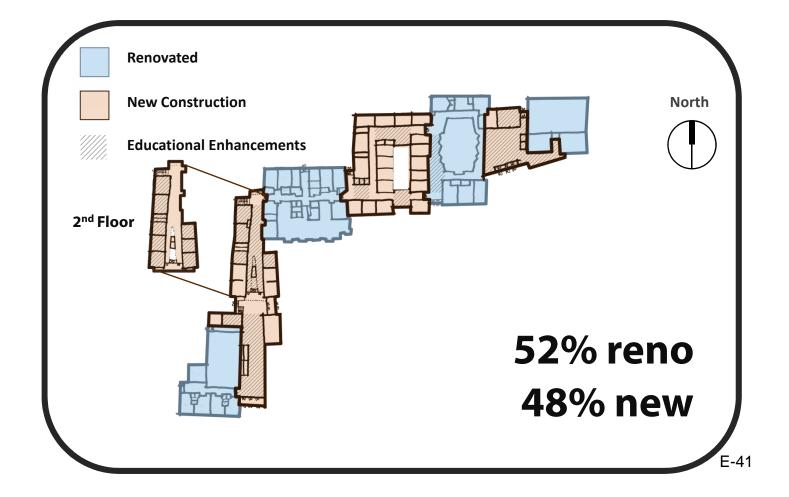
Educational

- ✓ Classroom Acoustics
- ✓ Smith Kitchen / Cafeteria
- ✓ Brooks Kitchen/Cafeteria
- ✓ Small Group Rooms
- ✓ 2nd Grade Classrooms
- ✓ Neighborhoods
- ✓ Hub Spaces
- ✓ Spatial Adjacencies
- ✓ Windowless Offices
- ✓ Acoustical Ceilings Throughout
- ✓ Science Rooms Upgrade
- ✓ Art Rooms Upgrade
- ✓ Improved Entrance Security
- ✓ Improved School Offices

Facilities

- ✓ Sprinklers
- ✓ Fire Alarm
- ✓ Roofing
- ✓ Precast Concrete
- ✓ Boilers & Boiler Room
- ✓ Emergency Generator
- + Code Triggers
- ✓ Building Envelope
- ✓ Elect. Infrastructure
- ✓ Classroom Lighting
- ✓ Plumbing
- ✓ Intrusion Alarm
- ✓ Heating/Ventilating
- ✓ Hazardous Materials
- ✓ Interior Finishes
- ✓ Remaining Lighting
- ✓ Furnishings & Equip.
- ✓ Girls Locker Room
- ✓ Paving and Curbing
- ✓ Play Field Improvement •

EFERRED NEAR-TERM



TASK THREE	Lincoln Public Schools – Lincoln School K-8 Study			
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3.3 Develop Cost Estimates for Options

Dore & Whittier and its cost estimator prepared cost estimates for each of the options developed. A methodology for these estimates was developed based on the available existing building documentation, the level of detail of each option illustration, the conceptual nature of the study, and current cost trends in Massachusetts public sector construction. The methodology relied on the development of definitions for three levels of renovation:

- Light Renovation Repair, replacement and/or new installation of some major systems (i.e. roofing, heating and ventilation, electrical, plumbing, and sprinkler systems) and replacement of finishes (i.e. paint, flooring, ceiling tiles, etc.). No interior reconfiguration of spaces. No structural alterations included. Only triggered building code upgrades as required.
- Medium Renovation Light renovation plus, complete replacement of all major systems
 with new. Selective interior reconfiguration of spaces included. Significant improvements
 to building exterior envelope included. No structural alterations included. Only triggered
 building code upgrades as required.
- Heavy Renovation Complete replacement of all existing systems except the structure.
 Complete replacement of the exterior building envelope. Significant interior reconfiguration included.

massachusetts construction trends*

	light renovation	medium renovation	heavy renovation	new construction
base	\$180	\$235	\$250	\$270
+ general conditions	\$45	\$65	\$65	\$70
+ soft cost @25%	\$56	\$75	\$79	\$85
total project costs	\$281	\$375	\$394	\$425

*costs per square foot

As in Task One, each estimate represents a total project cost calculated using the following typical methodology:

Hard Costs (Materials, Labor, Contractor Overhead and Profit, Contingencies)

A: Direct Construction Cost = Cost Quantity x Unit Cost

B: General Conditions Cost = $A \times 17\%$

General conditions consist of a construction contingency, permitting fees, bonds, insurance, and contractor overhead and profit.

C: Design Contingency = A x 10%

Given the conceptual nature of this study, the design contingency represents the level of uncertainty of specific design choices (i.e. product/system selection, design layout)

D: Owner's Contingency = A x 10%

An owner's contingency is typical in most construction projects and represents the owner's choice and ability to change their mind about design and construction decisions.

E: Total Construction Cost = A + B + C + D

<u>Soft Costs (Designer Fees, Consultant Fees, Testing Services, Commissioning)</u>

F: Soft Costs = E x 25%

G: Escalation = $(E + F) \times .04^H$

H: Total Time Required for Phasing in Years

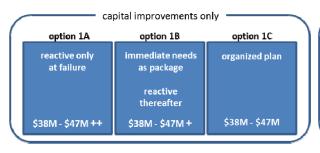
Total Project Cost

J: Total Project Cost = E + F + G

Each estimate assumed no work could begin prior to November 2015. Therefore, each estimate included at least one year of escalation at 4%, but also accounted for additional escalation based on phasing and swing space necessary to complete the project. For any work begun beyond November of 2015, additional escalation must be added at a rate of 3%-5% per year.

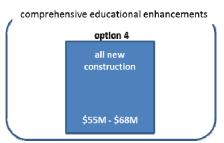
For each conceptual option developed, areas of the design were labeled as light renovation, medium, renovation, heavy renovation, or new construction based on the information and estimates prepared for Task One. The following two graphics depict summaries of the estimates for the Public Forum #2 held on October 16th and the State of the Town meeting held on November 15th.

preliminary options summary | october 16th, 2014



1	capital improvements + a la carte educational enhancements			
	option 2A	option 2B	option 2C	
	kitchens & cafeterias only	small group rooms only	2 nd grade classroom upgrades only	
	\$41M - \$51M	\$39M - \$47M	\$40M - \$48M	

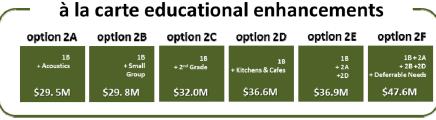
option 3A	option 3B	option 3C	option 3D
major renovation/ selective additions	major renovation/ major additions at Brooks	minor renovation/ major additions at Brooks & Smith	renovate 1994 & gyms only/ major additions at Brooks & Smith (2-story)
\$48M - \$58M	\$50M - \$62M	\$50M - \$62M	\$52M - \$64M



- + As a portion of the work over the thirty year time horizon is reactive in nature and, therefore, unpredictable, all that can be known is that it will be more expensive than Option 1C.
- ++ As all of the work over the thirty year time horizon is reactive in nature and, therefore, unpredictable, all that can be known is that it will be more expensive than both Option 1B and Option 1C.

final options summary | november 15th, 2014







State of the Town - November 15th, 2014

The Town of Lincoln held its annual State of the Town meeting on Saturday, November 15th, a meeting designed to give residents of Lincoln the opportunity to discuss Town-wide issues in an open and democratic forum. The 2015 agenda included two agenda items: a presentation on the progress of a study related to a community center and a presentation on the progress of The Lincoln School study. Dr. McFall, Superintendent of Lincoln Public Schools, and Dore & Whittier presented on behalf of the SBAC and the School Committee. Dr. McFall gave a brief presentation of the District's educational vision similar to that presented at the October 16th Public Forum. Dore & Whittier Architects followed with a presentation and a series of printed handouts outlining both the process to date and an updated range of conceptual options with cost estimates meant to address facility needs and provide educational enhancements in incremental steps. Additional information is provided in Appendix IV of this report. Illustrations handed out were provided in the sub-section above titled: 3.2 Develop Options and Iterate but are also provided in Appendix IV. Time devoted to the Lincoln School project also included approximately fifty minutes for public question and comment and concluded with a set of individual exercises designed to gather feedback about the options.

In Exercise #1, Dore & Whittier and the SBAC invited those in attendance to identify the project family that they would most likely support if Lincoln were to fully fund the project independently, without the participation of the MSBA. Of the 188 people who responded in this exercise at the State of the Town, 77% expressed support for the Option 3 family. Approximately twenty percent showed support for the À la Carte Option 2 family, while 3% supported the facility-only Option 1 family.

EXERCISE #1 – Participants placed a dot on the option they would support assuming Lincoln chose to fully fund a project without the participation of the MSBA. Total Participants = 188

- Facility Needs Only Options 1A & 1B \$12.2M - \$29.2M – Fully Funded by Lincoln
- 38 <u>A La Cart Educational Enhancements</u> Options 2A, 2B, 2C, 2D, 2E, and 2F \$29.5M \$47.6M Fully Funded by Lincoln
- **144** Comprehensive Educational Enhancements Options 3A, 3B, 3C, and 3D \$54.7M \$66.3M Fully Funded by Lincoln

In Exercise #2, Dore & Whittier invited those in attendance to hand-write responses to the prompts, "I like...", "I wish...", "I wonder...". This open ended exercise was designed to gather initial reactions to the material presented, to be used as a tool to understand the community's appetite for a school project, and to help this study move forward.

EXERCISE #2 – Participants commented on the three families of options by responding to three prompts, "I like...", I wish...", and "I wonder...". This open ended exercise documented a wide range of individuals' thoughts.

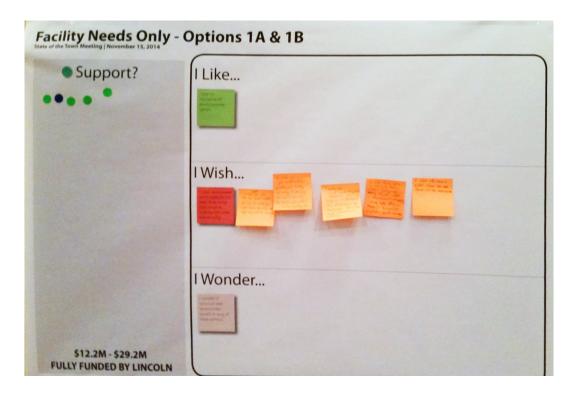
It would be disingenuous to suggest that participants' responses neatly gelled into a community-wide consensus. This summary only strives to capture some of the overarching themes of these comments.

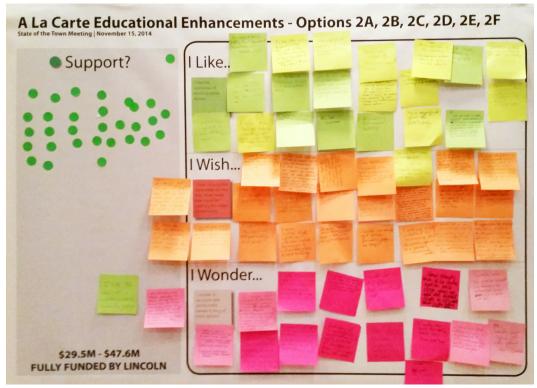
- The third family of options received the highest volume of hand-written responses followed by the second family of options. The first family options received the fewest number of hand-written responses.
- In general, the responses suggested a community-wide desire to pursue school and community center projects concurrently, if not as a single investment.⁴
- **Education**. Responses suggested that maximizing the educational impact of any facility investment is perceived as a key desired outcome.
- **Energy efficiency**. Responses suggested that energy efficiency is also a key desired outcome of any facility investment.
- **Cost**. Responses suggested that, while there may be support for a significant school project, the cost impact to individual households must be clearly understood and communicated to the broad community.
- While the exercise, specifically asked participants to respond assuming no MSBA participation, responses suggested a general agreement to pursue MSBA participation.⁵

⁴ A single investment implies a single Town warrant article. While such a strategy is not prohibited under the MSBA process, combining school functions and community center functions as a single project, and funded through the same Town warrant article, would significantly complicate MSBA's process. Pursuing a school project and a community center project concurrently, but with two separate warrant articles, where the community center project is completely outside the MSBA process, would greatly simplify the MSBA process, but would require the Town to take two votes.

⁵ At the time of the State of the Town meeting, Dore & Whittier had not yet prepared estimated design and construction timelines for WITH and WITHOUT MSBA participation. Those in attendance were not yet aware that the MSBA process would likely delay completion of a project by approximately 18 months.

The images below depict the results of the two exercises. What is important about these images is where the concentration of interest appears to exist.







Task Three General Findings and Recommendations

Task Three focused on the development of options. Dore & Whittier and the SBAC organized the final iteration of options into three families of options:

Family #1 – Facility Needs Only

- Option 1A Immediate Needs and Code Triggered Items Only, \$12.2M
- Option 1B Option 1A + Near Term Facility Needs, \$29.2M

Family #2 – À La Carte Educational Enhancements

- Option 2A Option 1B + Acoustical Treatments for Classrooms, \$29.5M
- Option 2B Option 1B + Small Group Rooms, \$29.8M
- Option 2C Option 1B + Improvements to 2nd Grade Classrooms, \$32.0M
- Option 2D Option 1B + New Additions Housing Kitchens and Cafeterias, \$36.6M
- Option 2E Option 1B + Option 2A + Option 2D, \$36.9M
- Option 2F Option 1B + Option 2A + Option 2C + Option 2D, \$47.6M

Family #3 – Comprehensive Educational Enhancements

- Option 3A 88% Renovation/12% New Construction, \$54.7M
- Option 3B 77% Renovation/23% New Construction, \$55.8M
- Option 3C 52% Renovation/48% New Construction, \$58.8M

Option 3D – 0% Renovation/100% New Construction, \$66.3M

Outcomes from this task suggest the following:

- The smallest actionable project has an associated project cost of approximately \$12.2M, all
 of which would likely be borne entirely by the Town of Lincoln. Although this cost
 represents a lower up front financial commitment, it does not represent the full cost to
 modernize the facility to the same level as options in the second and third families.
- There appears to be several viable addition/renovation options (at a variety of price points, albeit with varying numbers of educational enhancements) that align with the considerations identified by the SBAC and communicated at the top of this section of the report.
- Educational enhancements to the facility that support the District's educational vision are a key desired goal of any school construction project.
- There appears to be support (at least by those in attendance) for a significant school project even without MSBA participation.

In response to these general findings, Dore & Whittier recommends the following:

- Truth test support for a significant school project once details of each of the options have been fully presented by engaging participants in additional small group exercises at Public Forum #3.
- Design future large group exercises to differentiate support for various options based on whether or not MSBA participation is pursued.

TASK FOUR – EVALUATE THE MODELS

Overview

Task Four focused on evaluating the options, specifically identifying the pros and cons and developing an understanding of which options appeared to be the most appealing to the community. Members of the SBAC chose not to evaluate the options in committee meetings, but rather relied on members of the Lincoln community in attendance at the December 2nd Public Forum #3 to perform the evaluations. The process did not result in an official short list of options, but resulted in an apparent preference for four options for at least those in attendance.

4.1 Evaluation By The Public

Public Forum #3 – December 2, 2014

At Public Forum #3, Dore & Whittier presented the revised options in detail and clarified the advantages, disadvantages, and timing implications of choosing to pursue MSBA participation. In a series of small group exercises, Dore & Whittier invited the attendees to comment on the building solutions as well as their personal values related to key variables that arose in the comments following the presentation at State of the Town. Those in attendance were also invited to evaluate options by identifying pros and cons of each and by indicating support for projects both with and without MSBA participation.

<u>Implications of pursuing MSBA participation</u>

- Approximately 40% Reimbursement of eligible costs
- Requirement to Address Facility & Educational Needs
- Uncertainty of Participation
- Timing Delay of approximately 18 months @ 3% 5% annual escalation
- MSBA Process Full Feasibility Study Required
- Separation of School & Community Center Projects MSBA permits elements serving non-school uses to be constructed as part of their process under the same warrant article, but doing so adds complexity of management. It might be in the Town's best interest not to combine funding for a community center to the school project in the same warrant article. Should the Town choose to undertake a community center project concurrently as a free-standing, wholly separate building, and funded under a separate warrant article from the school project, the MSBA would have no objections. Such a decision would not adversely impact a school project from the MSBA perspective.

Dore & Whittier prepared and presented the timing comparison for Option 3a to determine an estimated timing delay associated with pursuing MSBA participation. Option 3A was used for these comparison purposes, but using this option to demonstrate the timing in not meant to suggest any preference by the Design Team or by the MSBA for this option. The estimated time to a fully completed building is likely to be delayed by approximately 18 months under the MSBA process. Much of this delay is associated with the time required for the MSBA to invite¹ the Lincoln School Committee to collaborate on a Feasibility Study.

<u>Timing Comparison – Opt 3A</u>

Wit	h MSBA Gra	n t	Fully	Funded by	Town
Date	Milestones	Mths	Date	Milestones	Mths
4/15	Submission of SOI	7	6/15	OPM Selection	2
11/15	Invitation from MSBA*	5	8/15	Designer Selection	1
4/16	OPM Selection	3	9/15	Schematic Design	6
7/16	Designer Selection	2	3/16	Design Development	4
9/16	Feasibility Study	4	7/16	Construction Documer	nts 6
1/17	Schematic Design	6	3/17	Construction	25
7/17	Design Development	4	4/19	Occupancy	
11/17	Construction Documents	6			
5/18	Construction	25			
6/20	Occupancy				
Initial E	stimate \$5	4.7M	Initia	l Estimate	\$54 .7 M
+ Addit	tional Escalation\$	3.3M	+ Add	ditional Escalation	\$0.0M
- Poten	tial MSBA Grant \$2	4.3M	- Pote	ential MSBA Grant	- \$0.0M

¹ The MSBA period for receiving Statements of Interests is expected to close in April 2015. The earliest invitation to collaborate on an MSBA Feasibility Study would be November 2015. The timing comparison assumes this best case scenario, but additional delays based on MSBA's current project load are possible an solely at the discretion of the MSBA.

Exercise #1 - Key Variables

In exercise #1, those in attendance were invited to identify which key variables represented the highest priorities. The key variables of a successful project presented included:

- Minimize Cost to Town
- Maximize Educational Enhancements
- Meet 2030 Energy By-Law
- Maximize Preservation of Existing Building
- Minimize Time to Occupancy
- Maximize Community Use
- Return on Money Spent (Participant added variable)

Participants identified their individual first and second priority choices in the first table top exercise. Dore & Whittier used a simple weighting methodology to score each of the variables. Each first priority received two points. Each second priority received one point. Totals for each were then summed. The final results follow.

- 1. Maximize educational enhancements (120 points)
- 2. Minimize cost to town/ return on money spent² (27/19 = 56 points)
- 3. Meet 2030 Energy By-Law (18 points)
- 4. Maximize Community Use (16 points)
- 5. Maximize Preservation of Existing Building (10 points)
- 6. Minimize Time to Occupancy (5 points)

It is important to note, that the variables that scored lowest during this exercise was not an expression of unimportance. They should also be considered in the design of any real project. These outcomes merely communicate that the lower-scoring variables are less important than those that scored the highest to those in attendance.

Exercise #2 – Evaluation of the Options

Dore & Whittier prepared floor plans of each option and summaries of which facilities needs and educational enhancements were included in each. Documentation for each option also included the revised conceptual cost estimate and an estimated Town share assuming MSBA participation. Facilitators invited each table to evaluate the option on their table by identifying pros and cons. Each table evaluated a different option. After a pre-determined number of minutes, tables were

² Return on money spent was a variable added by one group of table participants and has been included in the tally for minimize the cost to the town due to its similarity and focus on cost.

asked to rotate to another option at an adjacent table. Upon arriving at their new option, table members were asked to review the work of the previous group and either add to the list of pros and cons or to refute those already present. This process was repeated five times. Not all table groups evaluated every option, but all options were evaluated at least five times. What follows below is a summary of sentiments expressed during the evaluation by those in attendance. A full transcription of these results is available in Appendix V.

Option 1A & Option 1B - Facility Needs Only

Individuals who would support with MSBA participation: Not Applicable Individuals who would support without MSBA participation: 1

Attendees did not express much interest or support for these options. Although their comments suggested that lower initial costs might be perceived as an advantage, more emphasis was placed on the cons which included not addressing all the facilities needs and not providing any educational enhancements. In addition to these, most attendees recognized that, while up-front costs were low, additional costs would be necessary to complete the work and that those delayed costs would be highly unpredictable.

Option 2A - Facility Needs and Acoustical Treatment in Classrooms

Individuals who would support with MSBA participation: Not Applicable Individuals who would support without MSBA participation: **0**

Evaluations of this option mimicked those for Options 1A & 1B. Although the costs were low and, although both the immediate and near term needs were addressed, simply addressing the acoustical challenges in classrooms appeared to most to be of little value for the cost.

Option 2B - Facility Needs and Small Group Rooms

Individuals who would support with MSBA participation: Not Applicable Individuals who would support without MSBA participation: 2

Evaluations of this option also mimicked those for Options 1A & 1B. Simply addressing the small group rooms neglected the acoustical treatments in classrooms. Attendees also pointed out that although small group rooms would benefit many students – particularly those receiving additional services – locating them between existing classrooms would result in an exacerbation of the challenges in the existing 2nd grade classrooms.

Option 2C - Facility Needs and Reconstruction of Second Grade Classrooms

Individuals who would support with MSBA participation: Not Applicable Individuals who would support without MSBA participation: **2**

Attendees recognized that this option addressed the needs of the most educationally limiting rooms. They also identified, however, that this intervention benefits only a small percentage of the school population. Attendees expressed a sentiment that suggests this option was helpful in understanding the cost impact of this work relative to other options, but that in practical terms, it demonstrated little value.

Option 2D & 2E - Facility Needs and Kitchens and Cafeterias and Acoustics

Individuals who would support with MSBA participation: Not Applicable Individuals who would support without MSBA participation: **17**

Although these options were presented together, most attendees responded only to Option 2E. Option 2E tied with option 2F for the second highest point total for support without MSBA participation. Attendees recognized that the connection between the Brooks Auditorium and the Reed Gym would increase security within the school and that acoustical treatments in classrooms would improve the performance of existing classrooms. While this option garnered some support without MSBA participation, at least some attendees expressed a concern that this project may create regret in the not-too-distant future that Town did not embark on a larger, more comprehensive project.

<u>Option 2F</u> - Facility Needs, Deferrable Facility Needs, Kitchens, Cafeterias, Acoustics, and Resized Second Grade Classrooms

Individuals who would support with MSBA participation: **7**Individuals who would support without MSBA participation: **17**

Option 2F tied with option 2E for the second highest point total for support without MSBA participation. It was also the first option to garner any support with MSBA participation. Those in attendance identified a mixed set of pros and cons. While demolition of only a small portion of the building was received as advantageous, attendees felt this intervention was not transformative enough educationally. While attendees expressed the inclusion of several educational enhancements as a pro, they also expressed that they may not be enough educational value for the cost.

<u>Option 2G</u> - Facility Needs, Kitchens, Cafeterias, Acoustics, and Resized Second Grade Classrooms, but no Deferrable Facility Needs

Those in attendance speculated about a new option, an Option 2G that would be identical to Option 2F but exclude the deferrable facility needs. This speculation was directly related to the value disposition expressed about Option 2F. The premise of Option 2G was to bring the costs down by eliminating the site elements contained within the deferrable facility needs. By reducing the cost, the collective sentiment was that this increased its value. Dore & Whittier followed up with the necessary consultants and confirmed that this concept is viable.

Option 3A - Comprehensive Renovation with Selective New Construction

Individuals who would support with MSBA participation: **4**Individuals who would support without MSBA participation: **4**

In their evaluations, those in attendance identified providing the full educational enhancements as a pro. In addition, attendees cited the cost as a con should the Town choose to pursue such an option without MSBA participation. Based on the identified preferences, attendees preferred Options 2E, 2F, and 3B over Option 3A.

Option 3B - Comprehensive Renovation with New Construction at Brooks and Smith

Individuals who would support with MSBA participation: **10**Individuals who would support without MSBA participation: **19**

The evaluation from those in attendance mimicked the evaluation of Option 3A, but garnered far more support regardless of MSBA participation. Based on the feedback, something about the perceived aesthetic quality of this option was more appealing than Option 3A. However, at least some in attendance felt portions of this option appeared to be less flexible and somewhat disorganized.

Option 3C - Comprehensive Renovation and Major New Construction

Individuals who would support with MSBA participation: **44**Individuals who would support without MSBA participation: **11**

This option garnered the most support assuming MSBA participation. It was the third highest scorer without MSBA participation. A willingness to explore a portion of the building that was two stories was perceived as a positive – both from an energy efficiency perspective and from a sense of conforming to the existing siting strategy. Related to the proposed second story, at least some of the attendees speculated about a similar option

that existed on one story. Finally, based on the identified preferences and the pros and cons, it appeared this option crosses a threshold for the Town's share of the cost that may be beyond what members of the community are willing to spend.

Option 3D – All New Construction

Individuals who would support with MSBA participation: **7**Individuals who would support without MSBA participation: **2**

Although developed only for basis of comparison, Dore & Whittier invited those in attendance to also evaluate Option 3D. Although this option garnered little support regardless of MSBA participation from those in attendance, at least some participants expressed a preference for this option. An ability to be most energy efficient and a chance to start fresh were identified as pros. An inability and unlikelihood to get full community support for this option were cited as cons.

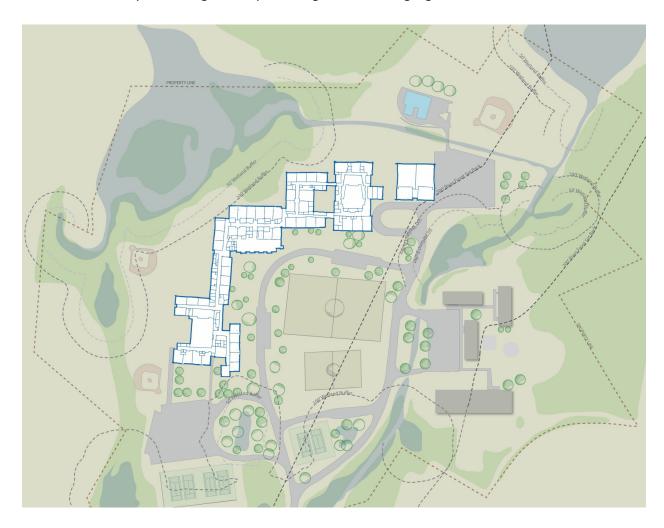
The outcomes of Public Forum #3 corroborate results of previous public forums in the following ways:

- Appears to be support (by at least those in attendance) for a significant project that not only addresses all the immediate and near term facility needs, but also provides most if not all of the educational enhancements.
- Any further development of options should respect the central green, retain existing trees, restrict interventions to the existing building's footprint, and reflect Lincoln's aesthetic values all to the greatest extent possible.
- Based on the estimated Town shares, there appears to be support for a school project where the Town contribution is approximately \$29M \$40M.

4.2a –Key Issues: Permitting

Wetlands

Several questions arose during the study about potential permitting issues for the study's options. The attached site survey has the significant permitting boundaries highlighted in blue.



There is a 100' wetland buffer which is jurisdictional, in that it triggers review by the Conservation Commission. There is also a 50-foot "no disturb" local buffer. There are many ways to offset work within the 100-foot buffer. If an area within 50-feet is already disturbed, the local Conservation Commission would not necessarily require restoration, but the scope of construction would need to be reviewed.

The Conservation Commission considers the stream behind the school a river, which has a 200-foot Riverfront Area. The 100' is the Inner Riparian, which is looked at slightly differently than the 100'-200' area, but still a resource area. There is also a 1% Annual Chance Floodplain, and a Floodway associated with the stream. Development in the floodplain, therefore, would need to be minimal

and the construction of a service drive to the north of the school would need the approval of the Conservation Commission.

Septic

It has been suggested to Dore & Whittier that the existing Lincoln School is operating under a Title 5 variance and that the existing field is somehow non-conforming and possibly undersized. Nitsch Engineering, civil engineer for this study and the MSBA Feasibility Study conducted in 2012, has confirmed that the school septic system is currently operating under a variance. The variance was granted to allow the school to use a design flow of 200% its average water meter readings (as per 310 CMR 15.416(3)) instead of 15 gallons per person per day (as per 310 CMR 15.203(5)). The approved variance design flow is 7,790 gallons per day (GPD).

Renovations, such as considered during this study, should be able to use the septic system as currently installed. It is designed for 19,172 GPD, is approved for 7,790 and, is receiving 4,236 GPD. The variance is approved for a projected school population of 850 persons. Any changes on the site will need to be reviewed by the Board of Health and DEP. In addition to the leaching field under the Center Field, there is a smaller field that serves the Hartwell complex and a field which serves the pool which is north of the School.

The Town is simultaneously considering expanding the Hartwell complex to include a Community Center (Council on Aging and Recreation Department). Questions have been raised about the implications of such development from a septic system perspective. Specifically whether there are any overall loading restrictions for the site as a whole, even with two separate septic systems. The southernmost building in the Hartwell complex is connected to the main septic field. The other buildings are connected to a separate septic system. The water usage calculations included the Hartwell buildings. If the site as a whole exceeds 10,000 gallons per day (GPD), a Groundwater Discharge Permit is required. The site can handle the flows; however it will require extra permitting for changes to loading of either system.

By way of explanation, Nitsch Engineering provided the following summary history of the Ground Water Discharge Permitting for the Lincoln School site:

In January 2000 the Massachusetts Department of Environmental Protection (DEP) notified Lincoln Public Schools that it would need to develop and Administrative Consent Order (ACO) to define steps needed to bring the schools into compliance with DEP regulations. GZA subsequently prepared a Hydrogeological Study, Groundwater Discharge Permit Application, and Nitrogen Loading Analysis for the facility. In response to a request from DEP for further calculations, GZA demonstrated to the DEP that the design flow for the Schools is 7,856 gallons per day (GPD), which is 200% of the average meter reading of 3,928 GPD. Since the average daily flow rate was less than 10,000 GPD, DEP deemed the Groundwater Discharge Permit application withdrawn, and instructed the schools to file a BRPWP60 Variance for Schools permit application. GZA

submitted the variance request in April 2007. The variance was approved in May 2007 based on a design flow of 7,790 GPD (200% of the average daily water meter readings from October 2001 to April 2006, which was lower than the 2002 water meter readings).

This information suggests that significant improvements to the school and the placement of a community center program on the site would not require increasing the capacity of the existing septic system. It also suggests that the proposed Option 2G, developed during Public Forum #3, is a valid option as site improvements may not be required.

4.2b -Key Issues: Town 2030 Bylaw

At most of the public meetings the question of energy efficiency arose specifically related to compliance with the Town's 2030 Bylaw adopted in 2008. As of July 1, 2014, Commercial Buildings in Massachusetts must comply with the 2012 International Energy Conservation Code (IECC) for Climate Zone 5 (Eastern MA). These are the prescriptive values for the IECC 2012:

- Windows fixed <= .38 U-Factor
- Windows operable <= .43 U-Factor
- Walls (metal framed above grade) >= R 13 + 7.5ci
- Roofs >= R-25.0

For a large structure like the Lincoln School, which falls under the commercial version of the MA Building Code (8th edition), Dore & Whittier recommends that an energy model be created during the Schematic Design phase of any proposed project. Since this study is not yet at that level of detail, assumptions were made relative to the prescriptive requirements of the IECC 2012 based on consultation with our MEP Engineers, Garcia, Galuska, DeSousa.

Town Bylaw

Motion under ARTICLE 40 Selectmen 2008

Moved: That the Town establish a Town Facilities Energy Performance Standard, as follows:

Clause I: Any town-owned buildings to be constructed or town-owned buildings undergoing major renovations shall be designed, to the extent practicable, as set forth below in Section II, so that the fossil fuel-generated energy consumption of the buildings is reduced, as compared with such energy consumption by a similar building with no fossil fuel-generated energy consumption reduction measures in fiscal year 2003 (as measured by Commercial Buildings Energy Consumption Survey or Residential Energy Consumption Survey data from the Energy Information Agency), by the percentage specified in the following table:

Year	% reduction
2008	50
2010	55
2015	65
2020	80
2025	90
2030	100

Clause II. Any Town entity acting as the project proponent for construction of a new building or renovating an existing building subject to the performance standard set forth herein, or the Town entity responsible for coordinating the design and construction or renovation of such a building, if such entity is different, may petition the Selectmen to adjust downward the applicable percentage reduction requirement by certifying in writing that meeting such requirement would be technically impracticable in light of the entity's specified functional needs for that building. Upon receipt of such a petition, the Selectmen may, in its sole discretion, adjust downward the applicable percentage reduction requirement. If the Selectmen is the project proponent, as described above, prior to taking any action to adjust downward the applicable percentage requirement, the Selectmen shall hold a public hearing for which at least one week's notice is published in a newspaper of general circulation in the Town.

Clause III. This standard shall take effect 180 days following enactment.

The Town 2030 Bylaw sets an aggressive, but achievable, goal for new public construction. For new work at the Lincoln School starting in 2016 at the earliest, the target would be 65% less energy consumption than a baseline building from the 2003 CBEC survey. In one sense this would be easier than outperforming the 2012 energy code in that it is based on existing buildings. However, the other part of this baseline is that it is based on total energy consumption and does not factor in that most existing schools have not upgraded to modern mechanical systems that provide some cooling capabilities (even those that do not include full air conditioning). The mere addition of this capability (should the Town and the School Committee chose to do so) increases the energy consumption substantially, no matter what HVAC system is chosen.

The question going forward will be – how far does the project pursue energy efficiency given increasing slope of the cost-benefit curve? Energy efficiency was evaluated as one of seven key variables in the final Public Forum and while there was support for this as a priority, it was substantially less than what emerged as the two main priorities: supporting the educational vision and cost efficiency. To provide the Town of Lincoln and the School Committee with data to help inform such decisions, Dore & Whittier's consultants developed the following information.

Sustainable Power Generation

Garcia, Galuska, DeSousa (GGD) estimates that sustainable power production consisting of a 1,300 KW Photovoltaic System would be required to sustain the net zero energy for the school. The 1,300 KW photovoltaic array will require an area of approximately of 130,000 S.F. based on 10 Watt/S.F. This is significantly larger than the readily available unshaded, flat roof area. D&W estimates that there are only about 40,000 sf of flat roof that are unshaded by other parts of the building or trees.

The estimated cost of the installed Photovoltaic System will be in the range of \$5.00/Watt if roof mounted and the estimated weight of the ballasted rooftop Photovoltaic System is 10 lbs./S.F.

Should the roof structure permit, the Lincoln School could install photovoltaic panels on the 40,000 SF of unshaded flat roof for an estimated \$2,000,000 to reduce the energy consumption of the building by 30%. This would not meet the 2030 by-law as a standalone solution.

Ground-sourced Heat Pumps

During the MSBA Feasibility Study conducted in 2012, GGD previously calculated the scale of a ground-sourced heat pump system as needing a capacity of approximately 220 tons and would require (7) 1,500' standing column open wells requiring an area of approximately 42,000 sf. The system would have (2) 50 ton and (2) 60 ton water sourced heat pumps providing chilled and hot water to mixed VAV and induction system within the building. Such a heat pump system is estimated to cost approximately \$1,000,000 (above HVAC System Option 2). A closed loop system would require many more wells (over 40) at approximately 350' and thus be even more expensive. The playfield could be an acceptable location.

Building Envelope Thermal Insulation

Windows

In the early part of this study, the cost premium for upgrading the existing windows to level needed to meet the 2030 Bylaw goal of 65% energy reduction was calculated assuming that triple paned PVC windows would be necessary. Typical aluminum framed commercial windows, even with the best low-E insulated glass have a U-factor in the .41-.44 range, which is right around the IECC 2012 prescriptive U-Factor of .43. Aluminum is a highly conductive metal which is the limiting factor in its performance as a window frame. PVC is a newer technology, but well established and allows for a total window system U-factor of around .25 (or R-5 in insulation terms).

Windows are always the least thermally insulating part of a building's envelope, so their complete replacement would be necessary to make significant energy savings. This study priced the replacement of 15,330 sf of existing wood framed and aluminum windows with triple-glazed PVC windows at a project cost of \$2.5 million. This figure was presented at the 1st Public Forum.

Walls

Most of the existing walls have no insulation as they date to the 1950's and 1960's. Newer portions (which date to 1994) have limited insulation by today's standards and perform well below what would be needed to achieve the 2030 Town Bylaw. Since there was a significant public sentiment for preserving as much of the exterior of the existing L-shaped scheme, this study looked as installing spray foam polyurethane insulation from the inside. This approach would create an air barrier without requiring the removal of the existing brick walls. Other interior renovations such as HVAC and electrical upgrades would require the removal of the interior gypsum wall board anyway. For the facility needs identified in Task One, it was assumed that 3" of closed cell polyurethane foam would be installed which has R-Value of 18 (plus the insulating value of the brick, air cavity, and gypsum wallboard). The IECC 2012 prescriptive requirement for metal framed walls above grade >= R 13 + 7.5ci.

In order to super-insulate the walls, a reasonable starting assumption would be to fur out the interior side of the existing studs to create enough depth for 5" of polyurethane foam. This would provide a R-value of 30 (plus the other wall components), which is more than many new roofs (R-25). The additional cost of 2 more inches of insulating foam and the metal furring could be weighed against the energy savings once an energy model is created. It should be noted that in Dore & Whittier's previous experience, there is a significant fall-off in the benefit of additional wall insulation for schools, as their energy consumption is driven largely by the large number of occupants. This is in direct contrast to residential homes, which being largely empty have their energy efficiency tied closely to the insulating value of the building envelope.

Roofs

For the facility needs cost estimating in this study, the renovation of the roofs included 5" of insulation, an air barrier, and enough structural reinforcement to meet current building codes. The IECC prescriptive guidelines call for R-25 in Climate Zone 5 (Massachusetts), which is actually less. Often superinsulated buildings in the northeast target R-30 for walls and R-60 for roofs. Again as with the wall insulation an energy model would need to be created to truly determine if R-60 was a good cost-benefit solution.

Task Four General Findings and Recommendations

Dore & Whittier facilitated Public Forum #3 held on Tuesday, December 2nd, 2014. Those in attendance evaluated each of the revised options by identifying pros and cons. Members of the SBAC chose not to evaluate the options in committee meetings, but, rather, rely on the input and feedback of those in attendance for insight on Town preferences. The collective results of all the Public Forums and of the State of the Town Meeting suggest:

- Task Four corroborated sentiments expressed in earlier public forums and the Lincoln State
 of the Town Meeting. There may be support for a significant school project that addresses
 at least the immediate and near term facility needs as well as provides significant
 educational enhancements concurrently.
- Based on the conceptual cost estimates presented and the estimated Town shares, it
 appears that those who were in attendance are willing to support such a project where the
 Town's share is approximately \$29M \$40M.
- Energy efficiency was expressed as a significant priority of the Town as expressed in the
 adoption of the Bylaw and at public meetings. Based on feedback from the Public Forums,
 there was a strong desire to develop an option that was as energy efficient as economically
 feasible. An energy model will allow a cost-benefit analysis of specific energy conservation
 measures.
- Dore & Whittier recommends that an energy model be developed in the Schematic Design phase once a single selected project has been selected. Such a model will allow the Town of Lincoln and the Lincoln School Committee to evaluate several energy efficiency strategies for their cost effectiveness.

TASK FIVE – PREPARE REPORT & MAKE RECOMMENDATIONS

Overview

In Task Five, Dore & Whittier assembled materials for a Draft Report. The other key outcome of Task Five was a final presentation to the Lincoln at Public Forum #4 held January 13, 2015. Although the study process did not conclude with any official recommendations or short lists of preferred options, results from Public Forum #3 suggested that four projects may have the most support for further exploration as part of an MSBA feasibility study or augmented schematic design process without MSBA participation.

• Option 2E – Without MSBA Participation:

Addressed the immediate and near term facility needs and provided new kitchens and cafeterias as well as the acoustical treatments for classrooms identified in Option 2A, but provided no other educational enhancements.

PROJECT COST = \$36.9M, TOWN SHARE = \$36.9M*

• Option 2G – Without MSBA Participation:

Addressed the immediate and near term facility needs and provided new kitchens and cafeterias as well as the acoustical treatments for classrooms identified in Option 2A, improvements to 2nd grade classrooms identified in Option 2C, but no deferrable facility needs and no other educational enhancements.

PROJECT COST = \$39.9M, TOWN SHARE = \$23.9**

• Option 2F – Without MSBA Participation:

Addressed the immediate and near term facility needs and provided new kitchens and cafeterias as well as the acoustical treatments for classrooms identified in Option 2A, improvements to 2nd grade classrooms identified in Option 2C, and the deferrable facility needs, but provided no other educational enhancements.

PROJECT COST = \$47.6M, TOWN SHARE = \$29.3M**

• Option 3B – Regardless of MSBA Participation:

Addressed all the facility needs and provided all the educational enhancements. This option accomplished this with a major renovation of the existing facility and a major new addition at both Brooks and Smith.

PROJECT COST = \$55.8M, TOWN SHARE = \$34.4M**

^{*} Based on assumption of no MSBA participation

^{**} Based on assumption of MSBA participation

Option 3C – With MSBA Participation:

Addressed all the facility needs and provided all the educational enhancements. This option accomplished this with a major renovation of the 1994 construction, the Brooks Auditorium, the Smith Gym, and the Reed Gym. All other portions of the existing building would be demolished and replaced with all new construction – a portion of which could be two stories.

PROJECT COST = \$58.8M, TOWN SHARE = \$36.2M**

- * Based on assumption of no MSBA participation
- ** Based on assumption of MSBA participation

Public Forum #4 – January 13th, 2015

Dore & Whittier presented the Executive Summary of the DRAFT report in bullets, charts, and figures to those in attendance. An approximately 30-minute period of open questions, answers, and comments followed the presentation. Copies of presentation materials are provided in Appendix VI of this report.

In addition to Dore & Whittier's presentation, Ms. Jennifer Glass, Chairperson of the Lincoln School Committee gave a presentation and facilitated a table-top activity related to the Spring Town Meeting warrant articles. Ms. Glass, on behalf of the SBAC and the School Committee, invited those in attendance to provide commentary and feedback on three potential warrant article strategies. The outcomes of this exercise were outside the formal scope of this study, and have, therefore, not been included.

Final Findings, Recommendations, and Next Steps

At its outset, this study endeavored to accomplished several key tasks. At its core, however, this study endeavored to explore responses to the following questions:

- Is the existing facility in need of significant investment just to keep it operational? How much is such an investment?
- Are there viable design options that respect the central green, respect the existing trees, conform to the area of the site occupied by the existing building, and align well with the principles of 21st educational practices?
- Are any of those options affordable with MSBA participation?
- Are any of those options affordable without MSBA participation?
- Is there any community support for such projects?

The findings of this study suggest that:

- Yes. The existing facility needs a significant financial investment to allow it to continue its service into the long-term future. Over a thirty-year time horizon, that financial investment can be expected to be approximately \$35M for all of the immediate, near term, and deferrable facility needs depending on how those projects are executed and sequenced.
- Yes. There appears to be viable design solutions that rely on a combination of additions and renovations to achieve all the desired goals. Existing site constraints will require careful collaboration with the Conservation Commission, other boards and commissions, and the Town entities working on the proposed community center project.
- Based on feedback from those in attendance at the five public engagement opportunities, there appears to be support for multiple options regardless of MSBA support, as long as the Town share of those projects is approximately \$29M-\$40M.

Next Steps

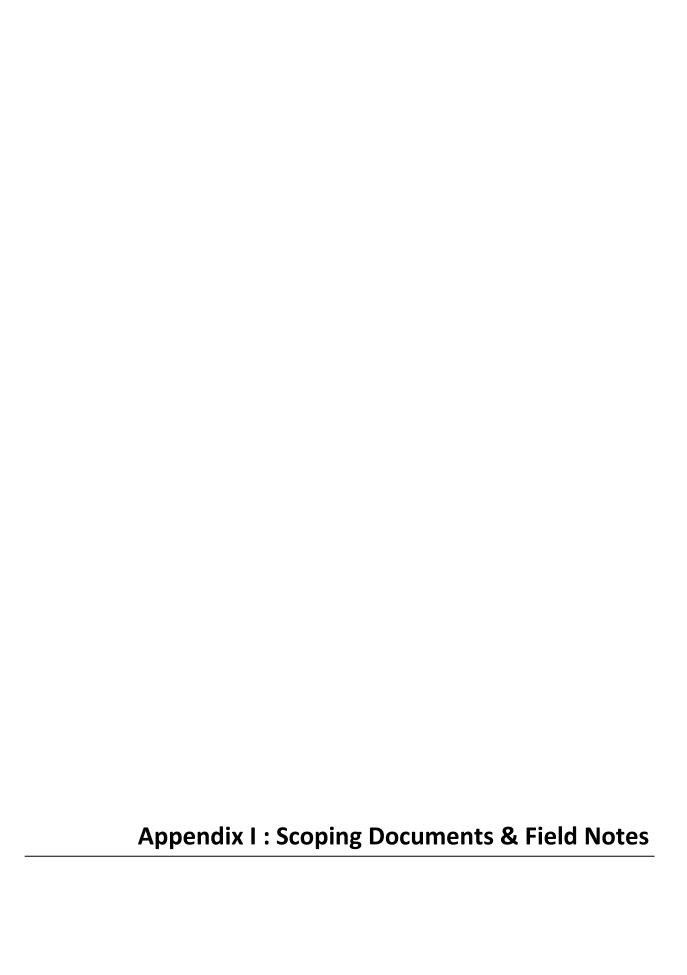
At this stage, the town of Lincoln has three potential pathways forward. First, the Town of Lincoln and Lincoln Public Schools can continue the current practice of addressing facility needs through annual capital expenditures. Should the Town and Lincoln Public Schools pursue this action, the individual scope items identified in Task One would likely be accomplished one-at-a-time over the course of many years.

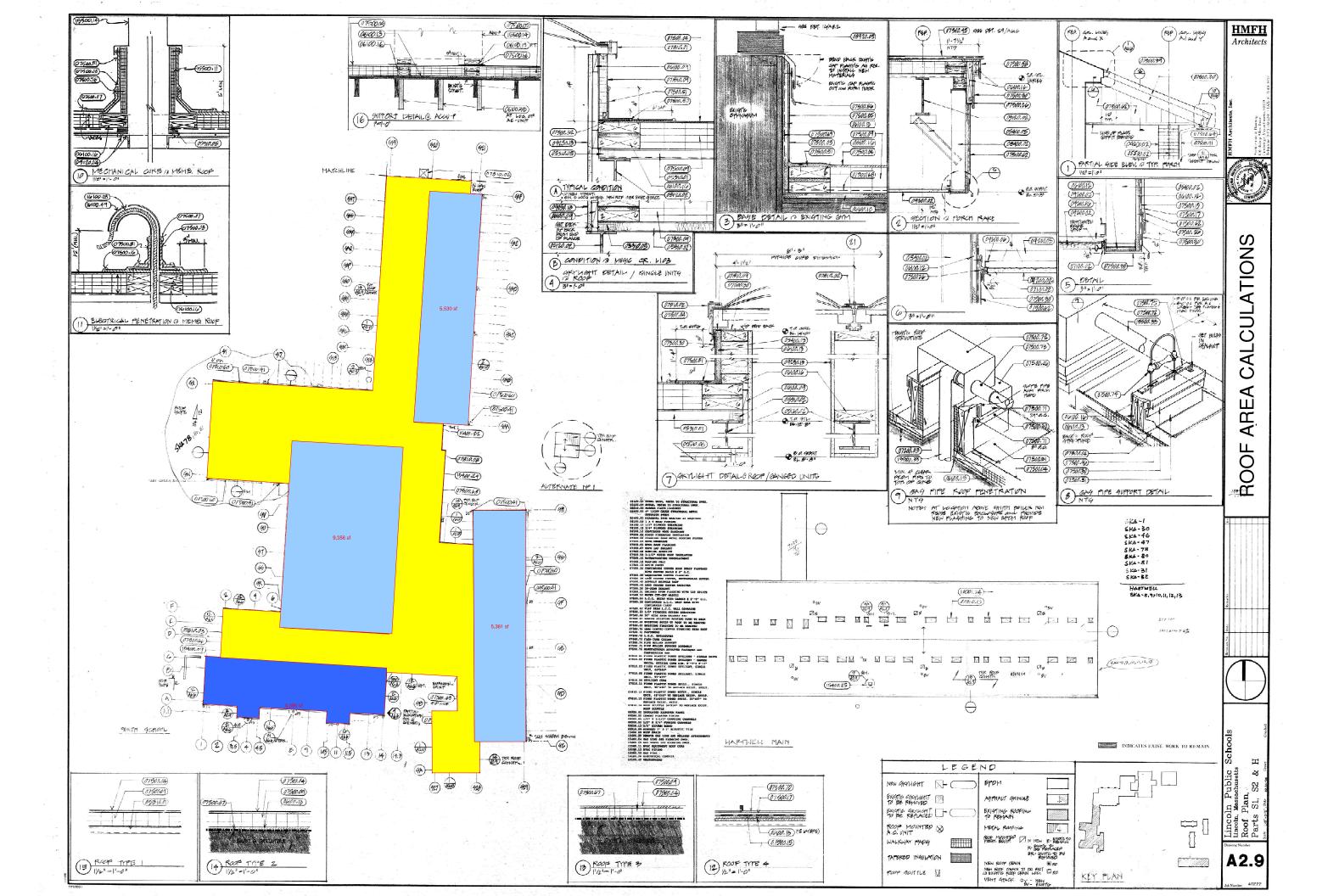
Second, the Lincoln School Committee can prepare a revised Statement of Interest and seek MSBA participation. If invited to conduct a second Feasibility Study under the MSBA process¹, this pathway would require the appropriation of funds to secure the professional services of an Owner's Project Manager and a Designer, which would not be reimbursable by the MSBA. Should the Town of Lincoln pursue this pathway, a selected preferred option would likely resemble Option 2F or any of the third family of Options.

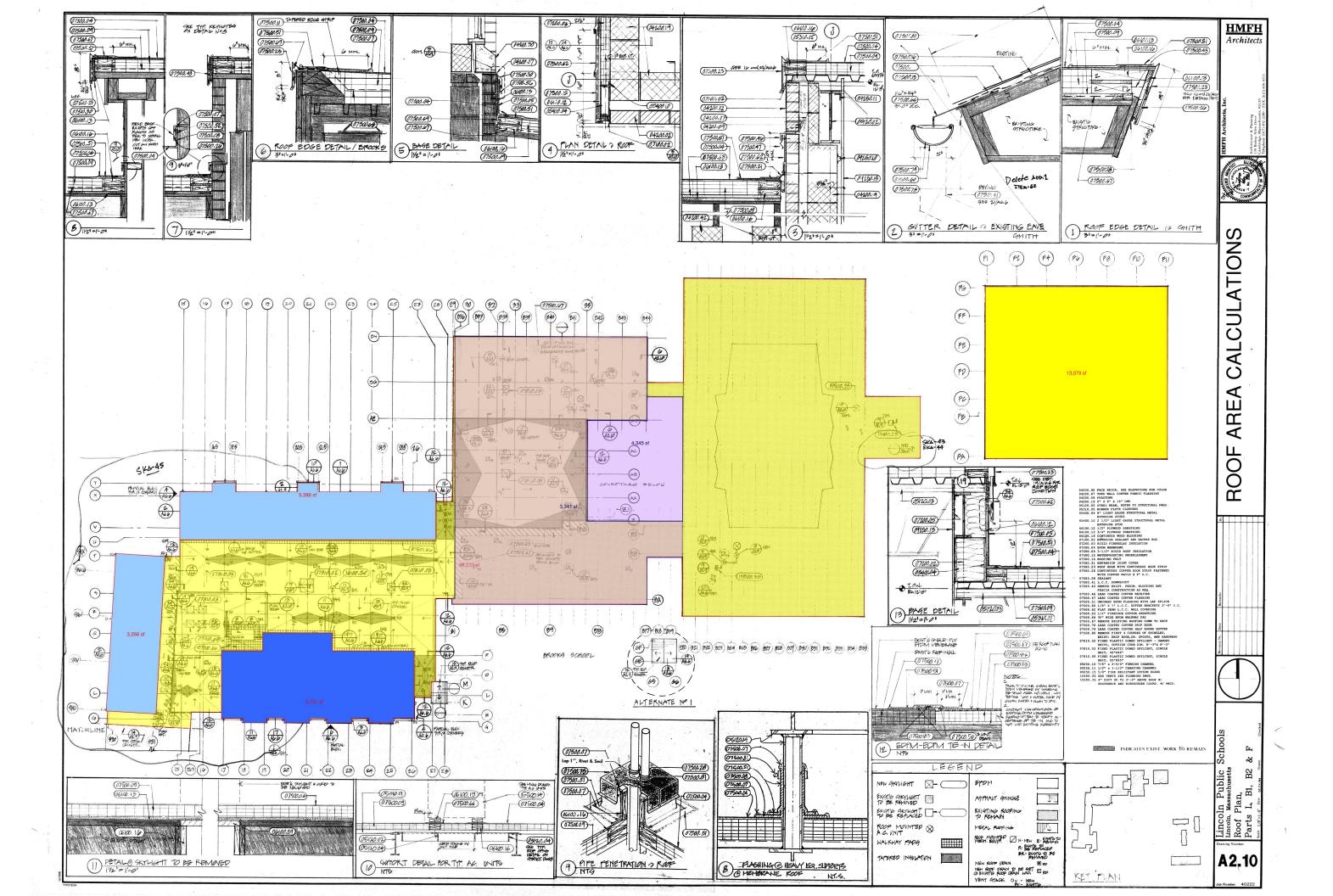
¹ The MSBA process is assumed to require the completion of a full feasibility study. The sequence of steps and deliverables for an MSBA Feasibility Study are clearly outlined in MSBA's Module 3. Such a feasibility study may be shortened slightly by shortening the portion of the process associated with facilities assessments with MSBA's

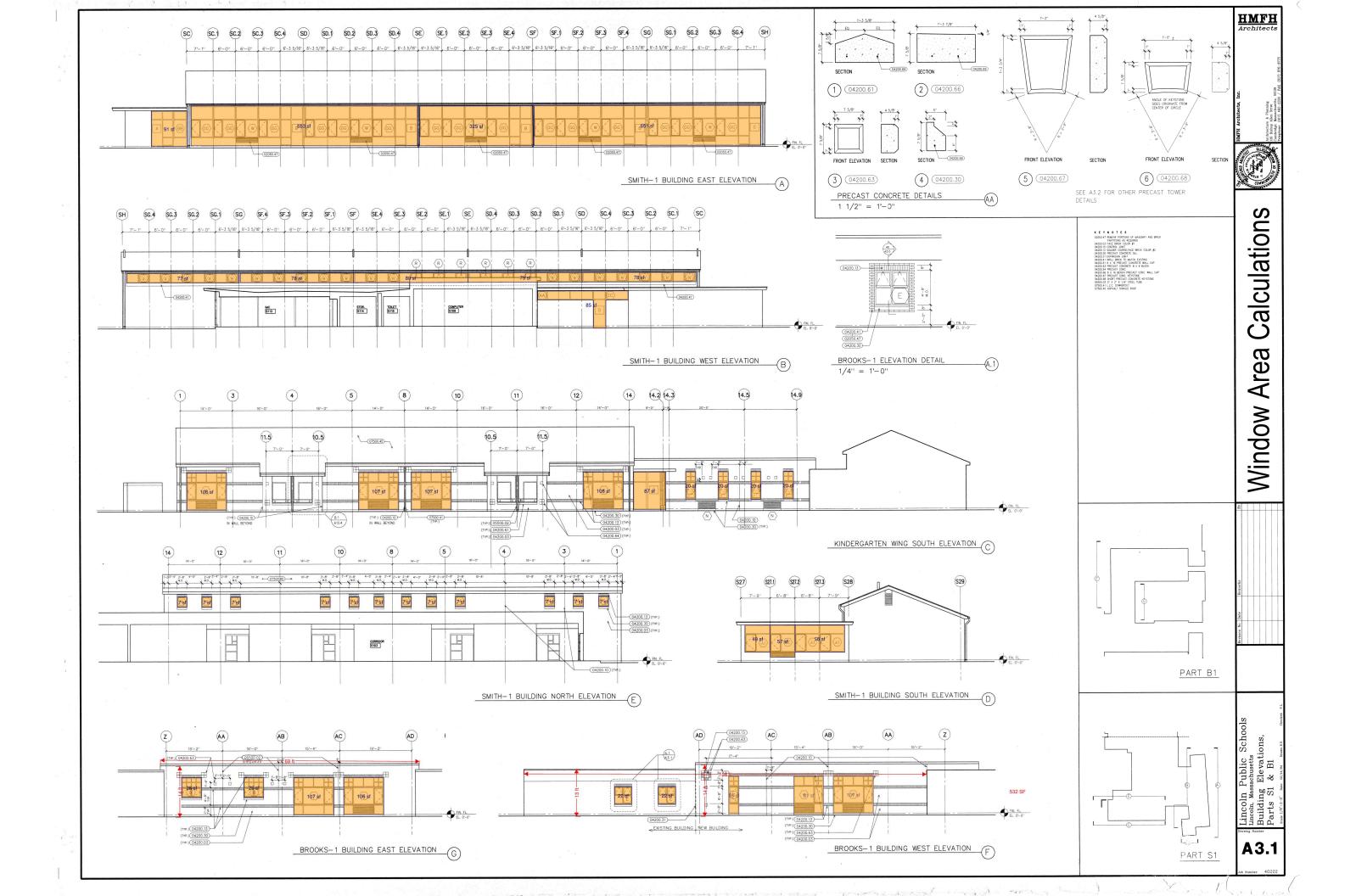
approval. MSBA's process, however, would likely require the full definition of an educational program and the full exploration of preliminary alternatives. A full exploration of preliminary alternatives means that renovation only, renovation/addition, and all new construction alternatives must be explored. While the options developed for Dore & Whittier's study will have some value in this process, these preliminary alternatives explored as part of the MSBA process will, necessarily, look slightly different.

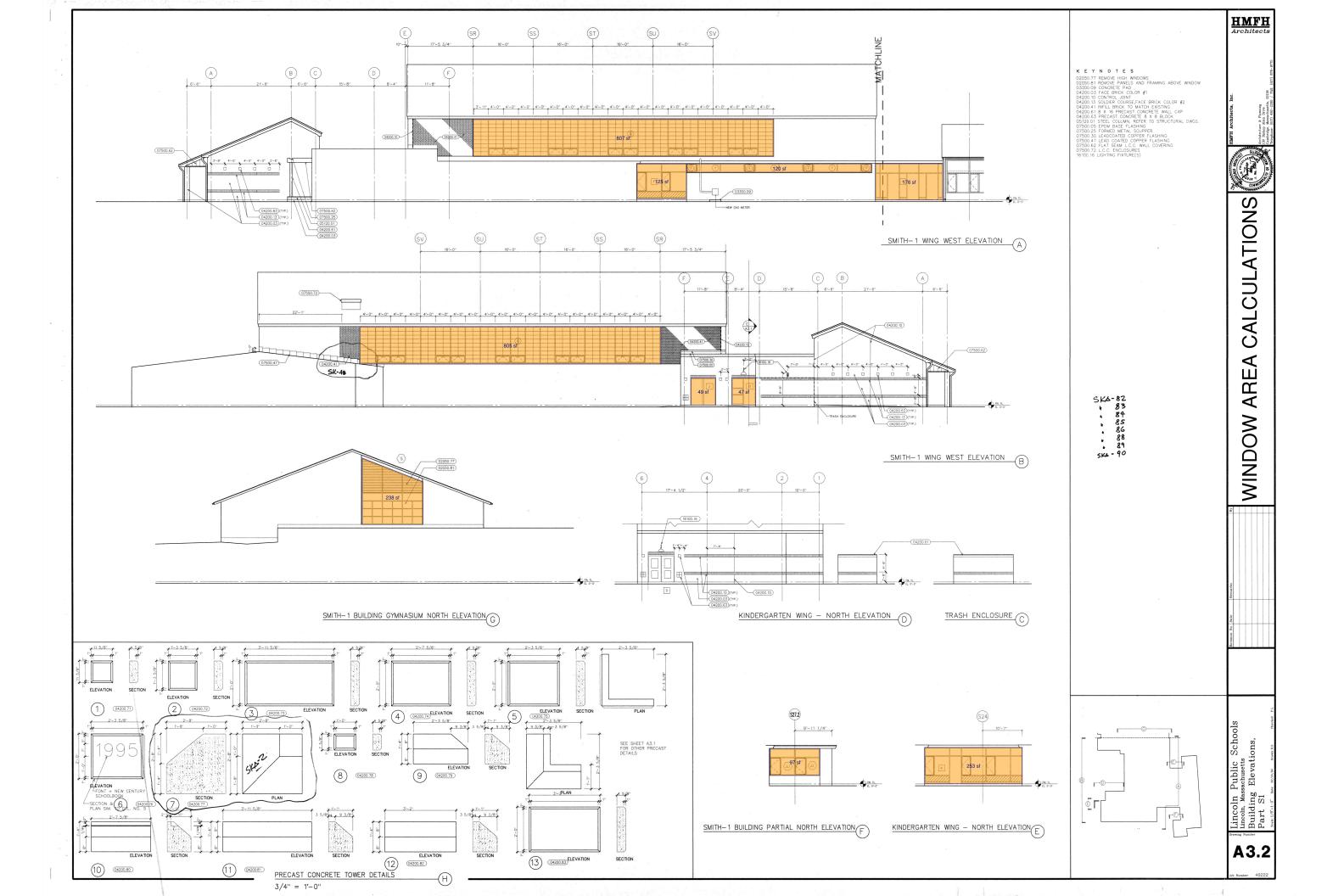
Finally, The Town of Lincoln can pursue a process to develop a school building project independently without participation by the MSBA. This pathway would also require the appropriation of funds to secure an Owner's Project Manager and Designer. These funds, however, might best be used for an abbreviated feasibility study which would refine a short list of options, allow the Town to select a single preferred option, and would include the preparation of a full schematic design. Selecting this pathway gives the Town of Lincoln and the Lincoln School Committee the greatest flexibility. Any option could be pursued on this pathway depending on the financial appetite of the Lincoln community and the financial capacity of the Town of Lincoln.

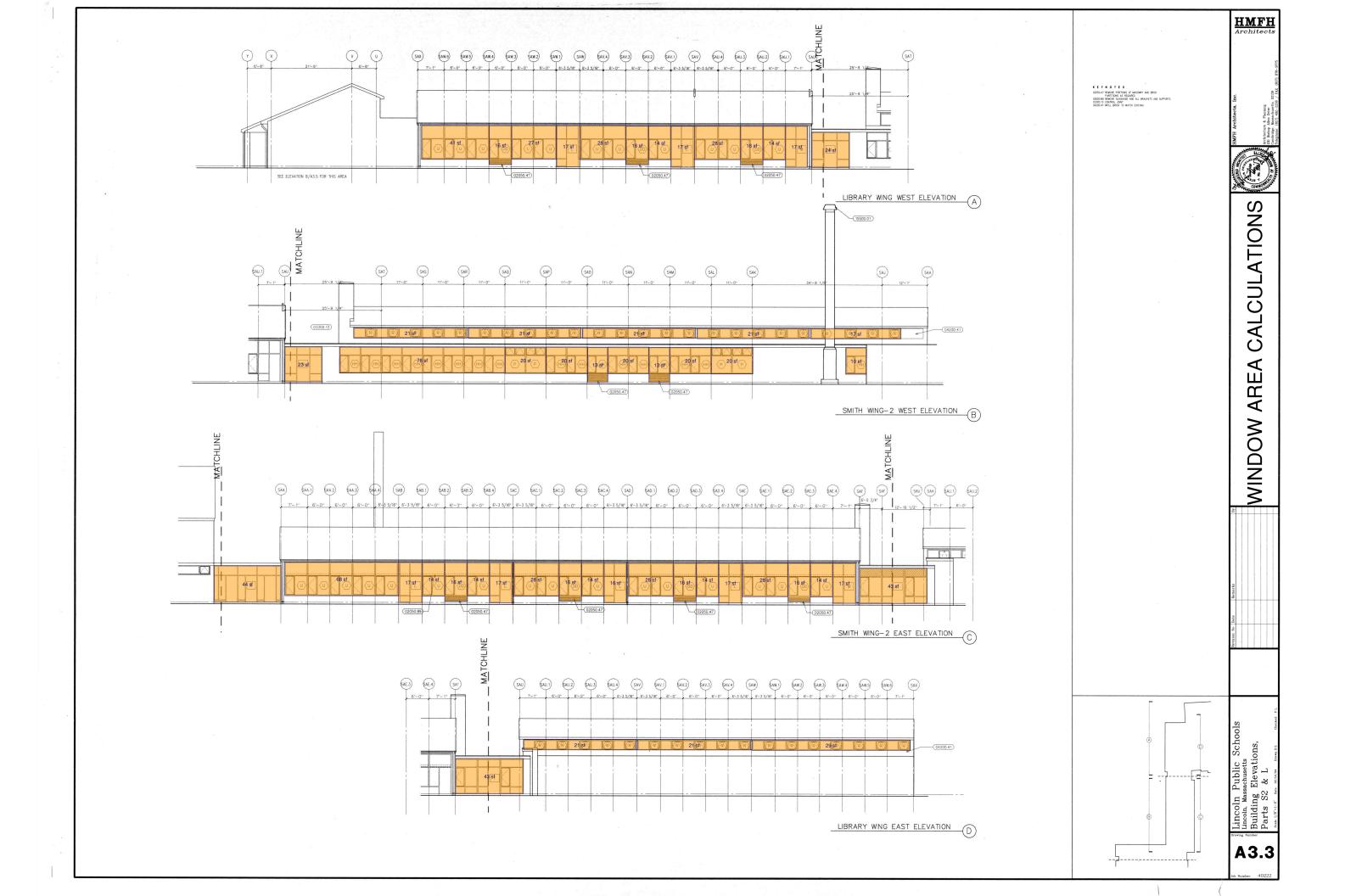


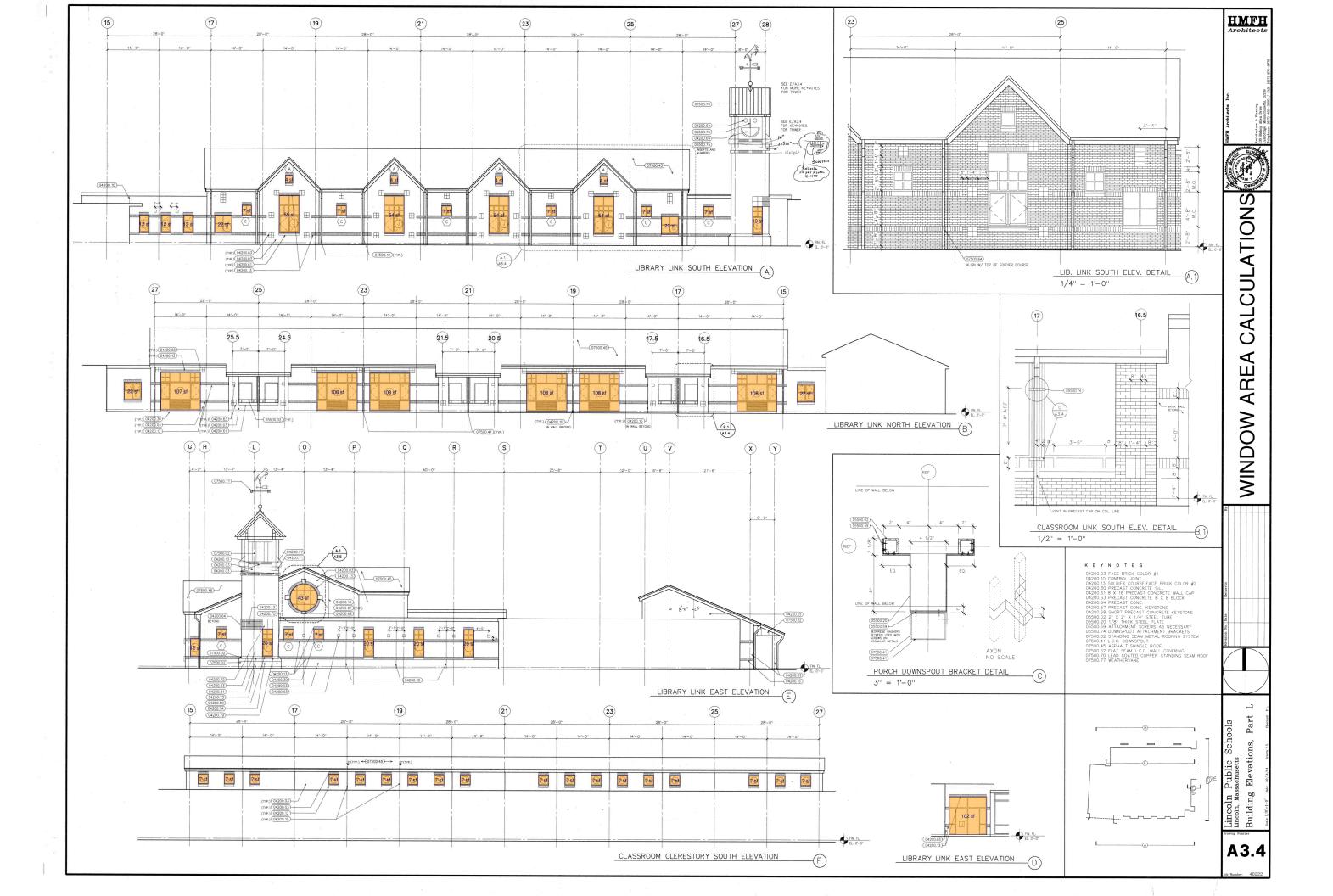


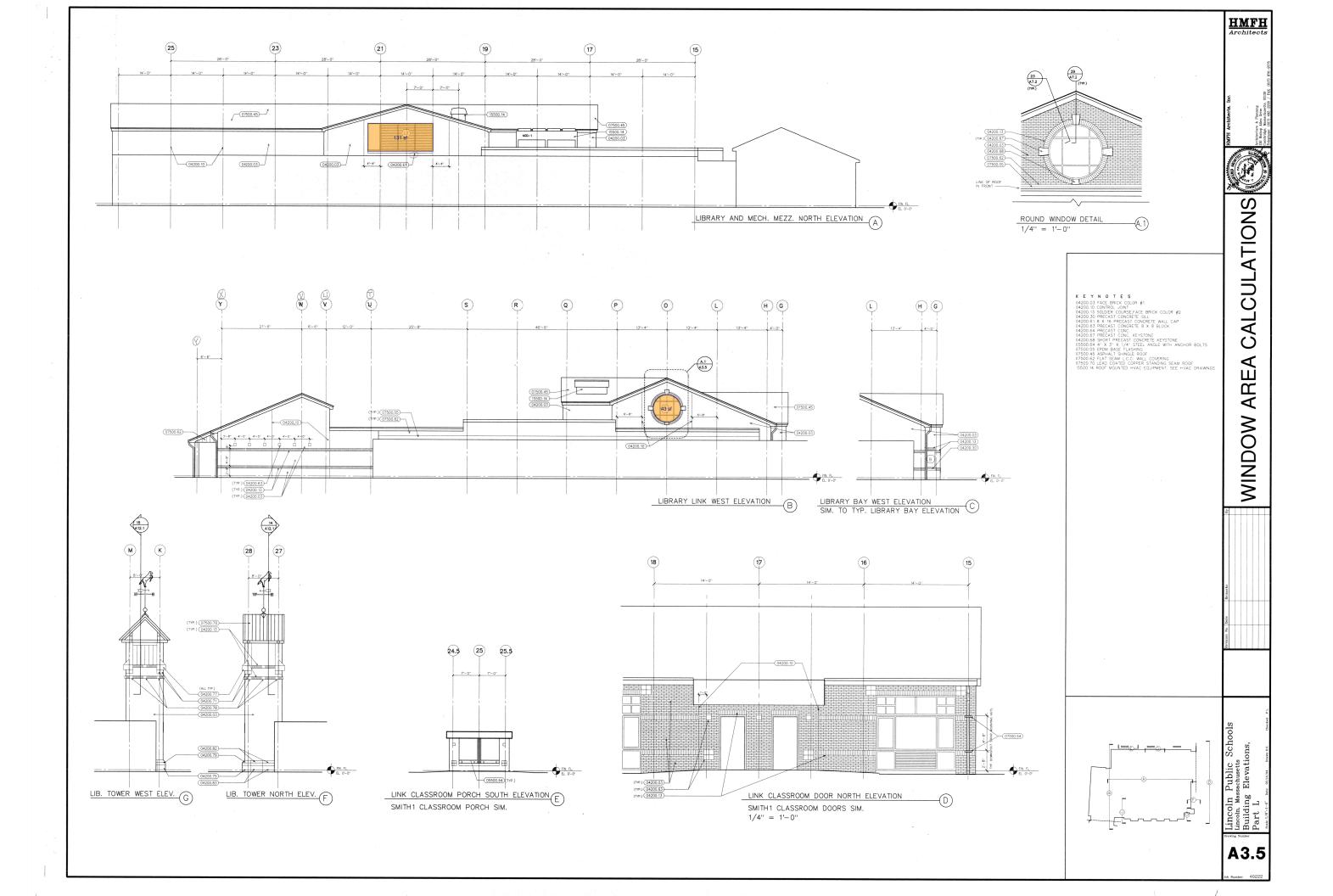


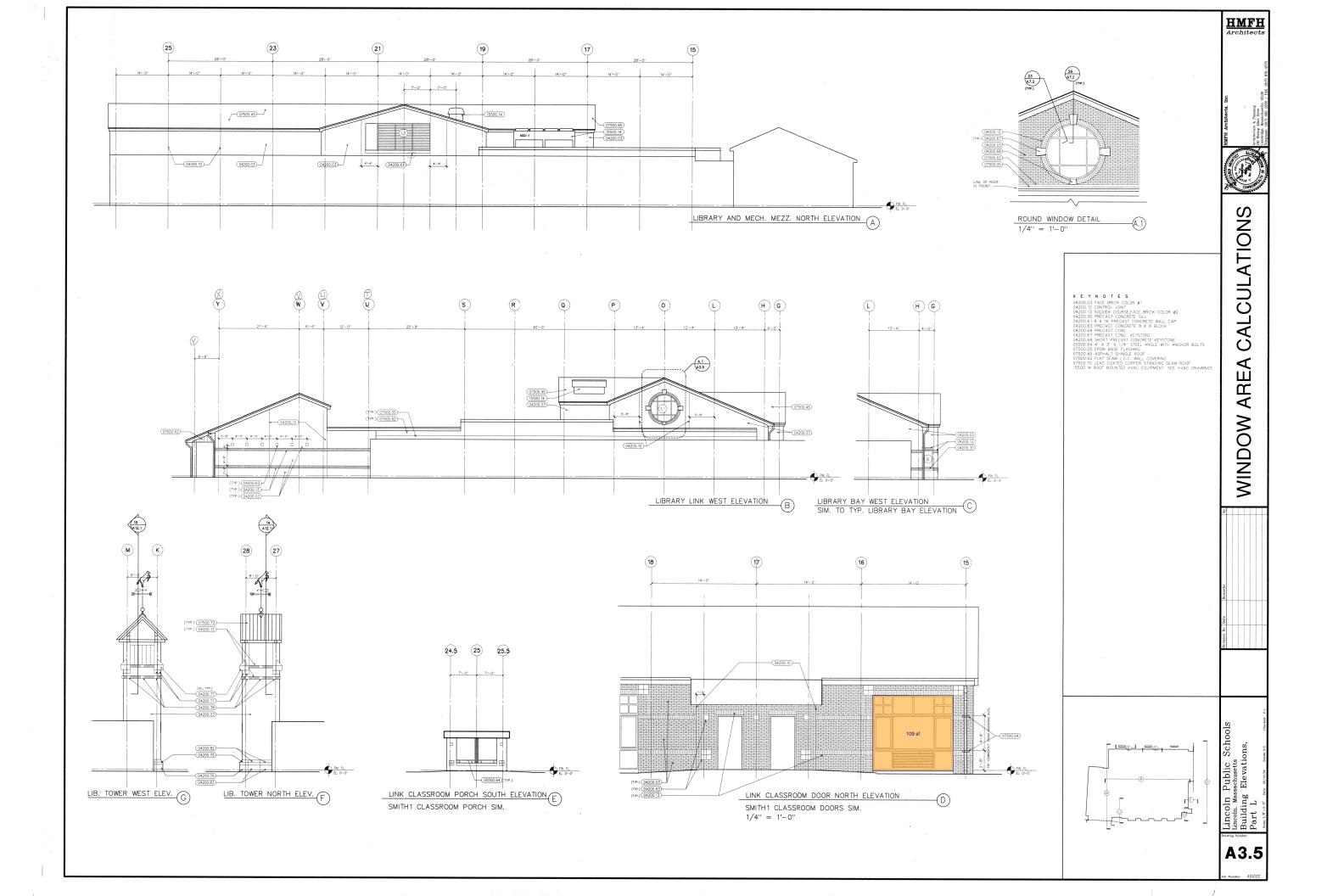




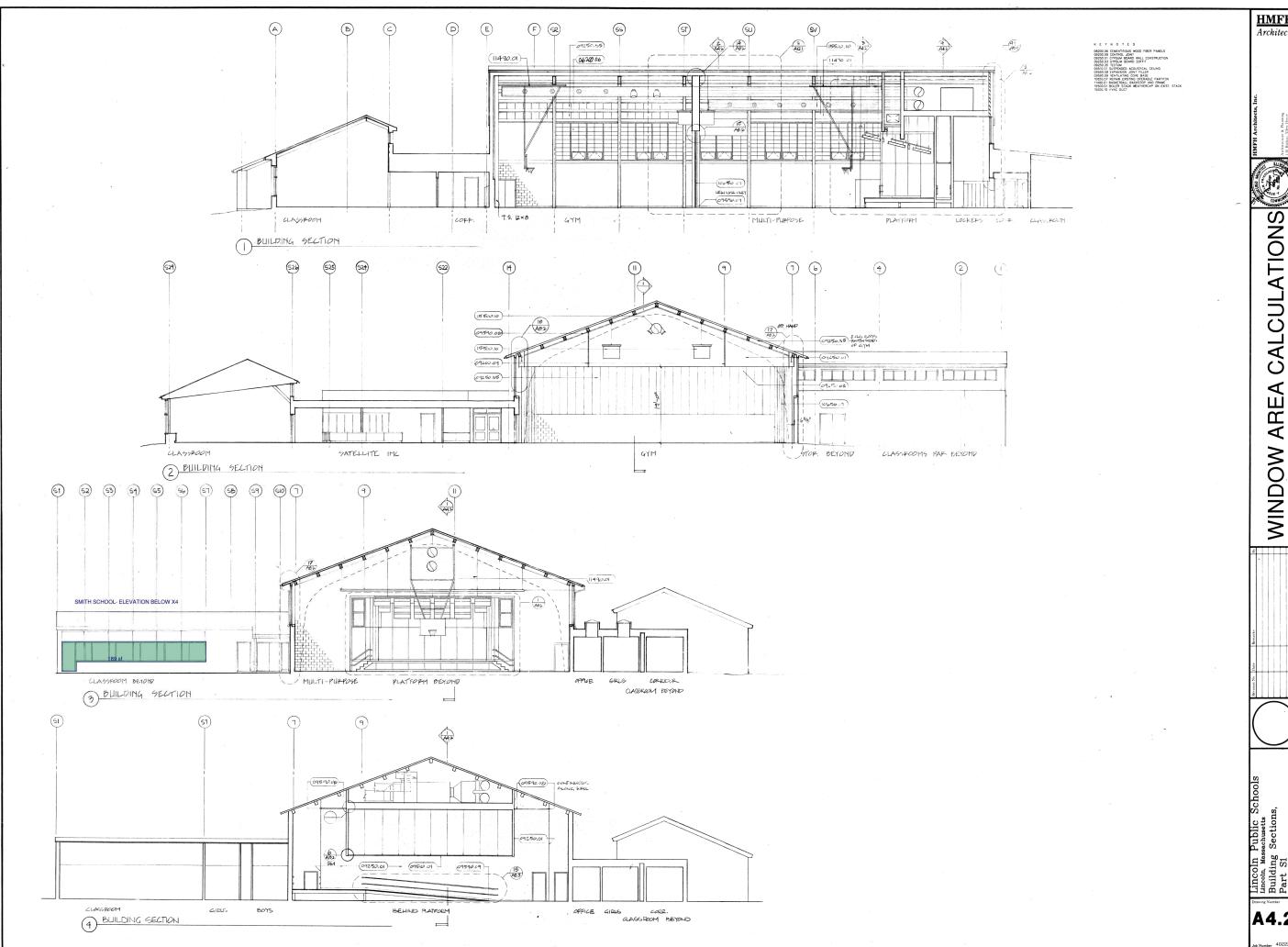












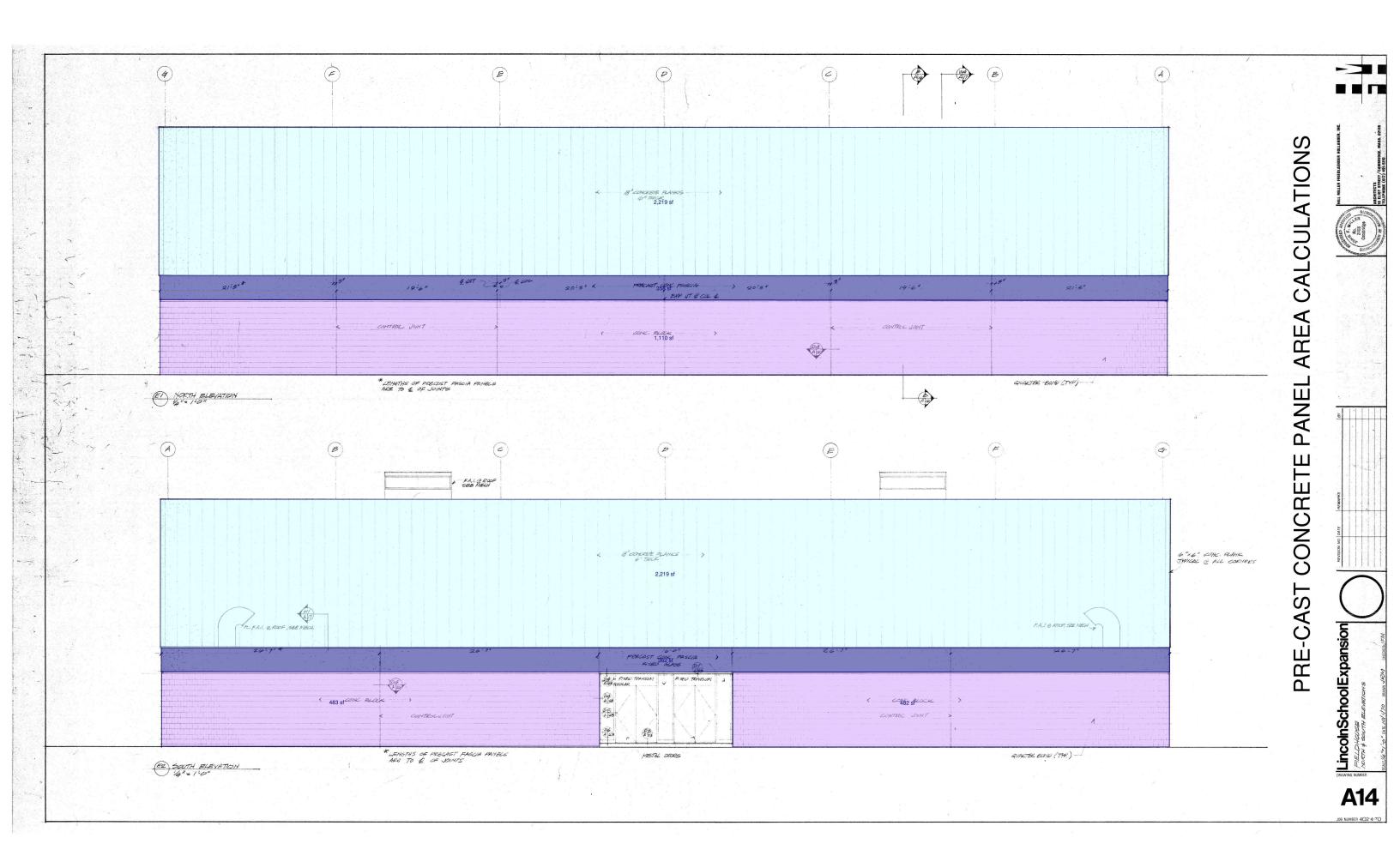
HMFH Architects

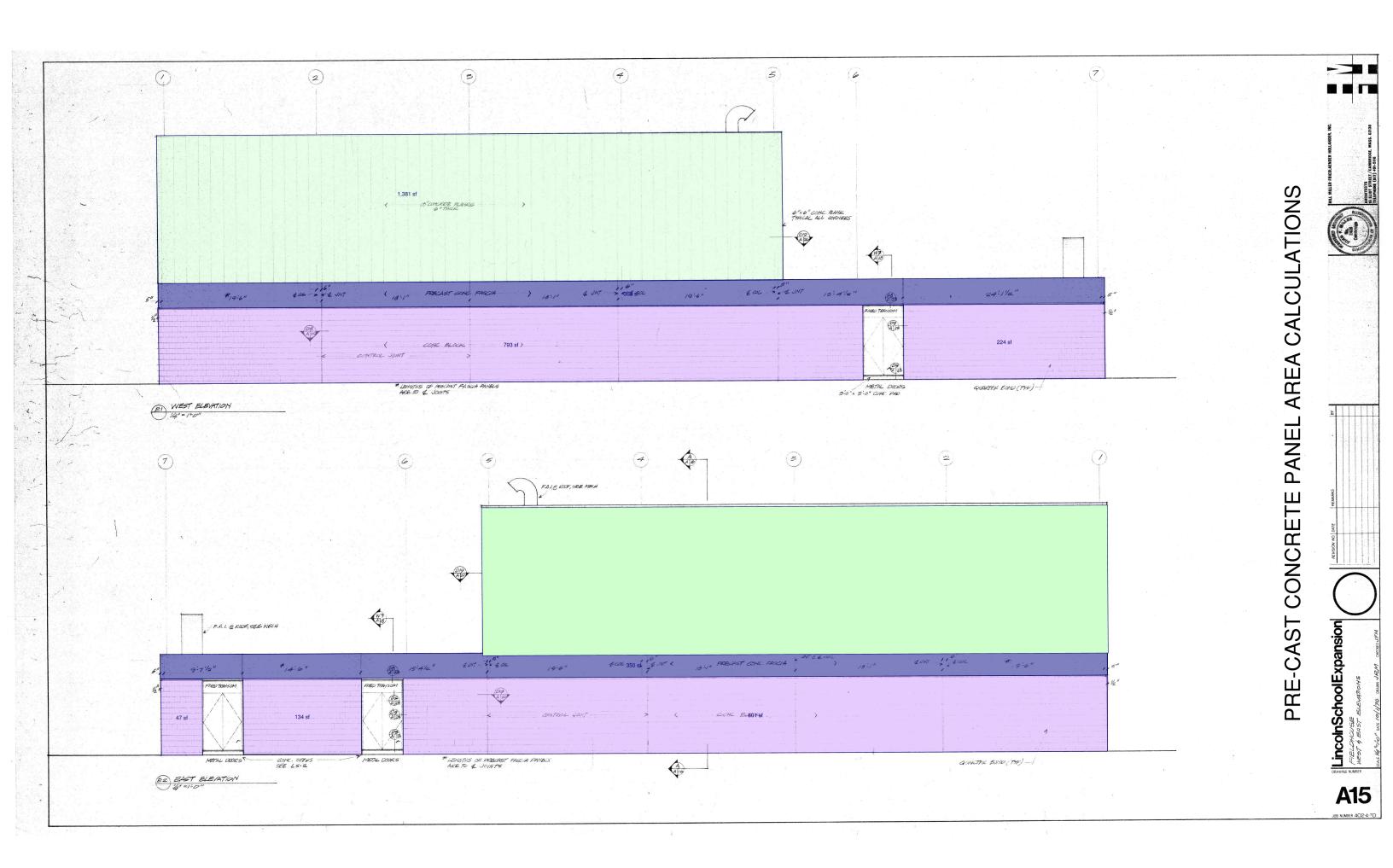


CALCULATIONS

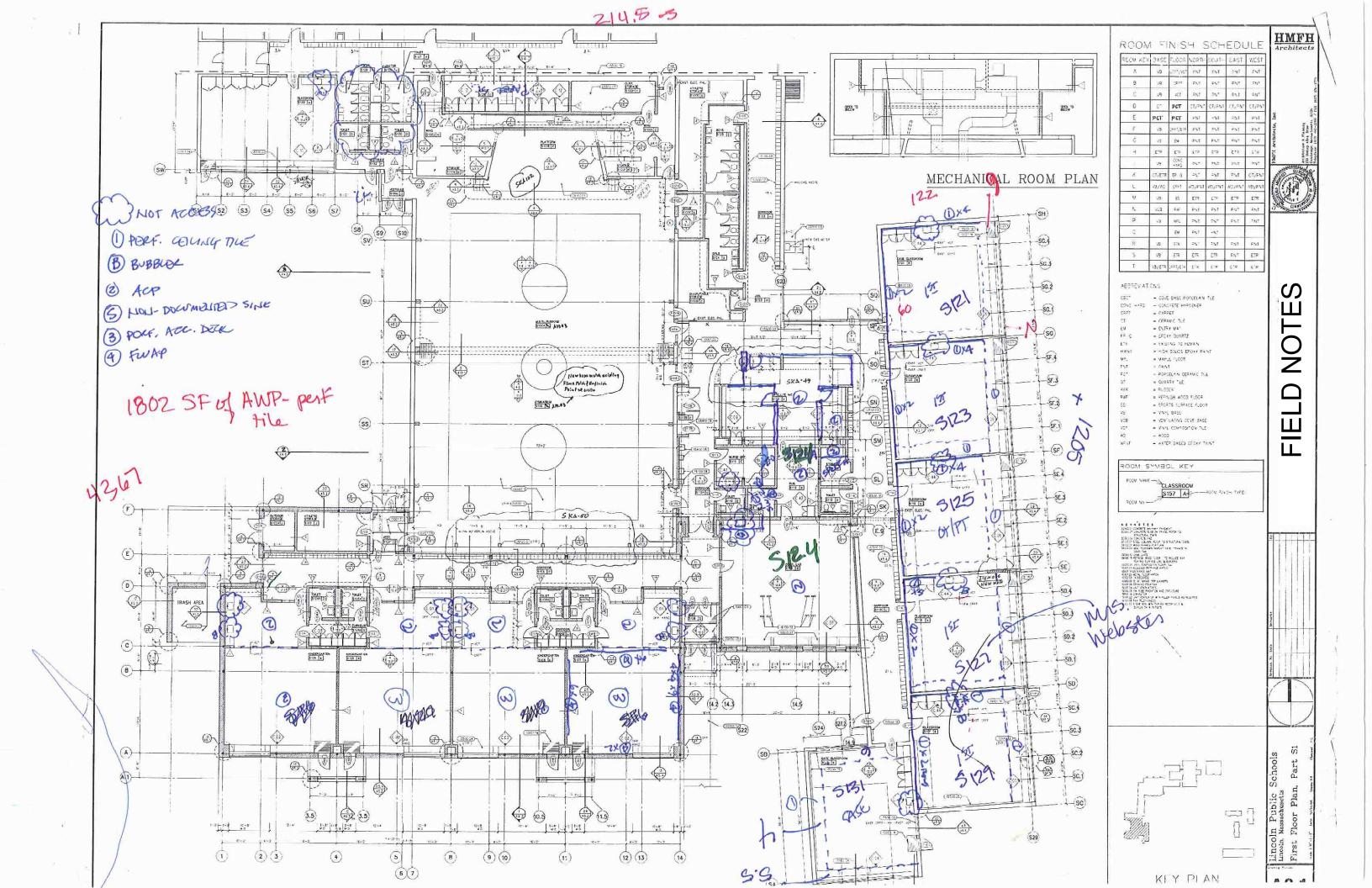
Lincoln Fincoln Building Part S1

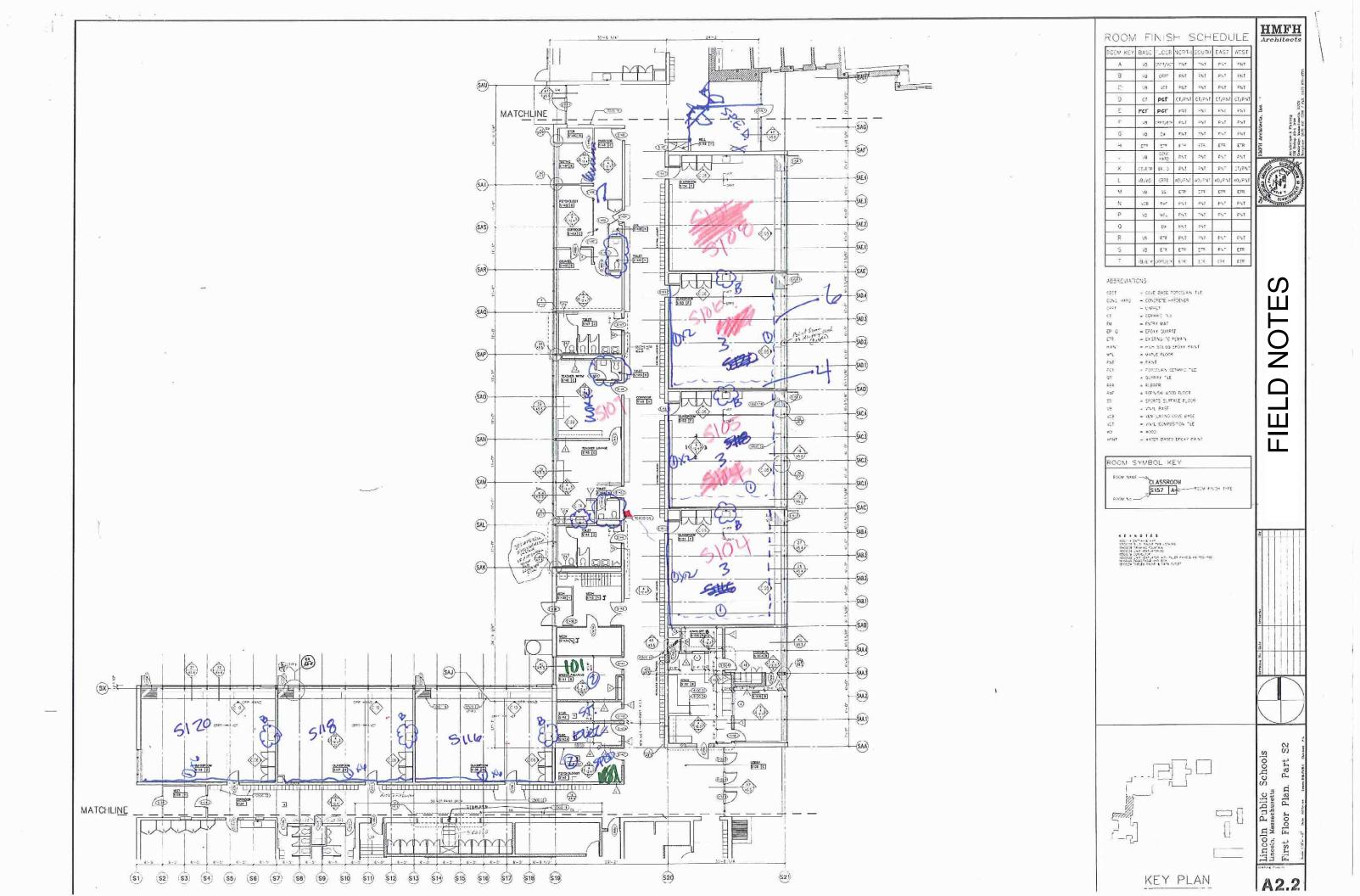
A4.2

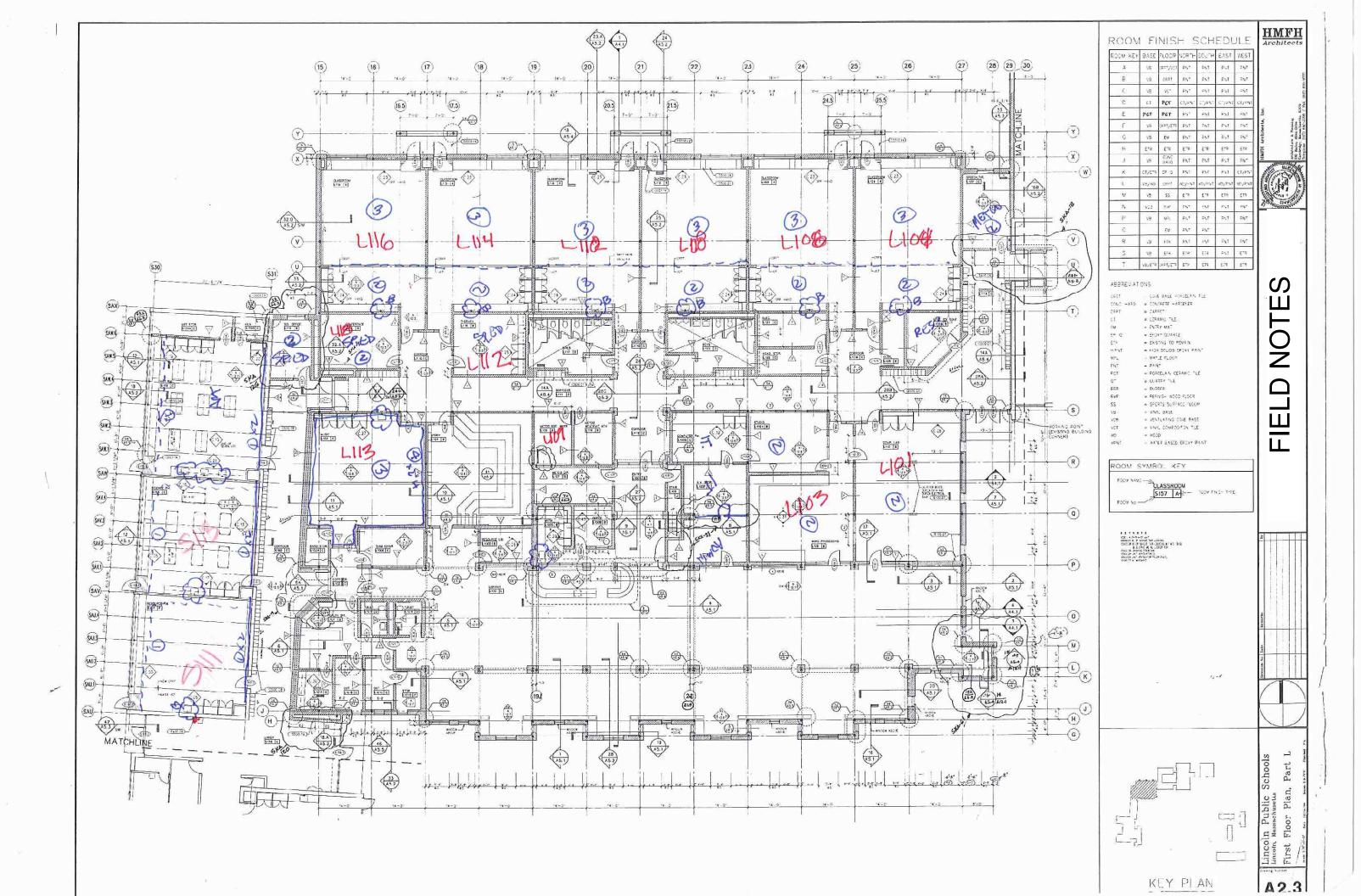


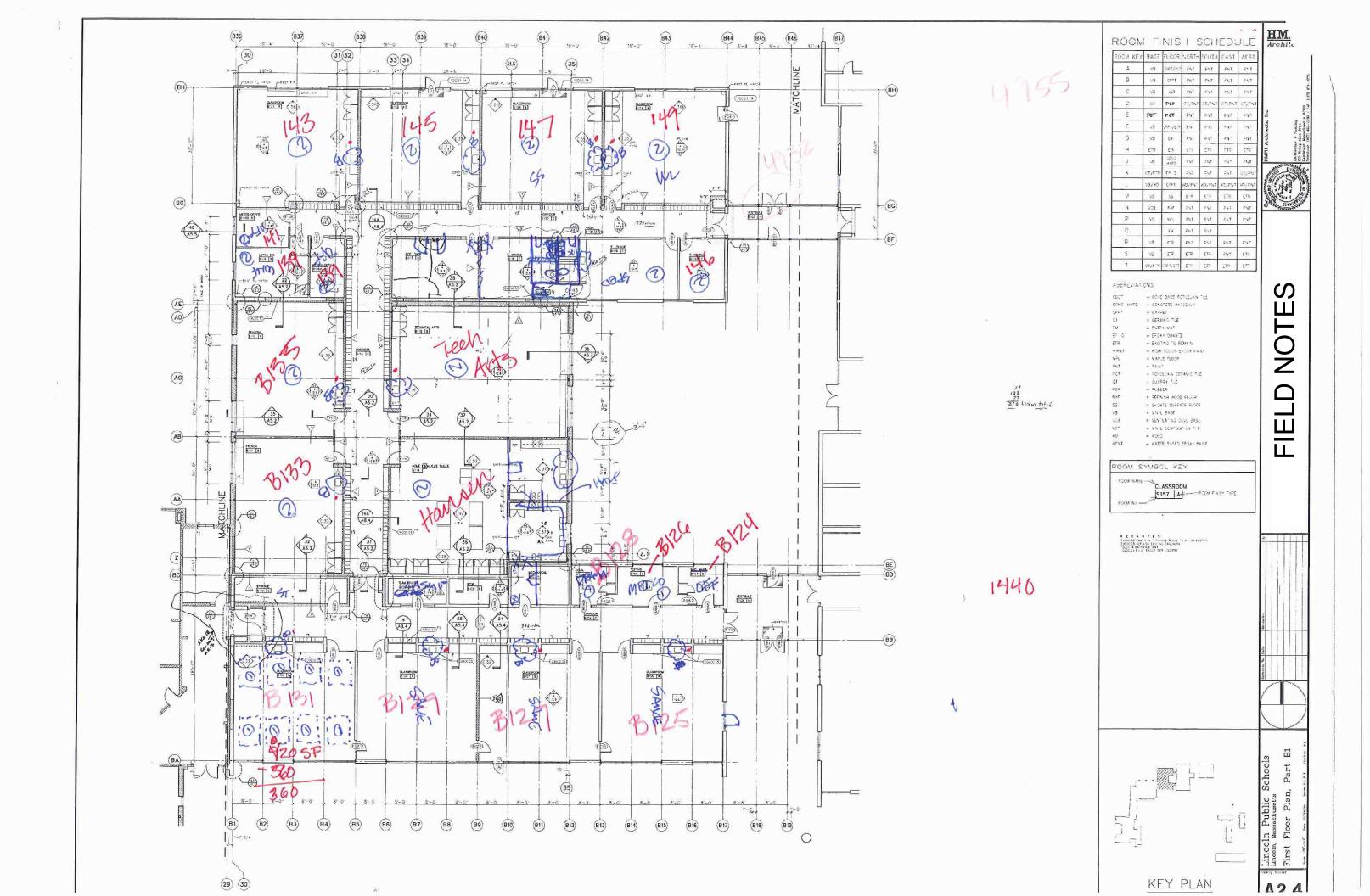


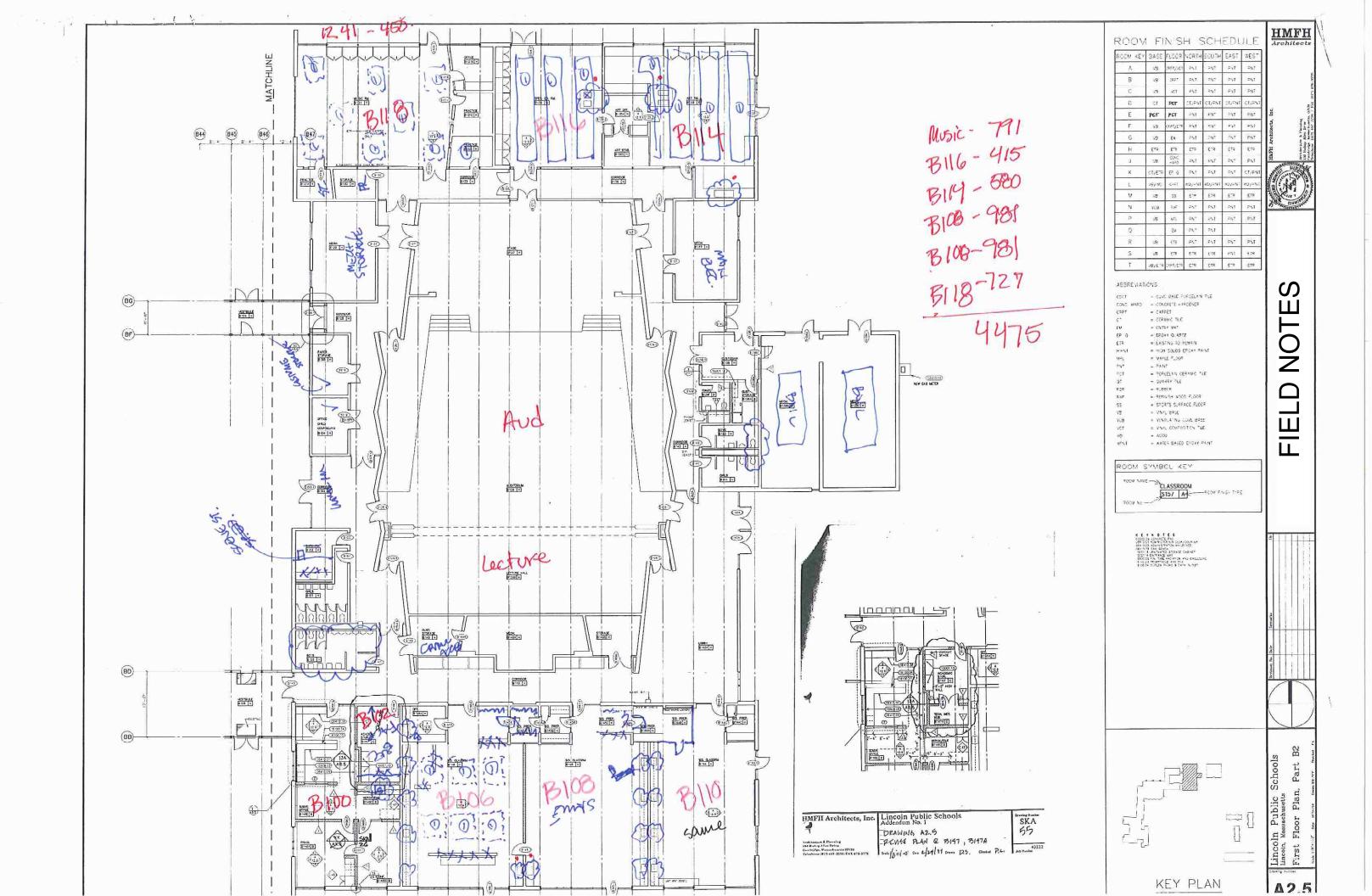
ACCESSIBLE PATH AREA CALCULATIONS

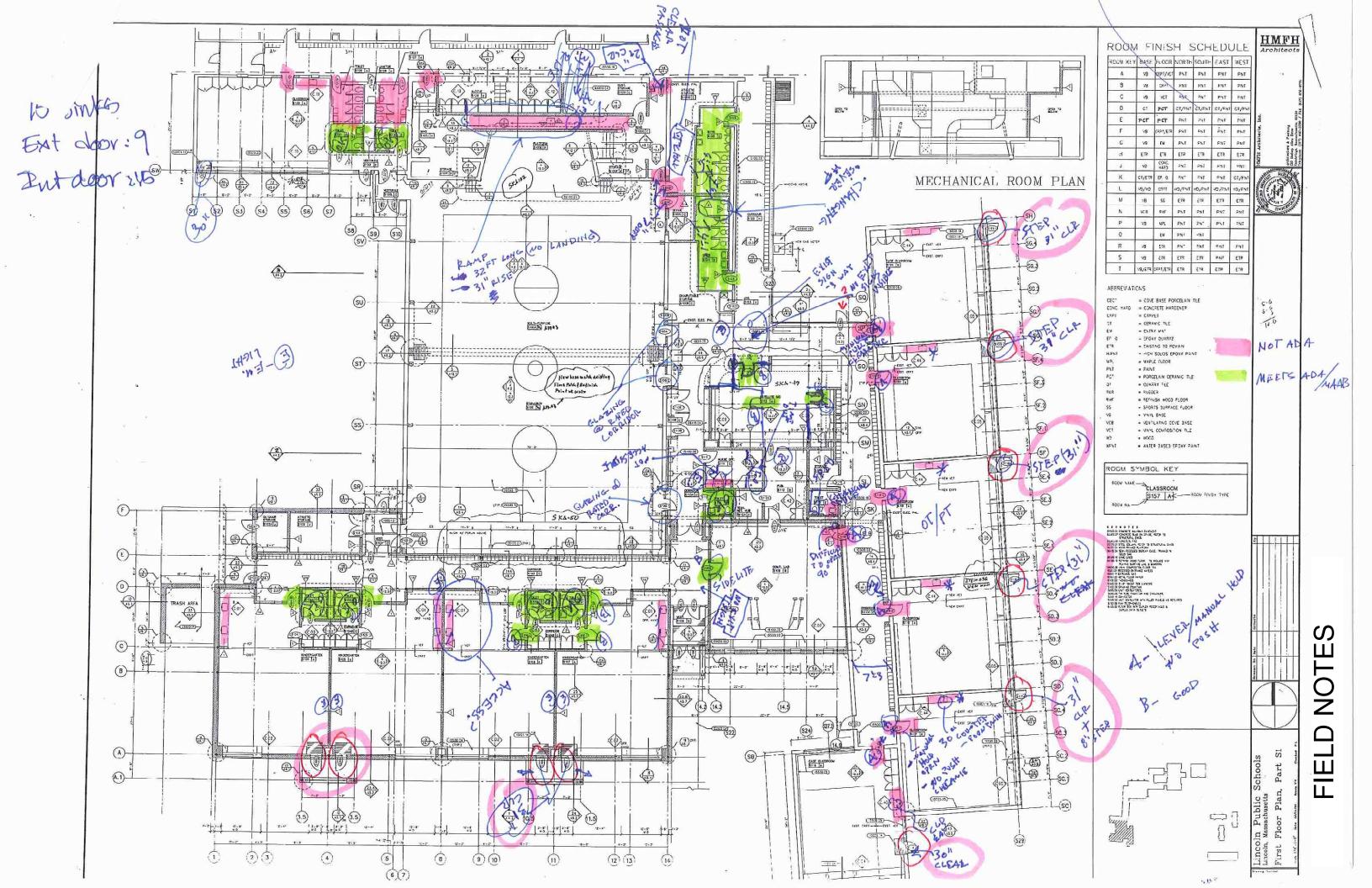


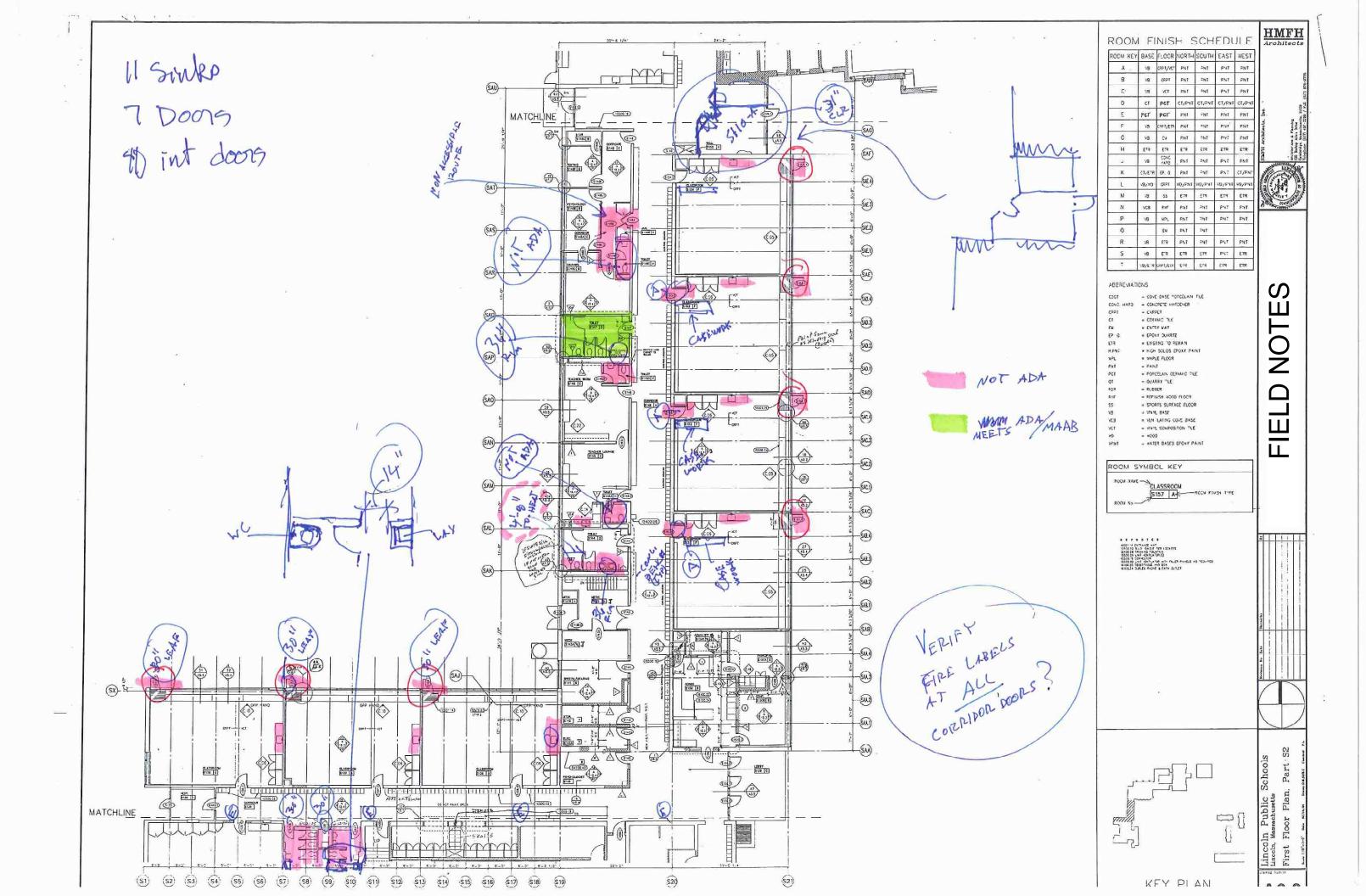


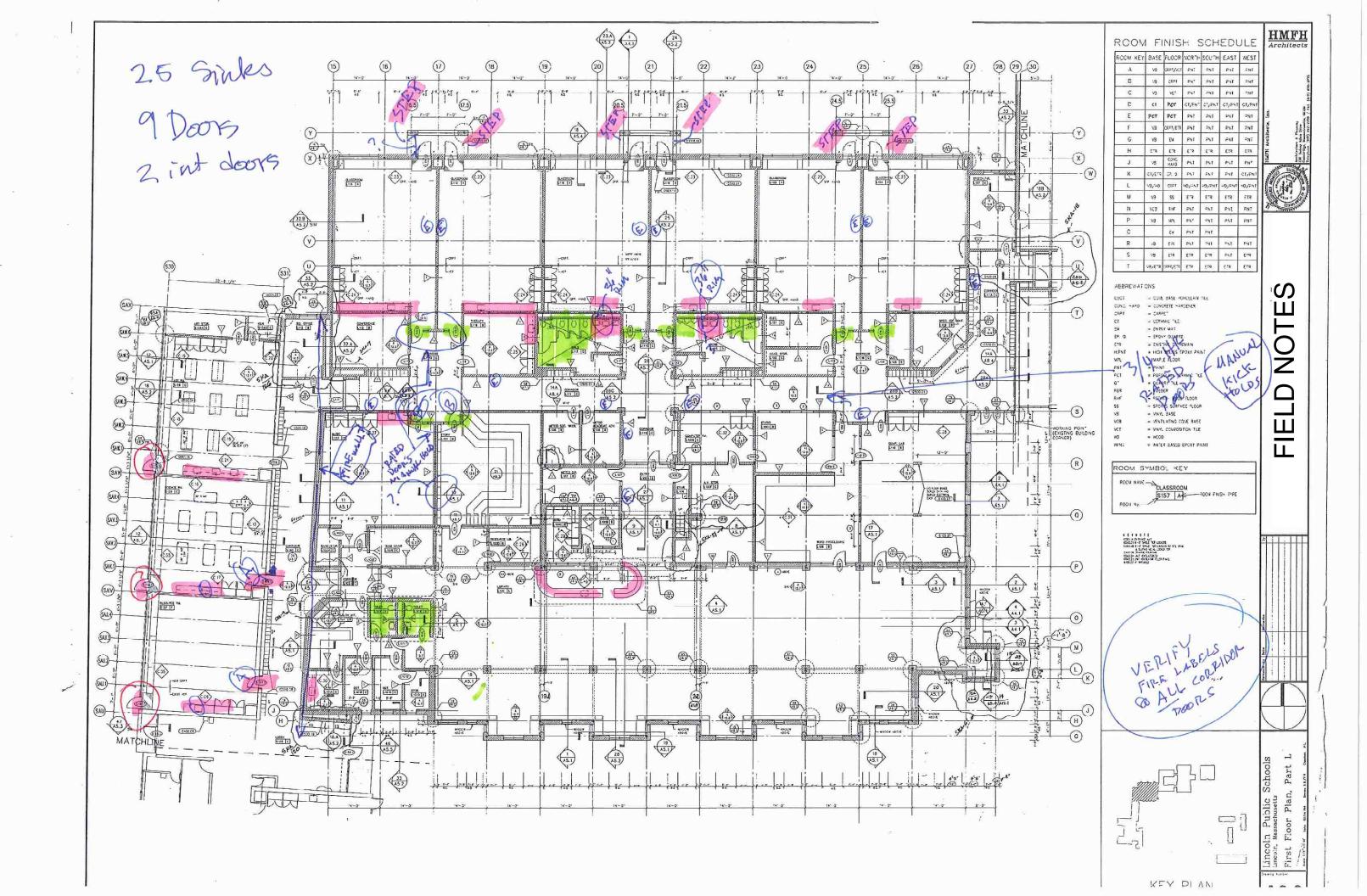




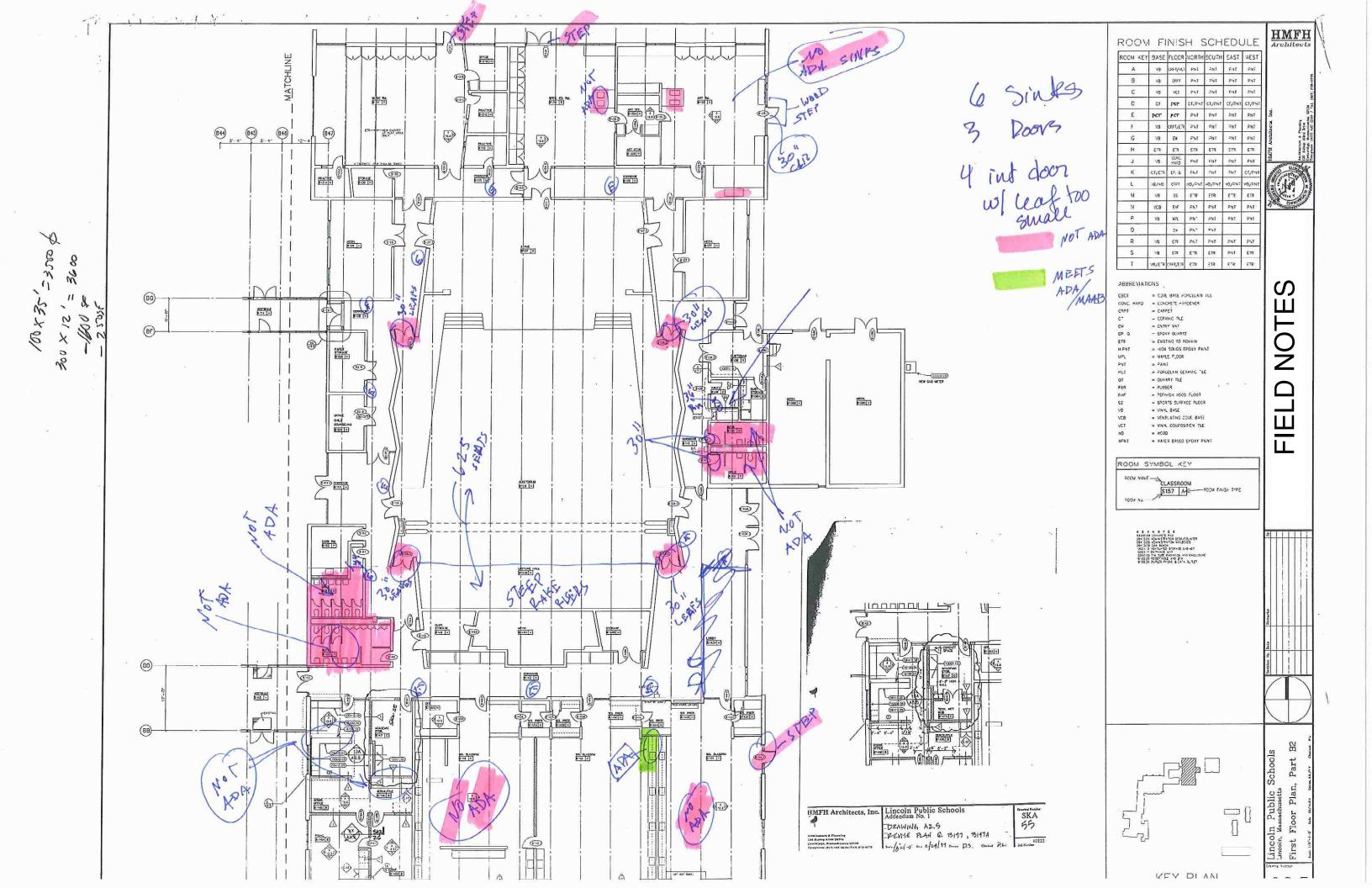


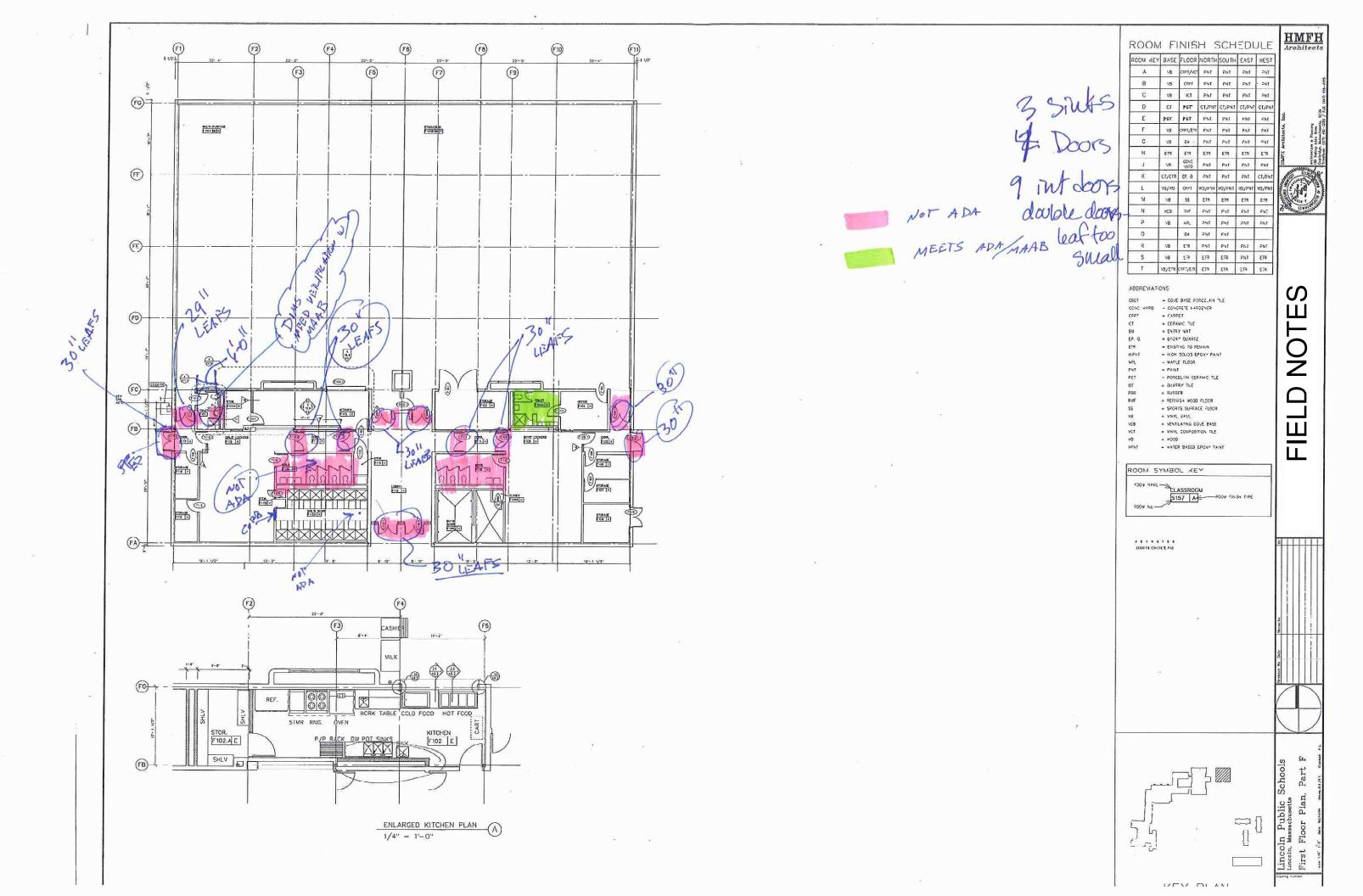


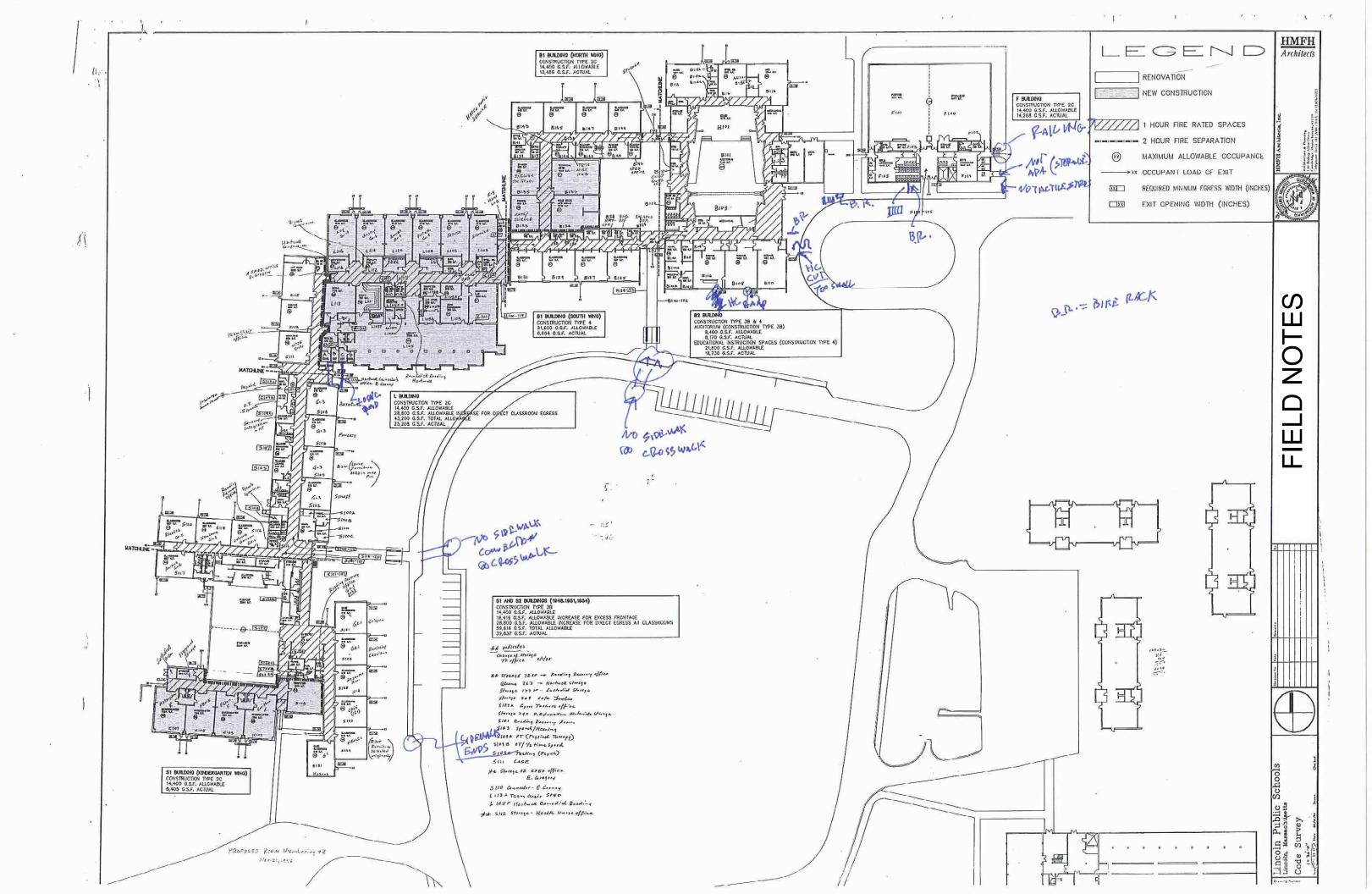
















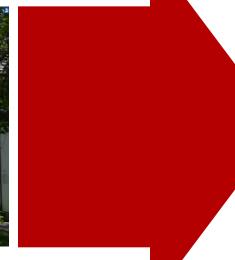
lincoln public schools

study of the lincoln school









... establishing a credible pathway forward

agenda | public meeting #1

- SBAC progress to date & introduction of D&W
- process for current study
- educational possibilities
- preliminary cost considerations
- small group break out sessions
- reporting out
- adjourn

SBAC Work to Date:

May

- Re-establish the School Building Advisory Committee (SBAC)
- Develop Request for Proposals for the Lincoln School study

June/July

- Interview and Selection of Architect Team
- Award of Contract to Dore & Whittier Architects

August

Preliminary work with Dore & Whittier

September

Information gathering sessions with stakeholder groups

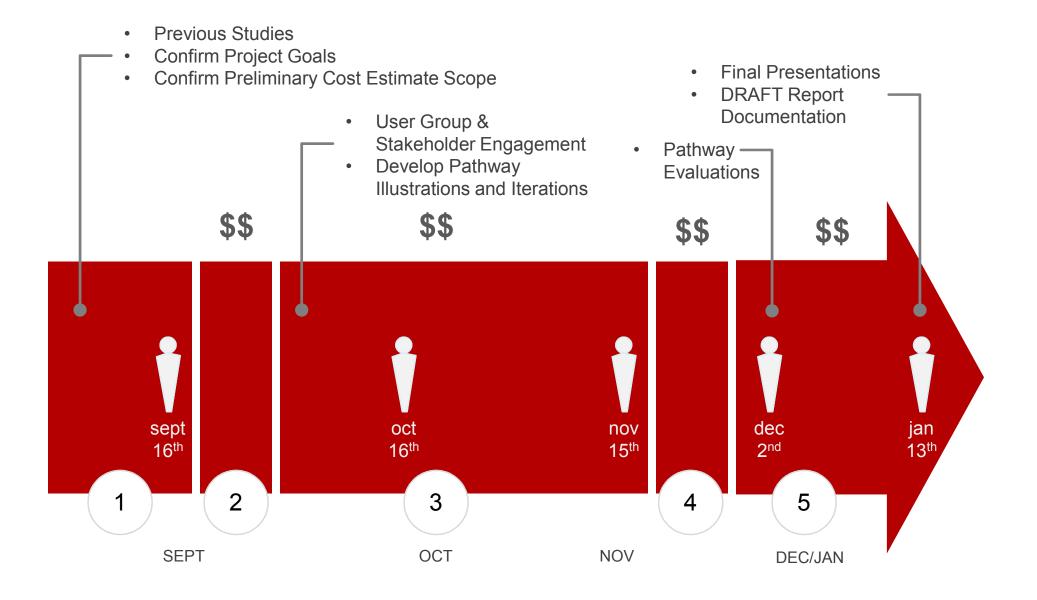
Upcoming Public Forums:

October 16th 7pm – 9pm, Reed Gym

November 15th State of the Town Meeting

December 2nd 7pm – 9pm, Reed Gym

January 13th 7pm – 9pm, Reed Gym











educational possibilities | 21st century

- provide warm, safe, and dry environment
- support individual learning modalities & multiple intelligences
- embody 4Cs critical thinking, collaboration, communication, and creativity
- possess ubiquitous technology
- adapt to changes over time

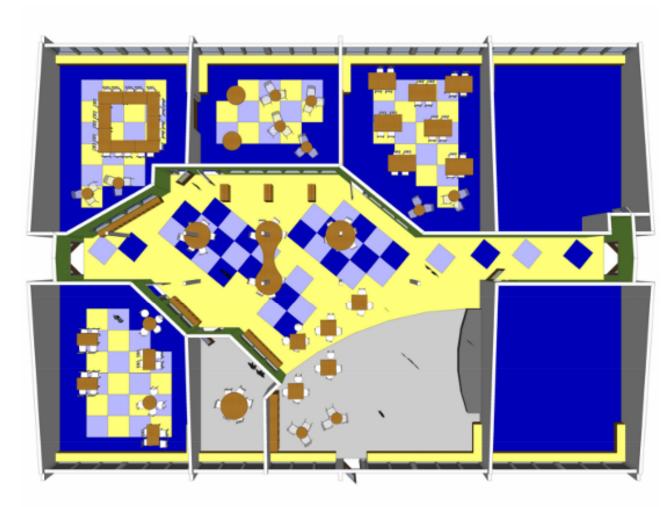




wilmington high school | wilmington, ma

small group break out: dore & whittier architects





forest avenue elementary school | middle town, RI

K-2 multi-age learning community: fielding/nair international









forest avenue elementary school | middle town, RI

K-2 multi-age learning community: fielding/nair international



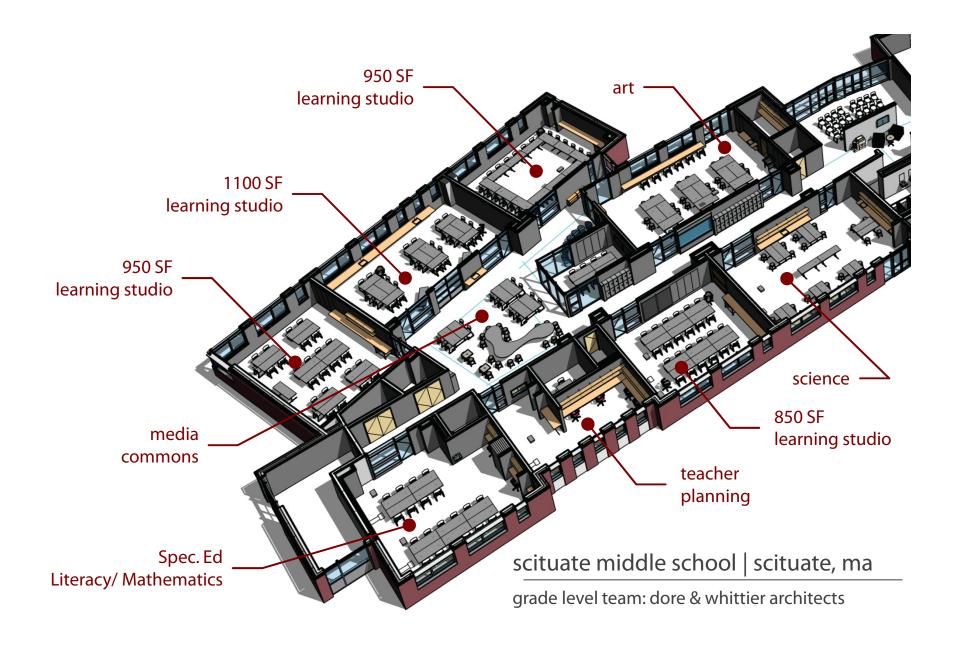
hanscom school | lincoln, ma

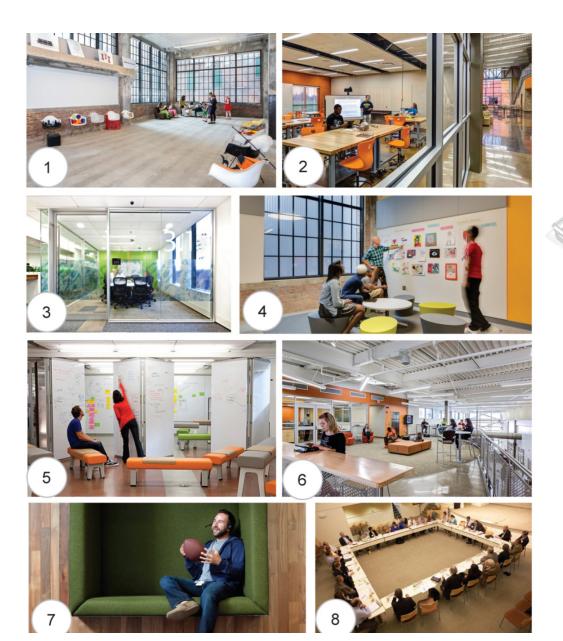
plan diagram: ewing cole

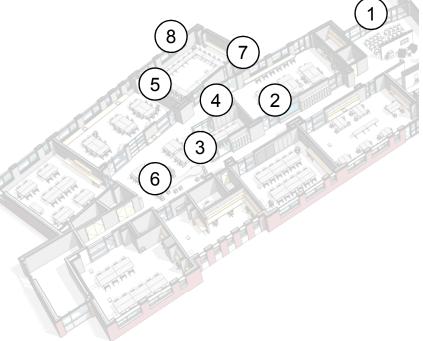


hanscom school | lincoln, ma

plan diagram: ewing cole







scituate middle school | scituate, ma

grade level team: dore & whittier architects

preliminary cost considerations

facility needs

educational needs

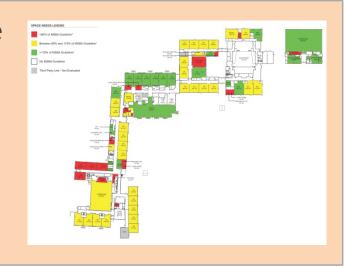
	Preliminary Facilities Scope		revised: 9.2.14						
			• Required		Φ Recommended		o Optional		
item #	Scope Description	Location	System Category	Priority	Required, Recommended, Optional	Code Triggered	Scope Source	Unit QTY	\$/\$
F-1	Provide sound-absorbative materials to dassrooms to improve acoustics by removing existing acoustical ceiling panels installing suspended ACP. Provide sound-absorbative materials to	Brooks	Acoustics				SBAC Components	XX SF on Per Classroom	
F-1a	d screeness to improve amounties by managing	Brooks	Acoustics				SBAC Meeting	XX SF on Per Classroom	
F-1b	Provide sound-absorbative materials to classrooms to improve acoustics by removing existing acoustical wall panels and installing fabric-wrapped acoustical wall panels.	Brooks	Acoustics				SBAC Meeting	XX SF on Per Classroom	
F-1c	Provide speech amplification equipment	Brooks	Acoustics	П			SBAC Meeting	Per Classroom	Γ
F-2	Remove existing roofing and trim components at Brooks School down to existing deck. Replace with new tappered to insulation and single-ply-roofing system (to meet Energy 2000 goal). Base roof material white EPDM. Replace all trim components.	Brooks	Arch - Building Exterior				CDR Maguire	XXX SF	
F-2a	Remove existing roofing and trim components at Brooks School down to existing deck. Replace with new tappered to insulation and single-ply-roofing system (to meet Energy 2030 goal). Base roof material white TPO, Replace all trim components.	Brooks	Arch - Building Exterior				SBAC Meeting	XXXX SF	
F-2b	Insulation and single-ply roofing system (to meet Energy 2030 goal). Base roof material white PVC, Replace all trim components.	Brooks	Arch - Building Exterior				SBAC Meeting	XXX SF	
F-3	Remove and replace existing uninsulated windows, curtain wall systems, and associated transite penels (ACMs) in the Brooks School and replace with triple glazed insulated and thermally broken, RS viryl systems.	Brooks	Arch - Building Exterior				CDR Maguire	XXX SF	
F-3a	the move and replace existing uninsulated windows, curtain wall systems, and associated transite panels (ACMs) in the Brooks School and replace with double glazed insulated and thermally broken, R2.5 aluminum systems.	Brooks	Arch - Building Exterior				CDR Maguire, D&W	XXX SF	
F-4	Fur out interior and install 4° closed cell spray foam. Painted gypsum finish interior surface.	Brooks	Arch - Building Exterior				D&W		
F-5	Use existing exterior wall as back up (at existing Auditorium only). Install air/vapor barrier, 4"of rigid insulation, 4" brick veneer on steel angles dipped to existing structure.	Brooks	Arch - Building Exterior				D&W	XXX SF	
F-6	Clean and prepare existing surfaces for repainting. Repaint all interior existing paited surfaces.	Brooks	Arch - Interior Finishes				CDR Maguire	XXX SF	L
F-7	Remove and replace existing carpet throughout facility	Brooks	Arch - Interior Finishes				CDR Maguire	XXX SF	
F-8	Remove existing carpet and replace with VCT in classrooms	Brooks	Arch - Interior Finishes				CDR Maguire	XXX SF	Ĺ
F-9	Remove and replace 12"x12" Spline ceilings (ACM is secondary issue). Replace with 2x2 ACP ceilings.	Brooks	Arch - Interior Finishes				CDR Maguire	XXX SF	
F-10	Upgrade classroom and toilet fixture sinks to be ADA and MAAB compliant.	Brooks	Code Compliance				CDR Maguire		
F-11	Provide vaccuum breakers and back-flow preventers at cross connections.	Brooks	Code Compliance				CDR Maguire		
F-12	Remove and replace natural gas piping to science classrooms. Equip with individual safety shut-offs in each science room.	Brooks	Code Compliance				CDR Maguire		
F-13	Provide dedicated non-potable hot and cold water distribution to existing science classrooms. Provide backflow devices at lab	Brooks	Code Compliance				CDR I Maguire		

existing facility | health, safety, welfare

- safety & security
- fire suppression
- hazardous materials
- accessibility
- acoustics
- structural code
- energy efficiency
- thermal comfort

existing facility | educational needs

- smith school 1955 classroom size
- classroom count
- cafeterias
- kitchens
- break-out spaces
- technology
- science



code requirements, triggers, and local bylaws

- Massachusetts Architectural Access Board
- Massachusetts State Building Code
- International Existing Building Code
- Lincoln Energy 2030 by-law

update on cost estimates

- general considerations public construction c149
- roofing options
- window options
- heating/cooling options
- current construction market

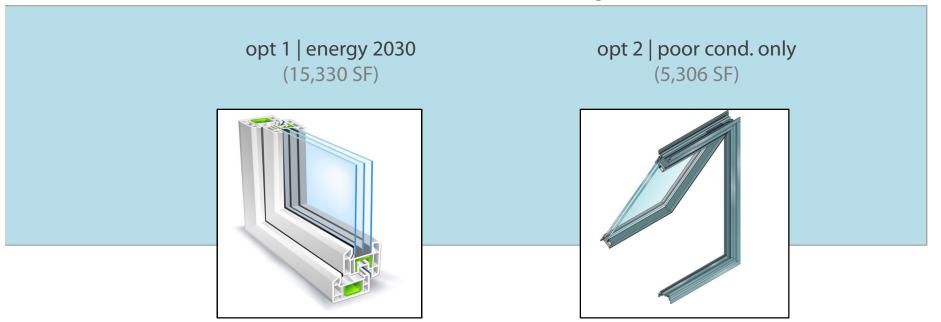
update on cost estimates | roofing scope



update on cost estimates | roofing scope

	opt 1 EPDM	opt 2 PVC	opt 3 TPO	
	EPDIVI	PVC	IPO	
hard costs +	\$2.3M	\$2.5M	\$2.3M	
soft costs @ 25%	\$0.6M	\$0.6M	\$0.6M	
total project	\$2.9M	\$3.1M	\$2.9M	

update on cost estimates | window scope



update on cost estimates | window scope

total project	\$2.5M	\$0.8M
soft costs @ 25%	\$0.5M	\$0.2M
hard costs +	\$2.0M	\$0.6M
	opt 1 energy 2030 (15,330 SF)	opt 2 poor cond. only (5,306 SF)

update on cost estimates | mechanical scope



update on cost estimates | mechanical scope

	opt 1 (full ac w/ VAV)	opt 2 (full ac w/ induction)	opt 3 (new UV w/ CHW)	opt 4 (add split ductless
hard costs +	\$6.5M	\$6.4M	\$5.9M	\$1.8M
soft costs @ 25%	\$1.6M	\$1.6M	\$1.5M	\$0.5M
total project	\$8.1M	\$8.0M	\$7.4M	\$2.3M

update on cost estimates | general*

	light renovation	medium renovation	heavy renovation	new construction
base +	\$180	\$235	\$250	\$270
general conditions	\$45	\$65	\$65	\$70
total construction	\$225	\$300	\$315	\$340

^{*}costs per square foot

small group break out sessions

Q1: What key issue details should the process explore?

- 1. Educational 4. Costs
- 2. Facilities 5. Other
- 3. Site

Q2: What are your priorities and briefly explain why?

Q3: How would you define a successful study/project?

Thank you.

- completion of preliminary component cost estimates
- initial development of comprehensive pathways
- next public meeting: Oct 16, 2014
- refinement of comprehensive pathways based on public comment and feedback
- state of the town: Nov 15th, 2014

TOWN OF LINCOLN – LINCOLN SCHOOL STUDY

PUBLIC MEETING #1, SMALL GROUP RESULTS

SUMMARIZATION OF SMALL GROUP RESULTS (#) indicates number of groups with similar response

Question #1: What key issue details should the process explore?

- (6) Education
- (5) Facilities
- (6) Site
- (6) Cost
- (2) Safety
- (3) Accessibility
- (1)Break Out Spaces
- (3) Kitchen Facilities
- (4) Center Fields
- (2) Energy Efficiency
- (1) Class Size
- (4) Flexibility
- (2) Warm, Safe and Dry
- (1) Striking balance between school, fields, greenery, and community
- (1) Minimize impact to students during construction
- (1) Teacher Retention
- (1) Long term solution [50 years +/-]
- (1) Minimal Planning Window [10-15 years+/-]
- (1) Minimize Specialized Facilities
- (1) Recreational Facilities
- (1) Integrate Parents/Grandparents into Educational Strategy

Question #2: What are your priorities and briefly explain why?

- (4) Education
- (5) Facilities & Code compliance
- (2) Site
- (4) Cost
- (3) Safety
- (3) Cafeteria
- (1) 2nd grade classroom size
- (1) Internet access
- (1) Electric upgrades
- (1) Traffic management
- (1) Knowing long term true cost long term costs, life cycle/payback/operating
- (2) Warm, Safe and Dry
- (1) Fire Suppression
- (2) Preservation of Center Field
- (1) Safe Parking
- (3) Flexibility
- (2) Energy Efficiency
- (1) Technology
- (1) Accessibility
- (1) Long term solution [50 years +/-]

Question #3: How would you define a successful study/project?

- (3) Range of options for town to identify as priorities
- (1) Full inspection of current circumstances
- (1) No more study money
- (2) A clear strategy for moving forward with consensus
- (3) Solution that the Lincoln Community can support
- (1) Bring together the community center project and school buildings
- (1) Minimize the amount of Town decisions to get a final outcome (i.e no overrides)
- (1) Articulate educational vision that motivates elements beyond general comfort and safety.
- (1) Need single long term solution

TRANSCRIPTION OF SMALL GROUP TABLE RESULTS

Group #1

Priority

- 1. Educational (6)
- 2. Facilities (1)
- 3. Site (1)
- 4. Cost (1)
- 5. Other (3)

Comments

- Justify "outcome" of facility improvements.
- Teachers must be on board with educational goals/changes
- A good teacher in a poor facility better than inverse.
- 1-4 "All are important" "This is an assessment not an educational vision"
- What is the educational benefit of the renovation?

TRANSCRIPTION OF SMALL GROUP TABLE RESULTS

Group #2

Question 1

- 1. Education Communal Spaces? Flexible Space?
- 2. Site
- 3. Other Safety, Sprinklers
- 4. Facilities Roof, Temperature Control, Cafeteria, Kitchen.
- 5. Costs Prioritize community needs

Question 2

- Climate
- Roof
- Windows
- Cafeteria All of these "Interior climate" are conducive to learning
- 2nd grade classroom size
- Internet access
- Electric upgrades
- Traffic management
- Safety

Question 3

- Range of options for town to identify as priorities
- Full inspection of current circumstances.

TRANSCRIPTION OF SMALL GROUP TABLE RESULTS

Group #3

Question 1

- Cost (thoroughly explore cost alternatives)
- Payback windows
- 2nd Grade wing (thermal)
- Accessibility
- Break out spaces
- Fire suppression
- Kitchen facilities

Question 2

- New long term true cost –long term costs, life cycle payback operating.
- Warm, safe (reasonably) quiet learning environment, fire suppression
- Preserving center field
- Safe parking
 - o Traffic pattern
 - o Pedestrian access

Question 3

- No more study \$
- A clear strategy for moving forward with consensus

Group #4

Question 1

- Building should function well
- Mechanical issues
- Air conditioning
- Windows, roof, insulation, tech infrastructure
- Feeling from former vote: Want building to be essentially the same from the outside
- Coordination with Community Center Study
- Site: Safe
- Priority: "Get something that will get approved"
- Better playing fields esp center field drains
- Energy efficient building

Question 2 [Group did not respond]

Question 3

- Some consensus before a major vote
- Series of opportunities to weigh in

Group #4

Question 1

- Adaptable to different education styles
- Durability over time
- Adaptability to different educational needs
- Not reinventing the wheel
- Class size concern-supports a commitment to small class sizes
- Retain flexibility to accommodate changing class sizes
- Building that is warm, safe and dry is paramount
- Things that need to be fixed that are not in the blds
- Lincoln community vs. school grounds needs
- Striking a balance between school field//greenery usage and just overall community

Question 2

- Educational needs of students are met
- · Comfortable teaching and learning environment
- Adaptability of the building to meet needs for many years
- Smart, green, lower operational costs, flexible spaces/adaptability

Question 3

- Solution that the Lincoln community can support
- Solution where voices can be heard
- Bring together community ctr project and school buildings
- Minimize the amt of town decisions to get a final outcome (ie # of overrides)

Group #6

Question 1

- Educational
 - o Flexibility over time
 - o General comfort of students
 - o Minimize "kids in trailers"
- Impact and transition (least distraction to students)
 - o Teacher retention
 - Safety
 - o Accessibility
 - o Kitchen & Cafeteria
- Successful outcome
 - o Articulate educational vision that motivates elements beyond general comfort and safety
 - o Need single long-term solution
 - o Will \$ improve education?

Question 2 [Group did not respond]

Question 3 [Group did not respond]

Group #7

Priorities: 1=Most important 3=Least

Education

2-Flexibility 1-Technology

Facilities

- 1.5- Code
- 1.5- Environment
- 1- Safety
- 1.5- Accessibility (Handicapped) (Access to outdoors) (Retain existing)
- 1.5 Cafeteria (Separate from gym)
- 2.5 Adjacency (affected by schedules)

<u>Site</u>

- 2.8 -Parking (Public)
- 3 Soccer Concern that centerfield slopes outward (safety)
- 2.8 Reed gym connector
- 1 Cost, affordability, budget

Group #8

Question 1

- Flexibility in achieving
- Requirements of a 50 year window
- Preserve the "green" a central site
- Consider other uses of the ball field site
- Determine town tolerances to costs

Question 2

- Educational excellence within out cost tolerance until mid-century
- One that has 2/3 of the town voting "aye" at town meeting

Question 3

• Connecters to outdoors

Group #6

Question 1

- Safe, good quality air and ventilation, up to code (safety) Inspections
- Cost/Budget
- Preservation of the environment/central common
- Flexibility (These are all a priority)

Question 2 [Group did not reach consensus on priorities. Results reflect individual opinions.]

- a. Education-Modern innovative, flexible design of spaces
- b. Cost
- a. Safety
- b. Cost
- c. Education
- a. Cost/Budget
- b. Safety
- c. Long term planning
- a. Evaluate renovates vs. new const.
- b. Cost
- c. Educational experience
- a. Safety
- b. Cost
- c. Comm access flexibility
- a. Fixing bare min (broken codes)
- b. Educational experience
- c. Air quality
- a. Preservation of open access of rooms, central common green
- b. Fix bare min (broken issues, roof)
- c. Flexibility

Question 3

Consensus

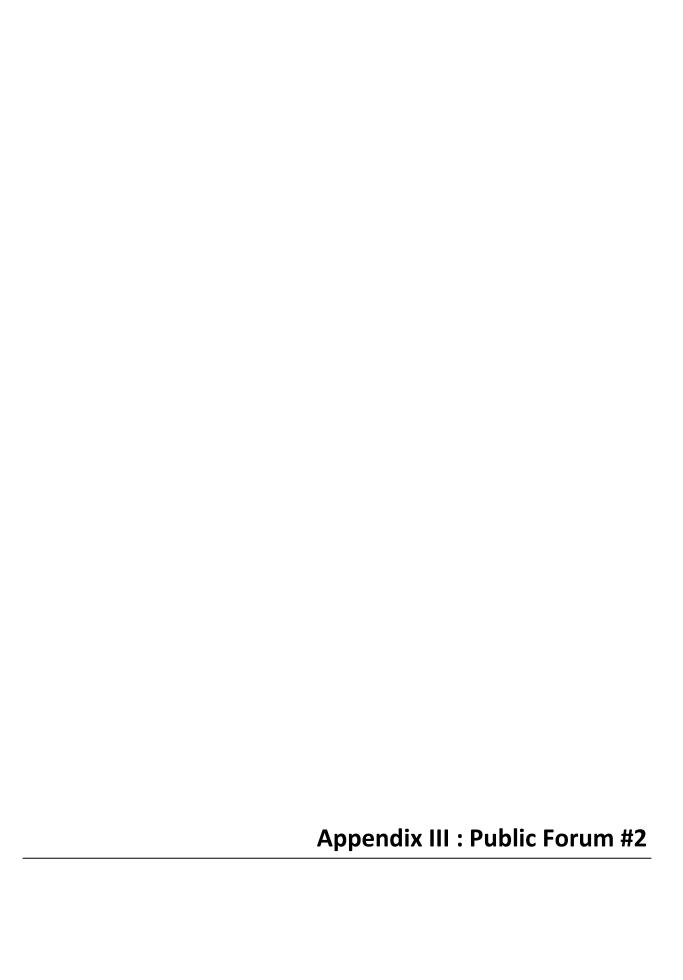
Group #10

Question 1

- Keep the green
- Build in flexibility/versatility to accommodate educational philosophies that may change over time
- Minimize number of specialized facilities that may be obsolete over time
- Integrate rec facilities
- Explore implications of planning for 10-15 year window of educational philosophy and relevance
- Integrate parents, the elderly and rec into educational strategy
- Create environment that fosters development of social skills among children
- Maximize educational benefit for minimal costs
- Become energy efficient.

Question 2 [Group did not respond]

Question 3 [Group did not respond]





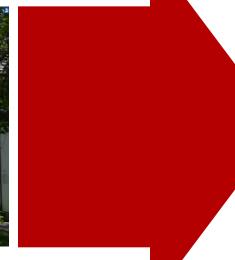
lincoln public schools

study of the lincoln school









... establishing a credible pathway forward

agenda | public meeting #2

- Introduction
 - Overview of meeting
 - Summary of previous mtg.
- Lincoln's educational vision
- Presentation of initial conceptual options
- Small group examination of options
- Reporting out

public meeting results | question #1

What key issues should the project explore?

- Educational Vision
- Site Sensitivity
- Cost to Town
- Facilities Implications

public meeting results | question #2

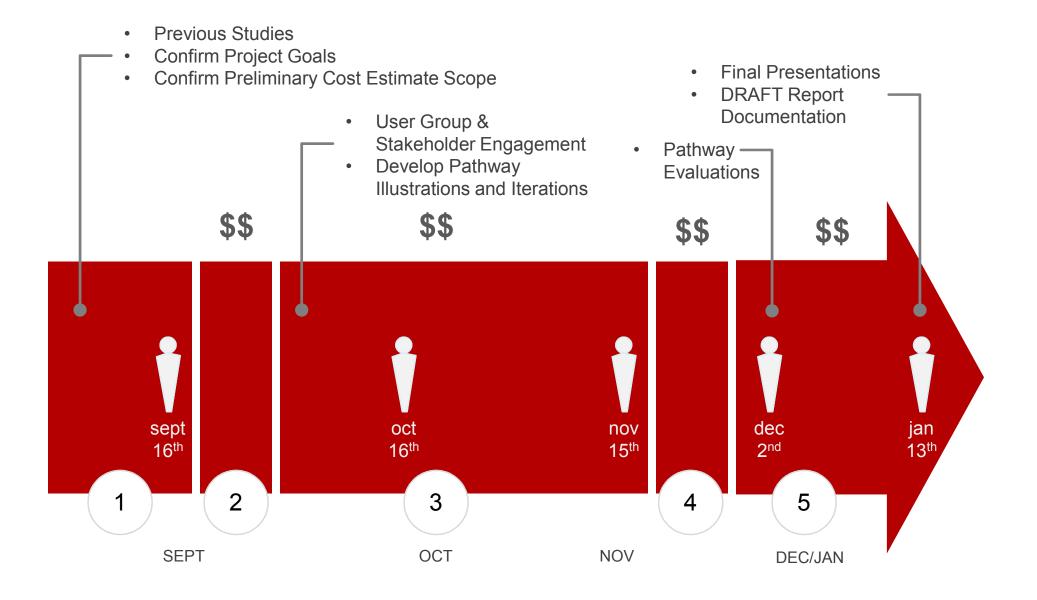
What are your priorities?

- Facilities and Code Compliance
- Education
- Cost to Town
- Safety & Security
- Site Sensitivity

public meeting results | question #3

How would you define a successful study?

- Exploration of a full range of options
- Solution that Lincoln community can support
- A project that considers Community Center project in parallel
- A single long-term solution



SchoolBuildingAdvisoryCommittee

October 16, 2014





Educational Vision and School Design

Looking at Educational Vision Through Different Lenses

- Educational Outcomes
- Educational Process
- Individual Experiences
- The Whole Child
- The Whole School Community

District Vision Statement

The **Lincoln Public Schools** seek to...

- unite our communities in challenging and equipping our students to acquire essential skills and knowledge,
- think creatively and independently,
- exhibit academic excellence,
- appreciate and respect diversity,
- demonstrate creativity,
- value reflection,
- work hard and play fair.

LINCOLN PUBLIC SCHOOLS STRATEGIC PLAN 2013-2015

Vision

The Lincoln Public Schools seek to unite our communities in challenging and equipping our students to acquire essential skills and knowledge, think creatively and independently, exhibit academic excellence, appreciate and respect diversity, demonstrate creativity, value reflection, work hard and play fair.

Theory of Action

IF we continue to build educator expertise and a shared vision of effective teaching, refine curriculum and instruction, and use assessment and data effectively, THEN we will respond to student needs skillfully and we will strengthen the engagement and achievement of all students.

Strategic Objectives							
Educator Growth: Build educator expertise and a shared vision of effective teaching through the new educator evaluation system, professional collaboration, and professional development	Curriculum and Instruction: Refine curriculum and instruction to strengthen the engagement and achievement of all students	Assessment and Data: Use assessment and data to effectively promote and monitor student growth	Responding to Student Needs: Respond skillfully to the academic, social emotional, and physical needs of all students				
Strategic Priorities							
Develop understanding and practices in the "Standards and Indicators of Effective Teaching Practice" among all faculty and administrators by observing lessons and analyzing student work	Provide professional development aligned with the 5 Key Questions for Learning: • authentic learning • learning targets / objectives • meaningful exchanges • assessing student understanding • differentiating instruction	Determine the primary data collection and analysis needs of the district and select and implement a data management system and other tools that allow faculty and administrators to utilize data to inform instruction and programmatic decisions, and assess the effectiveness of our practices	Provide professional opportunities to refine the differentiation of curriculum and instruction to effectively teach the full range of learners				
Develop administrator skill in coaching, conducting observations of teaching, and providing meaningful feedback to educators	Analyze instruction and student assignments for content and structure and adjust for the level of demand and engagement	Refine and pilot our District Determined Measures	Monitor the progress of students identified with "high needs"* and adjust instruction to narrow achievement gaps				
Develop team expertise in focusing on student learning goals and growth using reflective collaborative practices	Continue refining curriculum to align with new MA Curriculum Frameworks in ELA, math and science	Support educator use of data to monitor student growth and inform instruction	Continue to refine our implementation of Goal Focused Intervention Plans				

^{*} Students with Disabilities, English Language Learners or Former English Language Learners, and Low-Income Approved by School Committee 6/20/13

District Strategic Plan: Theory of Action

IF we continue to build <u>educator expertise</u> and a shared vision of <u>effective teaching</u>, refine <u>curriculum</u> and instruction, and use <u>assessment and data</u> effectively,

THEN we will respond to <u>student needs</u> skillfully and we will strengthen the <u>engagement and achievement of all</u> students.

District Strategic Plan: 2013 – 2015 Strategic Objectives

- Educator Growth
- Curriculum and Instruction
- Assessment and Data
- Responding to Student Needs

Steps Taken to Achieve District Objectives

- Educator Evaluation System
- Focus on Instruction and Student Engagement
- Changing Emphasis for Principals
- New District Administrators with New Ideas and Approaches (Superintendent, Assistant Superintendent, Director of Technology)

5 Key Questions for Learning

- 1) What evidence demonstrates that students know the **objective** and/or learning target?
- 2) In what ways does the lesson engage students in authentic learning?
- 3) What evidence is there of **meaningful exchanges** between teacher and individual students and between students?
- 4) In what ways does the teacher **assess student understanding** related to the objective and/or learning target?
- 5) Did the teacher differentiate the instruction and learning experiences to meet the range of learners in the class?

Authentic Learning

- Learning has a purpose that creates engagement and understanding of why a task is being carried out.
- Students have an intended audience that will view their work, provide feedback, and partner in the learning process.
- Students make connections between learning and the wider world. Students use authentic skills and processes.



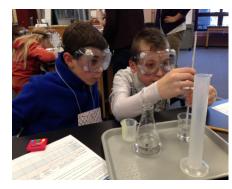




How can a facility...

Help us realize our educational vision?

Help us meet our Strategic Objectives?





+

Key Educational Components

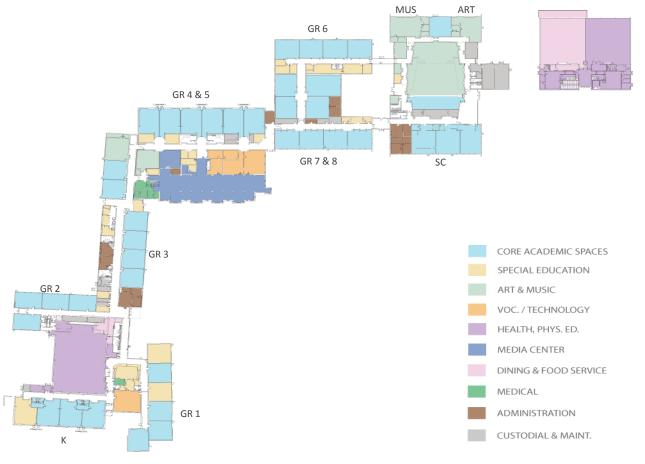
- Programmatic flexibility: variety of spaces for small and large groups; spaces can be used for more than one purpose depending on educational needs
- Enhance opportunities for student and staff collaboration through building layout
- Technology infrastructure for current and future educational needs
- Connection to the community and the environment







Existing Grade Layout





Current "Flexible" Spaces for Students and Faculty



Hallways

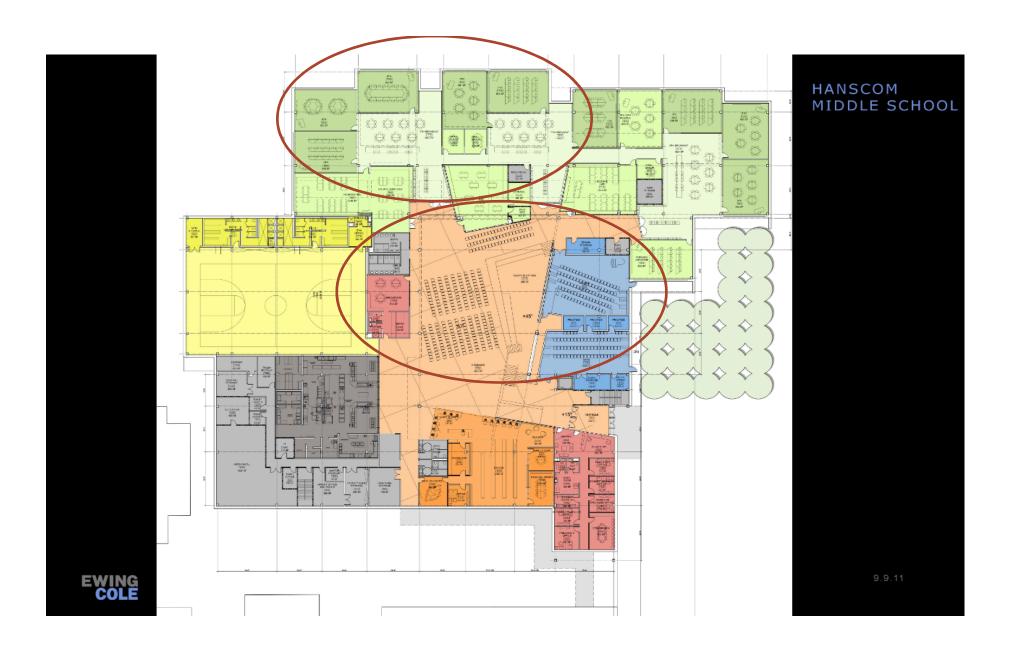


Closets

These spaces are used for enrichment, remediation, independent group work, and assessment.

HANSCOM SCHOOL DESIGNS

HMS Completion Expected Summer 2016 HPS Completion Expected Summer 2018



Flexible Spaces



Hanscom Middle School: Final Design, Commons

EwingCole ©2010



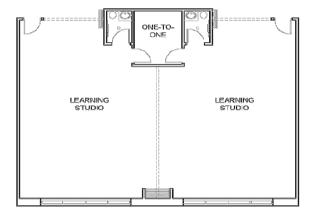
Scheme A - Distributed Neighborhoods with Flex Studios

EwingCole ©2010

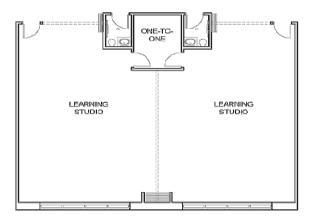
STUDENT WORK DISPLAY OPPORTUNITIES



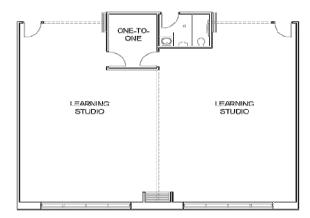
HPS



Hanscom PK/K Proposed



Hanscom Grades 1-3 Option



Hanscom Grades 1-3 Option

Typical Primary School Classroom Options

EwingCole ©2010



COMMONS AREA: DINING, LARGE GROUP WORK/PRESENTATIONS, STAGE

EwingCole ©2010

EXAMPLES FROM OTHER SCHOOLS



CONCORD SCHOOLS, NEW HAMPSHIRE— HMFH ARCHITECTS



Park Brow School, Liverpool England — 2020 Liverpool

EwingCole ©2010



BACKUP SLIDES

Core Expectations for Teaching and Learning

- Collaboration
- Differentiation meeting the individual learning needs of each student
- Integration of Technology
- Purposeful, authentic learning experiences
- Inclusion model of Special Education



Collaboration

What's Needed?

A building that allows for greater formal and informal collaboration between teachers and students.

- Spaces designed for small groups
- Spaces for larger groups such as a grade level
- Group spaces easily accessible by multiple users
- Core facilities (e.g. cafeteria, gyms, library) easily accessible to all students

Why?

Collaboration develops problem-solving and communication skills.

Creativity and innovation are fostered. Teachers share their expertise to benefit all students.

Differentiation

What's Needed?

 Varied learning spaces to meet the varied learning needs of students.

Why?

- Independent small group work: supports projects & students ready for additional challenges
- Small group work with a teacher: supports students at all levels

Integration of Technology

What's Needed?

Maintenance of infrastructure to meet increasing needs

Why? Teachers require consistency of connectivity in order to invest time and effort into developing integrated instruction.

- Provide adequate access to technology hardware
- Plan so that upgrades can be more easily performed in the future

Purposeful, Authentic Learning Experiences

What's Needed?

- Learning spaces that are alternatives to classrooms
- Range of group sizes (e.g. a few students or a whole grade)
- Flexible: not as specialized as an auditorium, library, or gym.

Why? Authentic learning can take many forms such as an exhibition of work, a poetry slam, a presentation to the conservation commission.

Inclusion Model of Special Education

What's Needed?

◆ Small group learning spaces

Why?

- Provide services to an individual student or small group
- Less disruption to the child and the class as a whole



school needs | SBAC I

- Flexible Educational Space
- New Kitchen and Cafeterias
- Breakout Rooms
- Improve 2nd Grade Space
- Security and Safety at the Reed Gym
- Accommodations for Students with Special Needs
- Need to Improve the Lighting, Air Quality and Acoustics
- Need to Improve the Building Envelope
- Addressing Flooding at Smith Boiler

school needs | CDR MacGuire

1. REED	Precast	Panel	S
---------	---------	--------------	---

- 1. Smith Boiler and Room
- 1. Smith Unit Vents
- 2. Life Safety Generator
- 2. Brooks Main Electrical Switch
- 3. Roofing
- 3. Lighting
- 3. Mechanical Ventilation
- 3. Electrical Upgrade

- 3. Toilet/ Sink Upgrade
- 3. Window Replacement
- 3. Flooring Upgrade
- 4. Heating/ Mechanical Upgrade
- 4. Toilet/ Sink Upgrade
- 4. Electrical Upgrade
- 4. Auditorium Seating
- 4. Carpets and Paint
- 5. Temp Classrooms

school needs | CDR MacGuire

- 6. Fire Suppression
- 6. Fire Alarm Upgrade
- 6. HVAC Digital Controls
- 6. Abatement
- 6. ADA/ MAAB Upgrade
- 6. Auditorium Roof

- 7. Window Upgrade
- 7. PA Upgrade
- 7. Back-up Power
- 7. Auditorium Lighting Upgrade
- 7. Building Envelope and Reed Gym

existing facility | comprehensive needs

- Educational Vision Upgrades
- Mechanical Upgrades
- Electrical Upgrades
- Plumbing Upgrades
- Accessibility
 Compliance

- Kitchens and Cafeterias
- Hazmat Abatement
- Building Envelope
 Upgrades
- Structural Updates
 - Fire Suppression
 - Fire Alarm Updates





existing facility warm, safe, dry & accessible

- Fire Suppression
- Fire Alarm Updates
 Building Envelope
- Accessibility
 Compliance

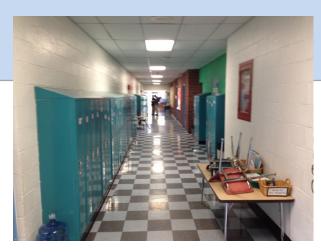
- Mechanical Updates
- Building Envelope
 Upgrades
- Hazmat Abatement





existing facility programmatic needs

- Kitchens & Cafeterias
- Small Group Rooms Hub Spaces
- 2nd Grade Classroom **Upgrades**
- Classroom Neighborhoods
- Spatial Adjacencies
- Windowless Classrooms and Specialist Spaces







update on cost estimates | roofing scope

	opt 1 EPDM	opt 2 PVC	opt 3 TPO
hard costs +	\$2.3M	\$2.5M	\$2.3M
soft costs @ 25%	\$0.6M	\$0.6M	\$0.6M

total project \$2.9M \$3.1M \$2.9M







update on cost estimates | window scope

	opt 1 energy 2030 (15,330 SF)	opt 2 poor cond. only (5,306 SF)
hard costs +	\$2.0M	\$0.6M
soft costs @ 25%	\$0.5M	\$0.2M

total project \$2.5M





\$0.8M

update on cost estimates | mechanical scope

	opt 1 (full ac w/ VAV)	opt 2 (full ac w/ induction)	opt 3 (new UV w/ CHW)	opt 4 (add split ductless
hard costs +	\$6.5M	\$6.4M	\$5.9M	\$1.8M
soft costs @ 25%	\$1.6M	\$1.6M	\$1.5M	\$0.5M
total project	\$8.1M	\$8.0M	\$7.4M	\$2.3M







update on cost estimates | accessibility scope

	Interior Doors	Exterior Doors	Toilets & Sinks	Auditorium & Stages
hard costs +	\$.04M	\$.07M	\$.90M	\$.33M
soft costs @ 25%	\$.01M	\$.02M	\$.23M	\$.08M

total project

\$.05M

\$.09M

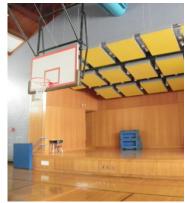
\$1.13M

\$.41M









update on cost estimates | fire suppression

Fire Suppression
System

Impacted Ceilings

hard costs +

\$.94M

\$.35M

soft costs @ 25%

\$.24M

\$.09M

total project

\$1.8M

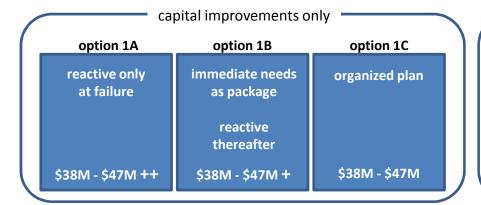
\$.44M



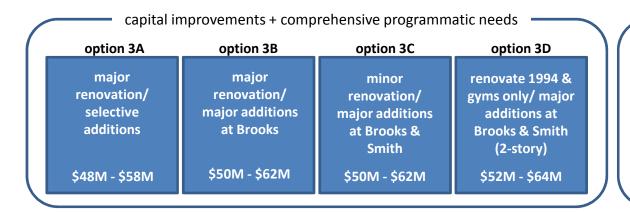
preliminary options | basis of development

- address facility needs w/ time as variable
- address programmatic needs in incremental steps
- retain basic site planning:
 - L-shaped building
 - sensitivity to central green
 - retention of existing trees
 - sensitivity to wetlands, river fronts, vernal pools, etc.
- varying levels of renovations & additions
- explore all new construction for informational purposes only

preliminary options summary



capital improver	capital improvements + ala carte programmatic needs			
option 2A	option 2B	option 2C	. '	
kitchens & cafeterias only	small group rooms only	2 nd grade classroom upgrades only		
\$41M - \$51M	\$39M - \$47M	\$40M - \$48M		



option 4

all new construction

\$55M - \$68M

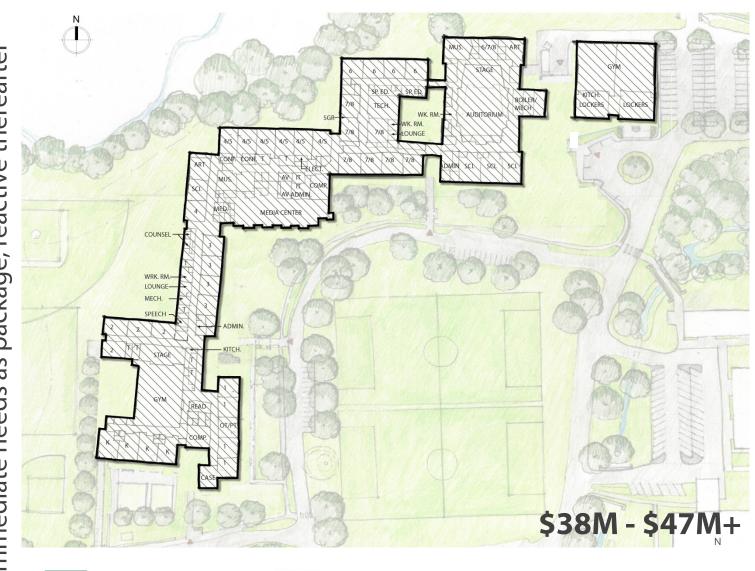
PROGRAMMING NEEDS



NEW CONSTRUCTION

option 1B

immediate needs as package, reactive thereafter

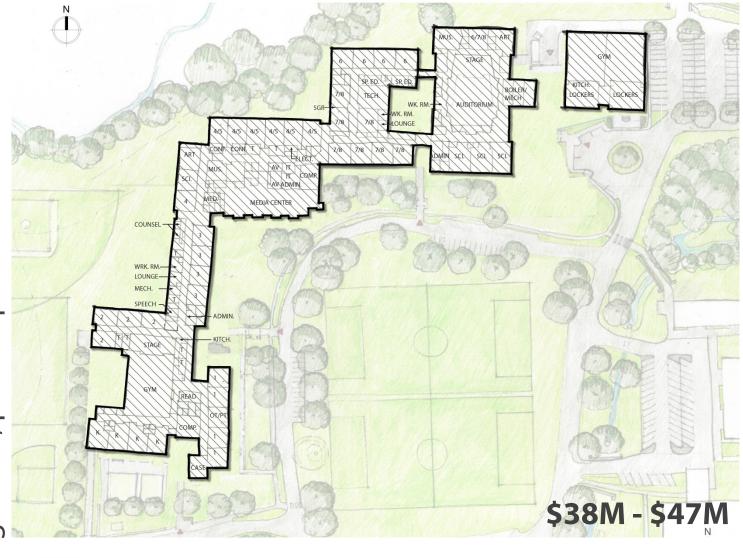






option 1C organized, phased plan

PROGRAMMING NEEDS



NEW CONSTRUCTION

option 2A kitchens & cafeterias only









NEW CONSTRUCTION



COUNSELsmall group rooms only WRK. RM.-LOUNGE-MECH. \$39M - \$47M

option 2B

PROGRAMMING NEEDS



NEW CONSTRUCTION



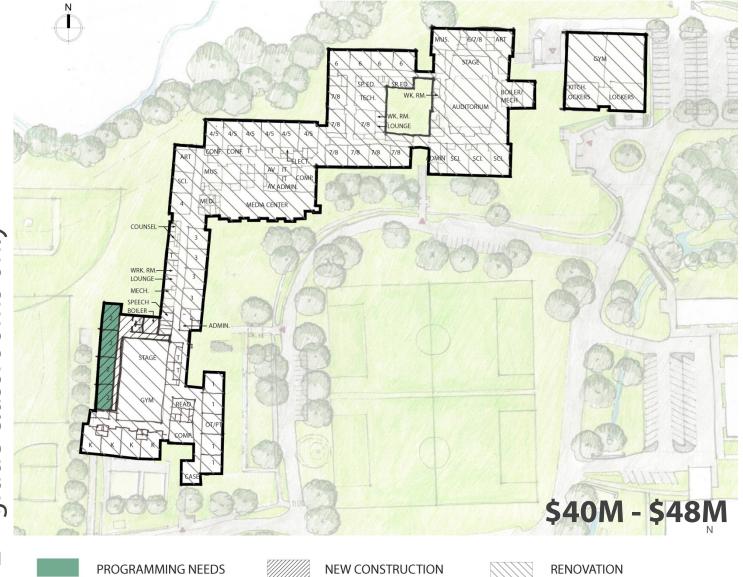
option 2C.1 2nd grade classrooms only

PROGRAMMING NEEDS



NEW CONSTRUCTION

option 2C.2 2nd grade classrooms only



option 3A

PROGRAMMING NEEDS

major renovation/selective additions EVENT ENTRY BROOKS ENTRY \$48M - \$58M

NEW CONSTRUCTION

option 3B

major reno/major additions at Brooks











option 3C

minor reno/major add. at Brooks & Smith







NEW CONSTRUCTION



option 3D

reno. 1994 & gyms/major add. at Brooks & Smith



option 4 | all new construction



\$55M - \$68M

preliminary options summary

option 1A

option 1B

option 1C

reactive only at failure

immediate needs as package

reactive thereafter

\$38M - \$47M ++ \$38M - \$47M + \$38M - \$47M

capital improvements + ala carte programmatic needs								
	option 2A	option 2B	option 2C					
	kitchens & cafeterias only	small group rooms only	2 nd grade classroom upgrades only					
	\$41M - \$51M	\$39M - \$47M	\$40M - \$48M					

capital improvements + comprehensive programmatic needs option 3A option 3B option 3C option 3D major major renovate 1994 & minor renovation/ renovation/ renovation/ gyms only/ major selective major additions major additions additions at additions at Brooks at Brooks & **Brooks & Smith** (2-story) Smith \$48M - \$58M \$50M - \$62M \$52M - \$64M \$50M - \$62M

option 4

all new construction

\$55M - \$68M

- All costs are conceptual in nature, in 2013 dollars, and represent only a preliminary understanding of the scope required to implement the options.
- All costs are total project costs.
- Phasing and escalation costs are included where appropriate

DRAFT public forum #2 –10.16.14

small group break out sessions

Q1: Which of the programmatic components excited you? Why?

Q2: What additional questions to have about how the Educational Vision impacts facility design?

Q3: What are your initial thoughts about the range of options presented?

Q4: What about an option(s) excited you? Why?

Q5: What other option(s) or combinations of options should the Design Team explore?

Q6: What questions do you have about the options?

Upcoming Public Forums:

November 15th State of the Town Meeting

December 2nd 7pm – 9pm, Reed Gym

January 13th 7pm – 9pm, Reed Gym

Thank you.

- refinement of the options based on public comment and feedback
- state of the town: Nov 15th, 2014

LINCOLN SCHOOL STUDY

PUBLIC MEETING #2 – DRAFT RESULTS, FLIP CHART TRANSCRIPTIONS

OCTOBER 16TH, 2014

At the Lincoln Public Meeting held on Oct. 16th,Dr. McFall, Superintendant of Lincoln Public Schools, gave a brief presentation of the district's educational vision. Dore and Whittier Architects followed with a presentation outlining a rangeof conceptual options and costs meant to address both building and educational needs in incremental steps. Options ranged from a reactive repairs approach to heavy renovation to new construction. Members of the town were asked to react to the presentations and respond the following prompts:

- 1. Which of the programmatic components excited you? Why?
- 2. What additional questions do you have about how the Educational Vision impacts facility design?
- 3. What are your initial thoughts about the range of options presented?
- 4. What about an option(s) excite you? Why?
- 5. What other option(s) or combinations of options should the Design Team explore?
- 6. What questions do you have about the options?

Summary

The results of the small group exercise suggested there may be:

- A desire to align the educational vision with the building layout.
- Little support for Options 1 and 2.
- A desire to focus attention on exploring the set of Option 3 as it may provide the most value to the town.
- A desire to see a full range of options that will include a new construction solution as well as a two story solution on the existing site.
- Interest in seeing the full itemized Capital Improvement Plan and its associated costs.
- Value in exploring community use of school spaces.
- Value in exploring the Community Center with the school building project concurrently.
 More information is needed to understand the integration of the Community Center.



Below is a transcription of the responses of town members:

Table 1

Programmatic Components:

- Technology
- Some spaces can the serve the community
- Concern about travel time in current and future situations
- 3A looks better for grades 5-8

Series 1 "Costly relative to value" Can be spread over time

- But not guaranteeing cost
- No planning

Series 2

- 2A -Great but not enough
- 2B-Don't bother, doesn't do enough, No interest
- 2C Not enough

Series 3 "Most bang for the buck (But could be a hard sell)

- 3D Probably offers most for our \$
 - o New Classrooms
- 3A Gets you most of what you want
 - o Would it cost less?

Other Ideas:

- 2 Story building on "Link & Brooks" footprint
- Use current Smith as a community center or
- Smith becomes open space.

Table 2

The classrooms are so stuffy. The kids are falling asleep

- New heating system can be much more efficient.
- What excites me is that I want to fix everything that is wrong with the building. Air is more important than breakout rooms.
- If you do piecemeal, the town has to pay for all of it
- If we build a sparkling school, would we have fewer kids going to a private school?

First reaction:

- Eliminate Options 1A-2C
- Look only at 3

Will we need new spaces for a changing school population?

Emphasize openness of classrooms to outside.

Second story: Balance esthetics and energy efficiency



Importance of project-based learning. Build spaces that accommodate new style of learning.

Table 3

No discussion [of question 1] No discussion [of question 2]

[Question 3]

- Struggling on how we arrive at \$38M as a minimum.
- Ala carte bundle seem to add \$6M to base capital improvements. MSBA funding wont likely kick in until we reach option #3 Or will it?

[Question 4] 3A, 3B, 3C or 3D [Question 5] No discussion [Question 6] No discussion

Table 4

- Have we asked students for input?
- Are there benefits to planning with the Community Center? Costs?
- Costs-Only modest cost increments between levels.
- Why cost escalating from 40+ million to 60 million?
- We have to decide what we want to spend at the same time we decide what we want.
- How about 2a + 2c or 2a +2d?
- Any scheme better in terms of green
- What does 2nd floor get you? More dynamic scheme?
- Question about AC? Climate control
- Difficult to choose between ala cart menu
- Why not all new/new school
- Community center on same campus

Table 5

Flexible spaces

Hubs

Link between education and building

- More on building new on existing footprint
 Incorporate community center explicitly
 Like idea of using swing spaces for community
 Want to incorporate all ages on campus and part of authentic learning (intergenerational)
- Why can't we do new construction in existing footprint?
 Keep most of historic smith (2nd grade can go)



Table 6

- How do we maintain facility?
- Is there documented breakout spaces?
- Technology ever changing-How do we maintain a plan that meets learning needs over time?
- Can we get state funding?
- What do we do with no state funding?
- Get a cafeteria
- Fix Grade 2 wing
- Is Option 3d with funding (state or otherwise) cheaper than just 1a (60-20m funding)

Considerations:

- How does the building support property values?
- How is tax bill impacted by any 1 option vs. current operating & maintenance?
- Marry community center to school

Table 7

- None of this is surprising-The conclusions echo what was reported by last architects in last proposal.
- Would like to see menu of elements with costs
 - o Eg what does it cost to add a cafeteria? 3-4 million
 - o What does it cost to add small group rooms? +1 Million
- Code triggers and 3 year window between projects really tie our hands and limit options
- Piecemeal renovation is disruptive for a time
- Demolition is inherently not "green"-wastes the energy originally used in construction
- Costs as much to make old walls & roofs insulted, brought up to structural code, etc. As new construction
- The cost of programmatic elements related to capital improvements is small, so favor doing as many programmatic elements as possible.
- What assumptions have been made that we don't know but might answer differently?
- Second story helps prevent extending the footprint even more.

Table 8

- Kitchen/cafeteria that connects reed field house to Brooks (7 of 8)
- Hub spaces (7 of 8) with neighborhoods
- Small group rooms (5 of 8) With special ed spaces part of it.
- Neighborhoods (with professional development about how to use them) (5 of 8)
- 2nd grade classrooms (6 of 8)
- Spatial adjacencies (0 of 8)
- Windowless spaces (8 of 8)
- Not excited about any of option 1
- Most interested in Option 3 family



- Some interested in Option 4
- Option 2 choices seem incomplete
- Would like to see nice facility and staff space (faculty room, place to gather)
- 3D makes a community space which is attractive whether or not there is a 2nd story having community access to the building is important (to cafeteria and gym)
- Is there a way to get café/lobby without going to a second story?
- 3C like the community space at auditorium needs more classrooms at elementary end.
- Would like to see 2A and 2C combined

Table 9

- Preference for option 3 since savings for "repair only" is not large
- One cafeteria instead of 2?
- Smart to rebuild side of building that has solar load problems?
- Practical issue of how food delivery gets to cafeteria
- Like 2nd floor cost and energy efficiency!
- Some feel small collaboration spaces are critically important-others like flexible large spaces
- Like idea of connecting Reed gym and Brooks
- Politically wise to keep existing footprint (roughly)
- More efficient to do all work at once
- Need to have nailed down estimates for the repair option, not just sq feet x sq feet estimate.
 Otherwise some in town will keep saying "just repair it will be cheaper"
- Do repairs significantly lower operating costs going forward?
- Want state funding for this project ok to start considering MSBA feasibility.
- Promote community use of space to get full value from project

Table 10

- Program components. Do you need 2 cafeterias? Important to have educational use and curriculum use.
- Add questions: Educational vision. How are hallways
- With sprinkled buildings/better utilized/or education
- Prefer full concept
- Difficult eliminating program = Question 1
- Like 2 cafeteria as also educational "HUB"
- Breakout learning 1 on 1
- Are there parts of the building (i.e Smith which have extra quality: Architectural Merit)
- Options: All options should be not reactive but logical long-term plan/Bond/Budget
- Need filler review of base money....How individual components are "bundled" on a project basis.

Table 11



- Desire for structure that visually conveys 21st century learning environment
- Create an inviting and respectful interior and exterior that supports an evolving educational vision
- Should reflect Lincoln's values with respect to Green Building principles, nutrition, local farming.
- Do not like options 1 & 2 since they do not seem to address educational vision.
- Expressed preference for option 3C
 - o All on ground floor
 - o Value in retaining as much as possible rather than all new construction
 - Like swing and magnet spaces and adjacency to cafeteria greater potential for use by community







Lincoln Public Schools

Study of the Lincoln School









... establishing a credible pathway forward

State of The Town 15 November 2014

Lincoln School & Community Center



School Building Advisory Committee (SBAC)

Doug Adams, co-Chair, community member

Becky McFall, co-Chair, Superintendent, LPS

Ken Bassett, community member

Owen Beenhouwer, community member

Vincent Cannistraro, community member

Tim Christenfeld, School Committee member

Buck Creel, Administrator for Business and Finance, LPS

Steven Perlmutter, community member

Maggy Pietropaolo, community member

Hathaway Russell, community member

Peter Sugar, community member

Gary Taylor, community member

AGENDA

- 1. About This Study
- 2. Facility Needs
- 3. Educational Vision
- 4. Options
- 5. Questions and Answers
- 6. Feedback Activity

1. About This Study

1. ABOUT THIS STUDY

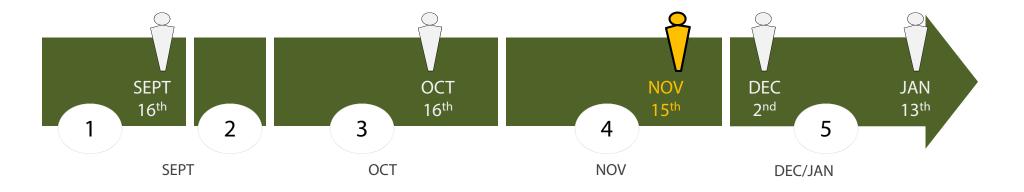
Study Objectives

- Build Community Understanding of the School's Needs
- Position the Town of Lincoln to
 - Decide on the School's Future

1. ABOUT THIS STUDY

Study Tasks

- 1. Identify Facility Needs + Educational Enhancements
- 2. Detailed Cost Estimates
- 3. Develop & Truth Test Incremental Options
- 4. Conceptual Cost Estimates
- 5. Present Findings



2. Facility Neds

2. FACILITY NEEDS





148 Facility Items

Immediate

Near-Term

Deferrable

2. FACILITY NEEDS

Immediate Needs: Approximately 0-5 Years

- Roofing
- Boilers & Boiler Room
- Precast Concrete Walls
- Emergency Generator
- Fire Alarm
- Sprinklers

2.FACILITY NEEDS

Immediate Needs: Approximately 0-5 Years

- Roofing
- Boilers & Boiler Room
- Precast Concrete Walls
- Emergency Generator
- Fire Alarm
- Sprinklers

\$8.4M + \$3.8M

code triggered

= \$12.2M

FACILITY NEEDS

Option 1A

Immediate+ Code Triggered

\$12.2 M

0 – 5 Years

\$8.4M

+\$3.8M

Code Triggered

= \$12.2M

2. FACILITY NEEDS

Near-Term Needs: Approximately 5-10 Years

- Building Enclosure
- Electrical Infrastructure
- Classroom Lighting
- Plumbing
- Heating/Ventilation
- Intrusion Alarm
- Hazardous Materials





2. FACILITY NEEDS

Near-Term Needs: Approximately 5-10 Years

- Building Enclosure
- Electrical Infrastructure
- Classroom Lighting
- Plumbing
- Heating/Ventilation
- Intrusion Alarm
- Hazardous Materials

\$17.0M

FACILITY NEEDS

\$8.4M

+\$3.8M

Code Triggered

+\$17.0M

= \$29.2M

Option 1B

Immediate

- + Code Triggered
- + Near Term

\$29.2 M

0 - 10 Years

2. FACILITY NEEDS

Deferrable Needs: Approximately 10-15 Years

- Interior Finishes
- Remaining Lighting
- Furnishings & Equipment
- Girls' Locker Room
- Paving & Curbing
- Playfield Improvements

2. FACILITY NEEDS

Deferrable Needs: Approximately 10-15 Years

- Interior Finishes
- Remaining Lighting
- Furnishings & Equipment
- Girls' Locker Room
- Paving & Curbing
- Playfield Improvements

\$7.7M

3. Educational Vision



Educational Vision and School Design





State of the Town 2014

* Educational Vision

- What is the educational vision?
- How does the facility connect to the educational vision?

To view the October 16th presentation: www.lincnet.org Click on:

"SBAC Educational Vision Public Forum, October 16, 2014"

* District Strategic Plan: Theory of Action

IF we continue to build <u>educator</u> <u>expertise</u> and a shared vision of <u>effective teaching</u>, refine <u>curriculum</u> and instruction, and use <u>assessment and</u> <u>data</u> effectively,

THEN we will respond to <u>student needs</u> skillfully and we will strengthen the <u>engagement and achievement of all</u> students.

District Strategic Plan: Strategic Objectives

- Educator Growth
- Curriculum and Instruction
- Assessment and Data
- Responding to Student Needs

+

Authentic Learning and Cognitive Demand

- Learning has a purpose that creates engagement and understanding of why a task is being carried out.
- Students have an intended audience that will view their work, provide feedback, and partner in the learning process.
- Students make connections between learning and the wider world. Students use authentic skills and processes.



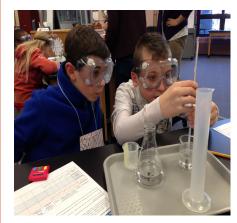




How can a facility....

Help us realize our educational vision?

Help us meet our Strategic Objectives?





+

Key Educational Components

 Programmatic flexibility: variety of spaces for small and large groups; spaces can be used for more than one purpose depending on educational needs



- Enhance opportunities for student and staff collaboration through building layout
- Technology infrastructure for current and future educational needs
- Connection to the community and the environment





Current "Flexible" Spaces for Students and Faculty



Hallways



Closets

These spaces are used for enrichment, remediation, independent group work, and assessment.

Educational Enhancements

Mechanical Systems

- Improved air quality, lighting, climate control
- Acoustical Improvements
- Accessible to All
- Flexible Multi-Use Spaces
 - Cafeterias
 - Small group work spaces
 - Project-based learning spaces

Safety and Security

- Improved entry design
- Link to Reed Gym

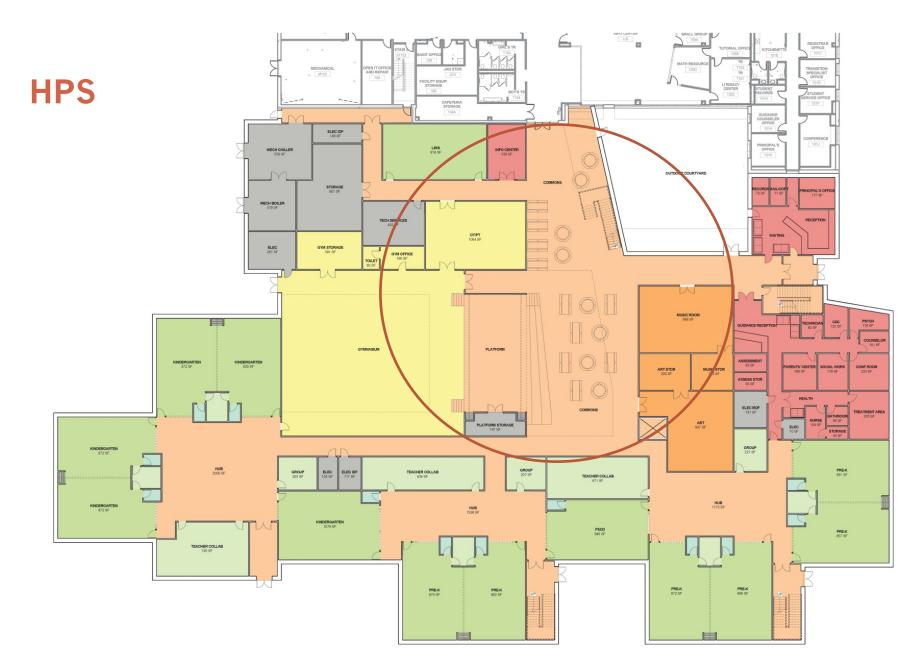
Increased Collaboration

 Layout and design encourage and assist student and faculty collaboration through proximity

Community Use

 Cafeteria and other multiuse spaces

To view the October 16th presentation: www.lincnet.org Click on "SBAC Educational Vision Public Forum, October 16, 2014"



COMMONS AREA: DINING, LARGE GROUP WORK/PRESENTATIONS, STAGE

Flexible Spaces



HANSCOM MIDDLE SCHOOL: FINAL DESIGN, COMMONS

EwingCole ©2010



CONCORD SCHOOLS, NEW HAMPSHIRE— HMFH ARCHITECTS EwingCole ©2010

4. Options

Educational Enhancements – 33 Items

- Classroom Acoustics
 Hub Spaces
- Kitchens & Cafeterias (Multi-Purpose)
- 2nd Grade Classrooms
- Small Group Rooms

- Entry Sequence & **School Offices**
- Neighborhood

Expression

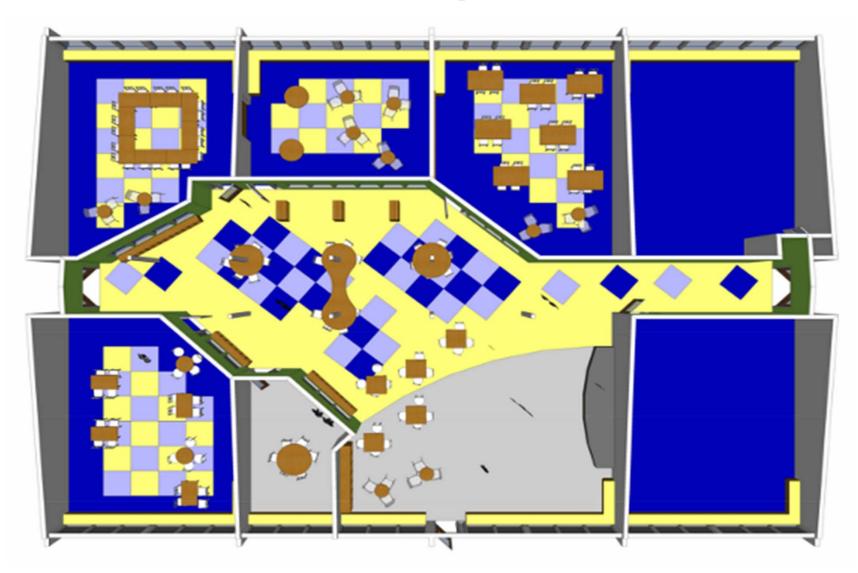


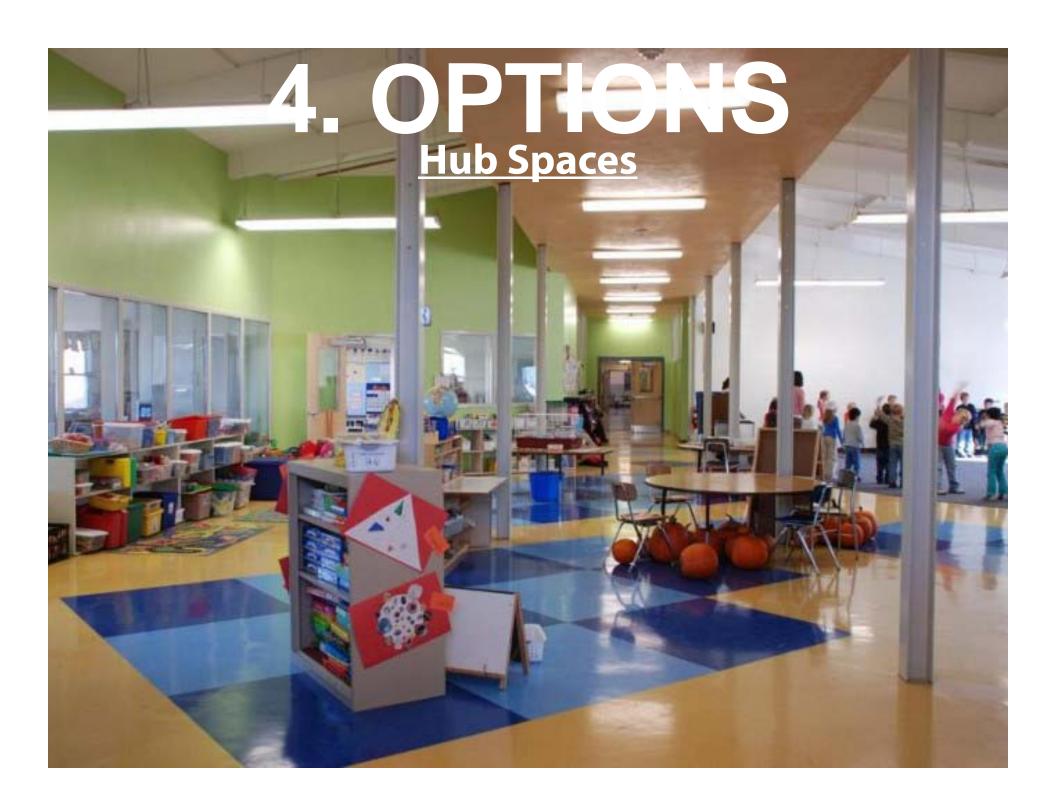


Kitchens & Cafeterias (Multi-Purpose)

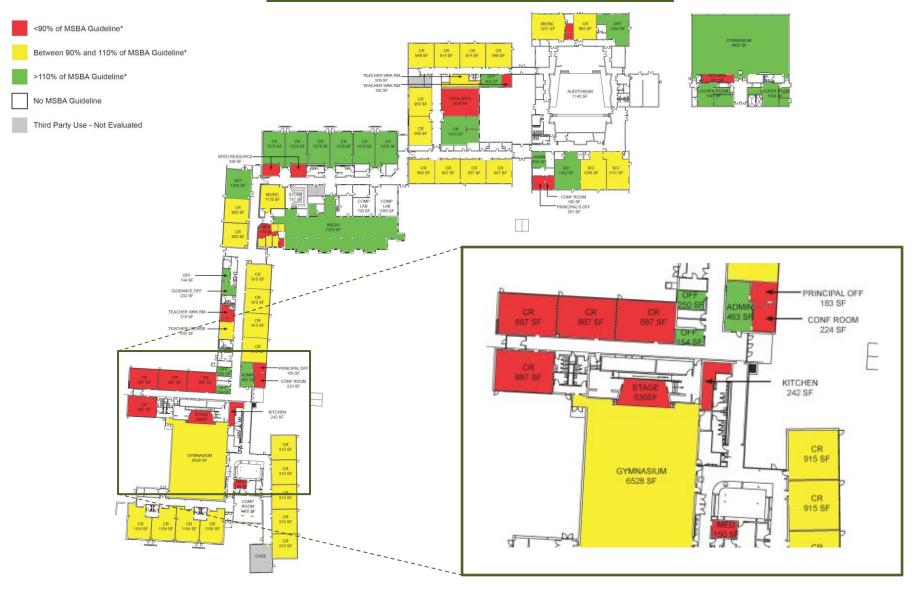


Hub Spaces





2nd Grade Classrooms



Small Group Rooms



Facility
Needs Only

A La Carte Educational Enhancements

Comprehensive Educational Enhancements

À La Carte Educational Enhancements

Option 2B

\$36.9 M

Option 2C

1B

+2C

\$47.6 M

1B 1B + 2nd Grade + Acoustics + Small Group \$29.5 M \$29.8 M \$32.0 M **Option 2D Option 2E Option 2F 1B 1B 1B** + Kitchens +2A +2D + 2A & Cafes +2D + Def

Option 2A

\$36.6 M

Comprehensive Educational Enhancements

Option 3A

Option 3B

Option 3C

Renov.

\$54.7 M

Renov.

New

\$58.8 M

New

\$66.3 M

- Hub Spaces
- Neighborhood Expression
- Improved Spatial Relationships
- Improvements to Special Education Spaces
- Improvements to Entry Sequences
- Improvements to School Offices



À La Carte Educational Enhancements

2 2A 2B 2C 2D 2E 2F 2F \$29.5M \$29.8M \$32.0M \$36.6M \$36.9M \$47.6M

Comp. Ed. Enhancements

3A 3B 3C 3D \$54.7M \$55.8M \$58.8M \$66.3M

5. FEEDBACK

Facility Needs Only - Options 1A & 1B State of the Town Meeting | November 15, 2014

I Like... Support? I Wish... I Wonder... we could add panels to any of

\$12.2M - \$29.2M FULLY FUNDED BY LINCOLN



Lincoln Public Schools

Study of the Lincoln School









... establishing a credible pathway forward

QUESTIONS & COMMENTS

Facility Needs Only - Options 1A & 1B State of the Town Meeting | November 15, 2014



\$12.2M - \$29.2M FULLY FUNDED BY LINCOLN



STATE OF THE TOWN 11-15-2014 TRANSCRIPTION OF PARTICIPANT'S REACTIONS

Option Family 1

I Like:

- Low cost options!
- Do what you can with a million per year in repairs.

I Wish:

- We would recognize that without State \$ we are only looking at modest repairs.
- We could find a way to combine the community center and school.
- I wish the Town could combine new school and community center design, and simply wait for funding. We still have same issues, so there is no reason to think state funding isn't achievable.
- Until state funding, we invest as little as necessary.
- I wish there was a joint proposal of the schools and the community center.
- I wish we could at least clean the seat backs in this auditorium.
- I wish there were a way to talk in a more integrated way about investment in teachers and infrastructure. They both affect our taxes and thus are not completely separate issues.
- I wish we could have suggested resources to help us understand the relationship between facilities and educational outcomes.
- I wish you would include geothermal heating and cooling to eliminate the need to burn fuel for heat--higher up front cost, but lower operating cost.
- I wish/hope we are not too short-sighted; we have to invest for both basic facility needs and educational excellence.

I Wonder:

- Taxes are already so high. Can we cut other areas to fund new school? Also, if a new building, I encourage you to consider LEED certification.

Option Family 2

I Like:

- Bridge from school to Brooks Gym
- Fixing boilers
- Soccer fields where ball doesn't roll into the road.
- I believe it is important to seek State support.
- I like the idea of taking advantage of solar power opportunities as much as possible.
- I'd like us to put a \$40M cap on what we do.
- This was a much better, more succinct presentation. Thank you!
- I like the idea of combining the community center with the schools. Is there overlap of projects? \$55M + \$10M?
- I like the idea of flexible spaces if they can be used by the community when school is not in session.
- I like the idea of connecting the gym to the school via a covered, protected walkway.
- I like the idea that if we are going to invest, and we have to, we are getting educational value out of it.
- 2C is the best compromise.
- I like option 2E--mid price, but includes the major additions needed.
- I like connecting Reed to the main building.
- Break out rooms IF teachers want them.
- I like the way the plans respect the outside environment, and I hope the new additions will make it easy for teachers and students to get outside and extend classroom learning outside.
- I like all the hard work of the committee.

- I like looking for synergy in the two projects.
- Family 2 is my preferred option without state funding.
- I like the classrooms each having an access to the outdoors, both visually and physically.
- Option 2B--I like the idea of these modest improvements and educational enhancements, 1) as a prudent move should we not receive state funds, and 2) a way of leaving enough appetite and funds to do the community center.
- I like the idea of a cafeteria as a community space.
- I like making the cafeteria a multi-purpose room.
- I like a cafeteria to allow kids adequate time to eat lunch and have recess.
- I favor: Immediate needs + near term + small group rooms + acoustics + Brooks bridge cafeteria.
- I like the idea of seeking State funding.
- I like the flex cafeteria/meeting space options.
- I like having a kitchen/cafeteria included in the plan.
- I like the potential for taking the school to the community by having space for them to come in during and after school for educational and other reasons.

I Wish:

- I wish for more solutions based around green, environmental directions that are not included as an afterthought, but at the front end of the decision-making.
- I think we need a whole town approach, not a la carte.
- I wish that the town was more behind MSBA pursuits as future costs for parents for college are daunting.
- I wish my taxes weren't so high already and have increased substantially recently.
- I wish there was info about projections of student enrollments in the next 3-5 years.
- I wish the town would choose a maximum construction budget and then choose the optimal option with this budget; MSBA funding availability will therefor have a direct impact on our final decision.
- I wish there would be an integrated financial plan for any potential school project and community center project; no more sequential votes like for the Town Offices building--these funds could have gone to the school!
- I wish the costs weren't so high, which may affect whether Lincoln attracts and keeps residents of "modest" means that can afford taxes here.
- I think we should consider sequencing the projects in this order: 1) construct community center-capable swing space, 2) do school scheme 2B, 3) improve swing space to accommodate community center.
- I wish there were an a la carte options combining 1B, 2A, and 2B.
- A more central single cafeteria with more useful program space connecting Reed to main building.
- "Hub spaces" could include the small group spaces and more arts display/development.
- I appreciate Dr. McFall articulating a vision for why the school should be designed in a particular way, but I wish she and others would connect the dots about how teaching and learning have changed--the message isn't quite clear yet.
- Photovoltaic cells on all new/refurbished construction.
- A comprehensive water use/re-use plan for all new/renewed facilities.
- Classroom noise control is important, but does not dictate 100% new construction.
- I wish we could understand the relationship between temporary space and a possible community center.
- I wish we could get MSBA funding before we begin.
- I wish the school, with its generator, was open to residents after their neighborhoods lose power in a storm, so they can stay warm, use and charge their computers and take showers.
- I wish we more aggressively pursued operating cost reductions via serious shared efforts with other districts.
- I wish our annual cost per pupil was not so far above what most comparable communities (who have comparable ed. results, by the way) spend.
- I wish option 2F had small group rooms

- I have a difficult time getting my head around spending for infrastructure when I had one child in a class of 16 and another in a class of of 22 -- the difference being \$80K for a teacher. It does come out of one: taxpayer dollars. What really impacts education?
- I wish there were an option to choose how to proceed financially. I feel \$30M is my limit, but would vote for a more expensive option if state funds were available. Can we vote conditionally for a \$50M option and convert to a \$30M option if state funding fails?
- I wish we could do both the school building and community center in concert.
- I hope that the financial projections include the newest cost-saving technology even though the initial cost may be high.
- I wish the school project would have lots of synergy with the community center project.
- I wish that the school and community center could be combined for consideration financially as well as symbiotically during construction.
- I would want the building to be extremely energy efficient for the future.
- I wish the building committee would arrange visits to school which they (and the superintendent) feel approach the needs and desires of a Lincoln new school.
- I wish the designs reflected the <u>fact</u> that small areas for children to eat, rather than a large cafeteria, promote "civilized" behavior, conversation and the development of healthy eating habits. Large cafeterias are noisy; bench seating, lines to get food do not promote good eating.
- I wish we could avoid triggering code expenditures by a more gradual approach to repairing/enhancing the schools. Do we really need seismic protection? or sprinklers? (each classroom has an egress to the outside)
- I wish that part of the current school could be used as a community center by COA seniors who value modern 20th century architecture and might want to preserve it.
- I wish I saw individual special instruction space to be more isolated and not part of a common room--the ability to focus is key.
- I wish I saw more ways to combine the community center space ideas with the school scenarios.

I Wonder:

- I wonder if two kitchens/cafeterias are needed.
- I wonder if small group spaces will seem outdated at some point in time and become wasted spaces.
- I wonder if all these "fixes" will be worth it.
- I wonder if some of the existing 20th century modern architecture of the school could be repurposed for use as community center space. The seniors of tomorrow will values having common spaces of this type available to them.
- I wonder if hub spaces and neighborhoods will remain valued educational spaces during the lifetime of the proposed renovation and new construction.
- I wonder what the negative consequence is of addressing the deferrable options later (e.d. 4 years from now)
- I wonder how much the a la carte option will cost when we add the deferred needs in 20 years; What is the total cost then?
- I wonder what kind of facility a charter school would need.
- I wonder if the building committee has visited schools with hubs and multipurpose areas while children are at work
- I wonder if there will be a space with good acoustics for concerts and recitals, e.g. vocal, keyboard and chamber music, especially open to the public.
- I wonder what impact all the "open house" signs around Lincoln for private schools has on prospective newcomers to Lincoln. We need to improve the school building as well as improve opportunities for accelerated learning so that more Lincoln families will feel they can keep their kids at the public school, that their kids will have challenging curriculum.

- I wonder how Lexington High School manages to remain at the top of measurable education standards while they have the same air-handling system we have? Clearly there is more to it than infrastructure.
- I wonder (hope) this coordination between the school building project and the community center can be thought out clearly!
- I wonder if solar PV will be used--there's a lot of rooftop!
- I wonder how close the new building can get to Zero Net Energy.
- I wonder if we could begin construction and apply for MSBA funding after it begins, i.e. 2 years down the road.
- I wonder if we could add grass to the roof--insulates and extends life of roof.
- I wonder how much this really would cost done over time.
- Solar--yeah!
- I wonder if a parking study has been done, especially if the COA/community center come to the school campus.
- I wonder what option 2F costs without the "deferrable" items.

Option Family 3

I Like:

- I like the idea of minimizing new construction while maximizing educational improvements.
- I like the idea touched on regarding creating communities for the different grades, such as having the spaces for grade-wide presentations along with the small group spaces.
- I like keeping the "big boxes" and replacing everything else with new construction.
- This will be the first "stop" of a child's educational journey. Trends in congregate and collaborative workplaces, business ideation and a technologically creative work force all suggest that we should "build" such opportunities into the schools. Hubs, flex-space, neighborhoods, small group learning, etc. will make this possible. Integrated learning will be the organic foundation to set children on the path to success.
- I like the idea of all generations using the space to create inter-generational learning.
- I like and admire the hard work of the SBAC and the architects.
- Essentially, 3A/3B seem the best option. We need to address educational needs without losing our history; no all-new building.
- I like the idea of the "Adams team" working on/leading both projects.
- I absolutely want more and better teachers working with smaller numbers of students--however the spaces of the school support that best works for me.
- I like the ability to specifically design the space as we see fit.
- Flexible, multi-use spaces.
- I want our school to be state-of-the-art and joyful no matter what the cost: light-filled, uncrowded, efficient, flexible.
- I'm still heart-sick that we lost the MSBA money in 2012 and will support anything we can do to get that money back.
- Doing all renovations in one step rather than multiple projects over the years.
- I like that the comprehensive school plan allows for enhancements that cater to the different learning styles
 of learning that recent studies show exist amongst children. I grew up with dyslexia and ADD and these
 enhancements I think allow for all types of learning styles and disabilities to be accommodated.
- I like meeting all facilities and educational needs with most renovation and least new construction--3A.
- I like bringing our schools into the 21st century; cafe/technology/better classrooms.
- I like addressing all needs at once: smart investment in our future; anything we pay will get big returns in property value, not to mention education.
- I like the idea of achieving education value along with remediating the facilities needs.
- I like using a second floor to avoid extending the footprint more: 3C

- I like cafeterias, better HVAC and temperature control.
- Use of Hartwell pods as construction swing space--limit use of temp. trailers (due to cost).
- I like the focus on improving arts/science spaces. Can we please partner with deCordova?
- I like the cafeteria linking the gym to Brooks, and I like a separate cafeteria for Smith.
- I like the improvement of air quality and acoustics.
- Getting educational benefits in addition to fixing the problems.
- I like that you are considering new construction so we don't continue to patch old problems.
- I like saving the great spaces like the library and auditorium and gym, but add to it with good buildings.
- I like having a range of options to consider.
- I like saving the Smith school.
- I like the idea of <u>efficiently</u> facing the challenges and opportunities that face us by doing <u>all</u> the options at once. I'm sure staggered upgrades will be <u>much</u> more costly than projected.
- I like the idea of <u>not</u> putting a band-aid on the problem. A new construction that's well thought out will benefit Lincoln's children, future generations and home values. Let's get it done!!!
- I like boiler rooms with efficient boilers in places that don't flood.
- I like all the proposals and want us to do the most that we can now because the marginal costs are minimal.
- I like option 3A or 3B: address needs and hopes of Lincoln and maintain the long-held belief in and support of education here without seeming so excessive as other options.
- I like locating school and community center on a single campus.
- I like hub spaces. We work in different ways than we did 30 years ago and our schools must prepare our future leaders <u>differently.</u>
- I like the idea of smaller learning spaces--my town kids have benefited from small group instruction and it is increasingly central to a good education. The better the space, the better the collaboration of the teachers, too.
- I like the town hall "hub" concept.
- I like the idea of having a cafeteria as a multi-purpose and community use space--very important!
- I like multi-use spaces that include cafeterias.
- I like the emphasis on flexible and varying spaces as education will become less uniform and more hands on in the future. I would encourage even more imaginative thinking in this direction.
- I like the idea of getting it all done at once. We lived through the partial fix in 1992-94, so here we are 20 years later looking at a big fix.
- I chose 3C because [an additional] \$3M [compared to the 2 option] seems a relatively small amount for a valuable gain.
- I like the idea of flexible spaces for breakouts and tech and special programs.
- I like the idea of investing in education.
- I love the idea of integrating special education.
- I like the idea of combining school and community needs with space that can be used at different times by different groups.
- Strong support for projects in the 3 category; try to get MSBA.
- I like the educational benefits.
- I like that the marginal costs for the larger project made the choice clear: Go big.
- I like the idea of exploring how community center and school projects could benefit and enhance each other.
- I like having the entire building on the ground floor for better scale as well as security.
- I like the multi use space, including cafeteria, which the school sorely needs.
- I really like the ideas of programmatic flexibility, strong technology infrastructure and connection to the community and the environment; I want the facility to support these more.
- I like building a connection between Gym and Brooks.
- Integrating school project with community center, i.e. shared gym space.
- I like making the school a priority.

- I like 3C because it does a complete job and provides some swing space.
- I like that we are thinking of investing in education--need to make a decision.
- I like the superintendent's ability to tie educational goals to flexible spaces in school and knowing <u>kids</u> can help find answers.
- I like comprehensive investment because a la carte costs much more with much less return per dollar (build new/close to new).
- K-4 and middle school cafeterias must remain separate.
- I like taking care of schools first.
- I like trying to use the spaces for community use to save taxpayer dollars.
- I am a working Mom and I like that I am able to pick up my 3 year old from Magic Garden at 5:55pm, and I can pick up my 5 year old at LEAP at 5:58pm in the Hartwell building. I hope this can continue for all parents in the future.
- I like the idea of combining the two projects so that we can see some cost savings and have a more unified vision for the campus.
- A community center at Hartwell is the <u>only</u> sensible option in terms of saving money and encouraging community involvement.
- 3A and 3B: 2 cafeterias; 3B like hub spaces in Smith; 3A like Brooks/cafeteria link better than 3B.
- I like the cafeteria.
- I like the idea of fixing educational needs because I think it will increase the likelihood of getting state funding.
- I fully support a brand new building.
- I like the multi-use spaces and the link to educational innovations.
- I like the idea of fixing everything at once and removing uncertainty from the future funding needs.
- I like the notion of flexible spaces that can be used by school and community alike--school feels most important in priority, but choosing a design that enables flexibility to include other things like a new community center in the future would make sense "if" a choice for \$ has to be made.
- I like the integrated cafeteria and multi-purpose space.
- I like the idea that a comprehensive approach will protect my real estate values.
- I like the town folk getting a lot of input on the future school. I really like the idea that there is strong leadership and vision in the final solution.
- We already re-use current "cafeteria spaces" so yes, why not?
- Stage space--ves.
- I like a comprehensive educational approach but want energy efficiency NEEDS to be included.
- I like the idea of a new mixed use cafeteria space. It is very important to add these new spaces.
- I like the idea of activating the hallways (hub spaces) to become a more productive and communal space.
- "Just fine" is NOT good enough! We need a new school in Lincoln.
- I love the idea of a cafeteria joining the Brooks gym space; we need a building that can be secured for safety.
- We <u>need</u> flexible spaces. Having coordinated enrichment programs for the school, I've often struggled with finding appropriate/available spacing and it limits the programs we can offer.
- I like/LOVE dedicated eating space--the gym is a pathetic space to refuel.
- I like doing as much as possible at once, even though it costs more "up front." We need <u>everything</u> to some degree, and it's better to fund one big project at one time vs. several over the years.
- I like the addition of kitchens and cafeterias.
- I like connecting the Reed Gym to the rest of the school.
- I like the idea of combining the 2 projects BUT I'm having trouble seeing how to do it. It seems that there are <u>lots</u> of demands/needs for the community center space w/o adding schools.

- I like the idea of a <u>comprehensive</u> school building solution. Past piecemeal decisions have brought us to where we are today and we <u>really</u> need a 50 year solution that reflects this town's value of delivering high-quality education.

I Wish:

- I wish we could create a hybrid committee to explore a unified project: schools plus community center.
- I hope we can do the request for state aid and am still upset that we lost \$20M a few years ago due to false thinking that there was a \$6M renovation option. Argh.
- I wish we had taken MSBA funding last time! Let's try again with a well-supported project.
- I wish the community center and schools become one Lincoln project--good for all of Lincoln as opposed to dividing the population.
- I'm unclear about the Selectmen's role and I desperately ask for the leadership in March. The options must be clear and I fear divisiveness if leadership is not shown.
- I wish we could have a dialog about having a Lincoln high school--it's so sad to see 30% of Lincoln's 8th graders choose private schools over LS.
- I wish taxes were based on # of people in households who would use the school/community center. As a single person I could be paying what 4 children in a household would pay for a new facility. I am speaking as an affordable unit owner who believes in contributing my fair share.
- I wish to improve all facilities and educational aspects on all fronts.
- We've spent \$800K on studies. It is time to make a decision to bite the bullet and buy a new school.
- I wish we could have a school cafeteria that could be a food-science teaching lab and could include CSA local food.
- It would be nice with flexible class room that children could be educated flexibly--shifting into different classes as their needs are adjusted. Not all children are the same.
- The prices for renovation seem radically higher than typical business construction. The plans today have \$/ sqft at something north of \$400 when you could argue that it should be closer to \$200/sq.ft.
- I wish we could have the option of a 2-story Smith; the MSBA option with a different footprint.
- I wish we could all recognize that our investment in education is the most important thing we can do for Lincoln, from providing future leaders to enhancing property values.
- As an affordable home owner, I really want the town to go after state funding and pursue researching private funding, i.e. if you donate your name goes on a wall/room, etc.
- I wish for a school with multi purpose rooms with possibilities for sharing these spaces with local groups after school hours.
- I wish the field improvement was included in the options.
- The community center should have been integrated with one of the school options; Council on Aging should also be included.
- It's very hard to make a decision not knowing about MSBA participation.
- Adding a kitchen/cafeteria.
- I wish the school project would receive priority over a community center.
- Please involve our teachers in the design choices made.
- I wish instead of small rooms, classrooms would be arranged to accommodate teachers working in the classroom with a small group. It is NOT good to withdraw children from their classroom. Classrooms need to have alcoves, etc., not be squares or rectangles.
- I wish it was more clear how the town feels on what is a priority, school or community or COA.
- I wish project costs were simply state as total cost/household; annual cost with financing obfuscates the
 cost.
- I wish the town would bite the bullet and do this all at once!
- I wish town leadership would be active in supporting a school project.

- I wish I understood if the HVAC system is completely renovated/upgraded including cooling, and if so, in which options.
- I wish maintenance costs were budgeted and kept in a reserve fund so we would be able to extend the life of our school buildings.
- I wish that children's learning styles and disabilities would be mentioned in connection with the proposed school enhancements.
- I wish the 2 projects would be combined.
- There seemed to be strong sentiment about combining a community center with the school project. I support that concept, BUT we need to be careful about pitting elders vs. schools.
- I wish that the town had accepted the \$21M from the state. It is unfortunate we gave up that money.
- I wish we could manage the school renovation and the (putative) Hartwell community center as a single logistical and financial project.
- I wish that the discussion of space was more connected to having smaller class sizes and more integrated education (special needs addressed in every class).
- I wish for a modern ac/heat air exchange system so teachers and children feel they can breathe.
- The upper school cafeteria could be shared with the community center for cost saving <u>and</u> integration.
- I wish the school building costs would show the impact on my annual property tax in addition to total cost provided. Total cost doesn't really mean anything to me financially.
- Community Center and school building projects combine as much as possible.
- MSBA funding to bring down the cost of the total project for the taxpayers.
- I think that we do not need an "intrusion system." I worked on a bunch of rampage school shootings and it turns out that most of the shooters were students at the schools where they committed the shooting. Hence, an intrusion system would not actually prevent shootings, but would contribute to the feel of a school that most of us would not favor. The way to lessen school shootings is to improve relationships between students and faculty and to improve mental health services both of which have many other benefits.
- I wish the girls locker room and Reed Gym improvements were included in the options.
- Given that environmental challenges will be the biggest issue our children will fact, I wish/hope this building will teach and inspire environmental action.
- I hope we can INCLUDE parents in the process (surveys, voting). Simply doing town meetings does NOT allow a very high % of parents of young children to participate.
- I wish/hope we can think about what <u>flexible</u> space could look like for a real 21st century education: maker space, tech spaces, flexible pull out spaces, places for students to be CREATORS not just CONSUMERS of information.
- I wish we could use most of the cost of swing space to build a community center.
- I wish they'd put a sump pump in the boiler room (almost no \$) so we can stop hearing about the flooding.
- I wish we would tackle the school building and community center together in synchronicity.
- I wish and hope we get state funding; I'm less keen without it.
- I wish that we can see our way to go far enough to enhance educational spaces to serve the changing needs of the students and teachers.
- I would like to see a maker space which could be used by the community and school.
- I wish we could think of these projects as one and combine the planning construction and implementation-that would be the best idea.
- I wish we used Survey Monkey or something similar to get broad input from across the community including your parents who are unable to attend the SBAC Public Forum.
- Middle school cafeteria should be shared with a community center on the Hartwell campus. This is cost effective and meets values of Lincoln.
- Preserve the natural as much as we can and be more environmentally responsible.

- There should be a way to present options at Town Meeting that show a concept for the community center integrated physically with school renovations, acknowledging that there would be no state funds or they'd be unlikely.
- I wish all decisions re design/building/reno were based on what the <u>best teachers</u> want and sound educational best practices.
- I wish we could get MSBA funding.
- I wish we would finally do something about our schools.
- I wish there was a price/option 2G that includes first 5 educational items including small group rooms.
- I wish that we stressed how important quality space is to <u>recruit</u> the best teachers.
- I wish we were not wedded to the "L shape" as hubs are more efficient for education and energy.
- I wish there was much more inclusion of leadership in environmentally-dedicated thinking: solar, shade to cool spaces, double doors to prevent exterior heat loss.
- I wish I know if MSBA would approve funding or not, because I'm thinking that a new school is an easier option, especially if MSBA will fund.
- I wish there had been a proposal that combined both schools and community center. Why are you waiting for Town Meeting to delay this process any longer by demanding that we consider one project that builds both?
- I'm concerned that not <u>all</u> voters may have the ability to vote given parents of children and their roles of parents as well as those who may not be able to physically attend. Most important meeting is coming uphow to address?
- I wish for a covered pool--provides jobs and interaction between all ages.
- I wish to separate out arts vs. sports with the DPW space being used for future 200 units and growth in town, and not concentrate everything at Hartwell (traffic) but utilize plaza and commuter space--think FORWARD.
- The integration of a community center at Hartwell with the school's renovation be fully exploited both for program integration and cost savings.
- I wish there was a community-wide educational and community center plan option using the entire Ballfield Rd. complex, crystallizing facilities needs for school, COA and town recreation.
- I wish that the 20th century architecture of the school could be preserved and repurposed for use and enjoyment by COA seniors of upcoming generations.
- I wish that the Town Meeting and future vote will be set for a specific time of day so those of us with families can plan to make it and vote. Having to sit through a long meeting makes it very difficult for those with kids.
- I wish energy savings, net zero design, solar, etc. was mentioned. This is <u>so</u> important for our children's future. If we are going to spend this amount of \$ this should be included and the future energy cost savings should be studied and presented along with the cost of the project.
- I wish we could provide a tiered approach to build and complete a section of the construction plan to test before completing the whole project.
- I wish the issue of how we maintain our facilities over time could be included--I feel we build and then neglect facilities and run them down--new is exciting, fixing old is less so but <u>essential</u> over time. Is there a difference in how hard the various options will be to care for over time? (therefore how costly?)
- I wish we would build modern schools as our peer communities have done.
- I wish the girls locker room was a higher priority. I believe having unequal spaces for boy and girls perpetuates and sends the insidious message girls are not as worthy as boys. That is a bad message to be sending and we ought to fix it!
- I wish you would bring to Town Meeting a combined option of both school and community center to be voted on.
- I wish that a combined proposal of school and community center could be created before Town Meeting.
- I wish that more people would participate. They are missing and probably unclear as to project scope, etc.-- no fault of yours!

- I wish we could combine the school project and the community center project for consideration as an option--to understand the overlapping time lines, cost choices and possible state funding.
- I wish we had a clearer understanding of which building options might be considered comparable to the previous project the town submitted to the MSBA.
- I wish we could have a clear avenue/choice to combine with the community center at Hartwell. These two projects should not compete.
- I'm concerned about the sequencing of these issues at the Town Meeting. Which one gets voted first?
- I wish we had a vote on <u>priorities</u> of town spending so that the community center does <u>NOT</u> get funded ahead of the school. The school in my opinion is the first priority and the community center should not be funded ahead of it.
- Build only ONE cafeteria. It is healthy for kids to walk! We don't need cafeterias within a few feet of every classroom.
- I wish the two committees would offer shared options for the school and community center.
- We have nickeled and dimed long enough and delays have increased the costs substantially. It is time to bite the bullet and get on with it.
- I wish the design could have "architectural flare." Functionality is crucial, but why not also create a beautiful addition to the town?
- I want a contemporary design to reflect the full range of architectural styles in Lincoln.
- I wish we could stop talking about improvements and get the school building project underway. Our town deserves! It can't wait!

I Wonder:

- I wonder about timing, temporary space and displacement.
- I wonder if we're dreaming that we can do both a community center and a school, and we are refusing to admit reality: we need to choose.
- I wonder how we can involve more parents and parent input when it's often difficult to attend meetings. Are there other input avenues (surveys, for example?) available?
- I wonder if we can as a town determine what's a need and what's an obligation. The school building is a workplace and the children by law are required to be here for education. Aren't we required as a town to provide a safe and healthy environment?
- I wonder if we can continue the positive path we seem to have returned to. The last building decision was so divisive that it has alienated many parents from the conversation.
- I wonder if the town needs to suspend its purchasing of conservation land to tend to its obligations and responsibilities of addressing serious facilities needs.
- I wonder if we have a future panels (view) as well as both sets of boards presented today. It's never been about cost for us. It's about vision and design. Thank you all!
- I wonder why school/community center/Board of Selectmen didn't prepare a proposal that unites both projects, especially since we were asked about funding the school without state money. Couldn't we save money by planning and building as a unified project?
- I wonder about the use of solar panels on the roof and other clean energy options.
- I wonder if global warming issues have been considered: warm and cool classrooms.
- I wonder if it is even possible to get town supports without a community/COA project.
- I wonder if we can find synergies with the community center (i.e. auditorium, kitchens)
- I wonder if one of the educational enhancements can be not just science room upgrades but state of the art laboratories to foster cutting edge academics--more important than enhancements like electronic chalkboards.
- Can we get matching funds for building green--solar.
- Can we recycle to generate income out of old windows and materials.

- What kind of plan do you have for affordable unit owners whose taxes are increasing while their incomes
 that allowed them to live in/or have income from housing remains flat. When I first moved to Battle Road
 Farm taxes my taxes did not increase. Now they do. It makes the formula for affordable housing
 questionable.
- I wonder what other capital projects are around the corner.
- I support the "new school" concept, but fear a tax payer backlash affecting teacher funding later.
- I wonder if 3C includes preparing the structure for solar panels.
- How to avoid pitting community building vs. SBAC proposals at Town Meeting. Consider phasing of decisions. What is the Selectmen's role?
- I wonder if we can integrate the school project and community center.
- I wonder if we could save \$ if we made space for moving school administration into the school building and the existing admin. building as a starting point for the community center.
- I wonder if we can abandon wired gigabit ethernet and rely 100% on wireless connections. Wireless technology continues to evolve.
- I wonder if we can improve the environmental footprint of the schools.
- I wonder if solar panels have been allowed in your planning.
- I wonder how a comprehensive option would impact property values.
- I wonder if the committee recognizes the terrible and almost dangerous condition of the playing fields.
- I wonder if Town leadership will strongly support an application to the MSBA.
- I wonder how much \$ we saved by not doing needed maintenance!
- I wonder how we might be able to merge the school building and the community center.
- I wonder if we could add solar power to the options.
- Will the kitchens be commercial grade for community use and rental?
- Must have a cafeteria.
- I wonder why the Selectmen have not shown greater enthusiasm and leadership as related to the school project, equal to that shown by the school committee.
- I wonder if we invest too much in the buildings whether down the road taxpayers will support funding for teachers. <u>Look at Sudbury!</u> Teachers educate, buildings don't--they facilitate.
- Feasibility and cost of combining community center and school building projects.
- SOLAR PANELS. I wonder for the long, long roofs if they would pay for themselves within a reasonable time.
- A new building with a 50 year life if preferable to renovations.
- I wonder--in how many years the educational fads will change and these odd-shaped spaces will become obsolete.
- Can we include an accessible space for a kitchen/education garden or gardens.
- I wonder how we can get state funding AND incorporate the community center into the design.
- I wonder if the isolation of the school from commercial and other aspects of community life is good.
- I wonder how we can use the renovation to really enhance the education without linking it to class size and teacher quality.
- I wonder whether we need to anticipate additional staffing/maintenance/energy costs if we add a new facility.
- I wonder if new construction in the central fields and over at Hartwell and combining COA and school would be radically cheaper.
- I wonder why the cost of a new building is now \$66M when it was \$52M not 1.5 years ago.
- I wonder how we can improve energy efficiency of the school and reduce our town's carbon footprint. Can we add photovoltaic capacity to the school? I hope we can.
- I wonder if the new school and community center can be combined--this is the only way I'll support a community center.

- I wonder if police have been included in discussions on safety. It's good school safety is in discussion on design, BUT what we have now with exterior doors in many classrooms. PLEASE keep this in mind and have exterior doors in <u>all</u> classrooms for the safety of our children.
- I wonder what you are displacing in your addition scenarios--trees, parking. There is a "cost" associated with those, both financial and aesthetic.
- Has the # of classrooms been considered for future predictions of students. I would vote for smaller class sizes and would like to make sure any new/renovated space will accommodate that.
- I wonder what we would stand to <u>lose</u> (if anything except time) to apply and wait years for MSBA funding. What are the interim repair costs (between work ASAP and MSBA \$)?
- What do interest rate projections look like vs. current rates.
- I wonder why there is no mention of energy efficiency and 21st century ideas--solar panels, passive design, geothermal heating/cooling, etc.
- I wonder if all of the residents of Lincoln are aware of the different types of children's learning styles and how some children struggle because of these.
- I wonder if could add solar panel and edible gardens.
- I wonder if we could get the input of the teachers in deciding how we should use the shared/flexible space...will this space attract good teachers.
- I wonder what the costs are of not replacing the whole building over time. 25% un-renovated now will need to be before 50 years.
- I wonder why some people in town just don't get it and how we can better inform them.
- I wonder whether we can offset some operating costs over the long run by incorporating things like photovoltaics to pay less for electricity over time.
- I wonder if we combine the planning with the community center building plan.
- I wonder if the cost estimates are so uncertain that we will find the incremental cost of a completely new school happens anyway due to unforeseen cost overruns.
- I wonder how the changes will improve energy. Green energy?
- I wonder why we would why we would <u>not</u> just invest in an all new school since it is not much more than renovating the existing one.
- I wonder if the schools/admin could use the updated schools to create a school where far fewer families feel the need to go elsewhere.
- Photovoltaic panels would be terrific to address!
- I wonder if we could plant more garden space for the kids--with the help of seniors? Part of a joint community.
- I wonder how we can make sure we don't get a design that will offend or turn off anyone (like last time).
- I wonder how we convince people that the L shaped design may be too costly to maintain. That became clear with the state funding las year and will become an issue again. Can we strip off the auditorium into a community center to help get us to the square footage for funding?
- I wonder if there are some other creative ways to pay for the improvements to the school and community center.
- The community center and school be combined projects rather than one versus the other.
- Class size is important. Would like to keep numbers closer to the low end of the spectrum.
- Is it possible to fundraise for parts of the school project? i.e. Sell naming rights to the computer lab to Oracle for fund science labs from Genzyme? Other ideas aside from taxes...use local businesses interested in STEM, etc.
- I wonder if we could see more variety in design.

FROM STATE OF THE TOWN MEETING

NOVEMBER 15, 2014

Direction: Place your 1 Green Dot on the renovation family you would choose if Lincoln had to fully fund a project.

Facility Needs Only – Options 1A & 1B \$12.2M - \$29.2M – Fully Funded by Lincoln

Total Green Dots: 6 (One comment: "No more than \$29.") One Blue Dot

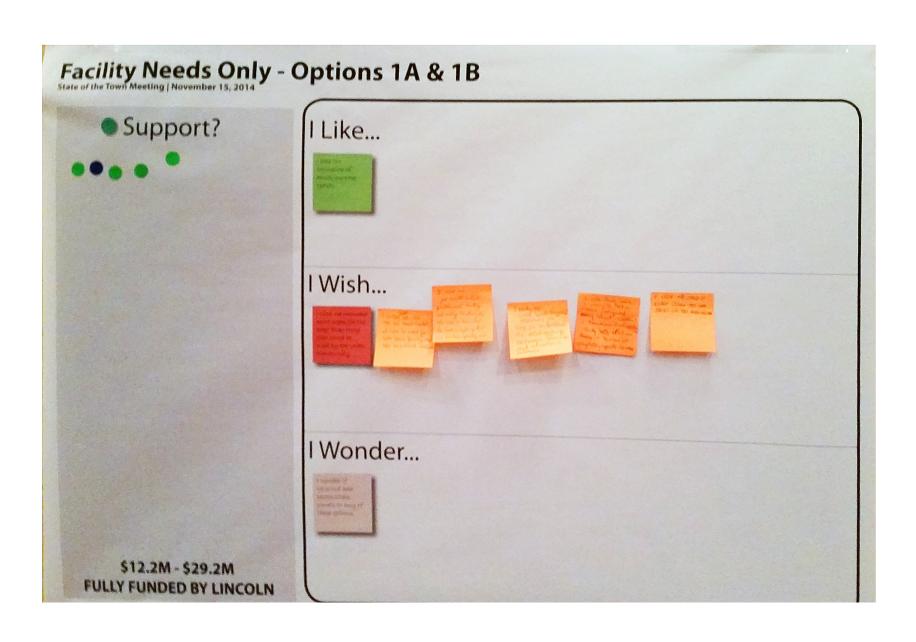
A La Cart Educational Enhancements: Options 2A, 2B, 2C, 2D, 2E, and 2F \$29.5M - \$47.6M — Fully Funded by Lincoln

Total Green Dots: 38

Comprehensive Educational Enhancements – Options 3A, 3B, 3C, and 3D \$54.7M - \$66.3M – Fully Funded by Lincoln

Total Green Dots: 144 (One Comment: "I want state funding.")

One Blue Dot











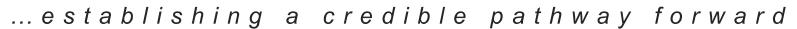
Lincoln Public Schools

Study of the Lincoln School









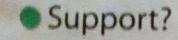
Public Forum 2 December 2014

AGENDA

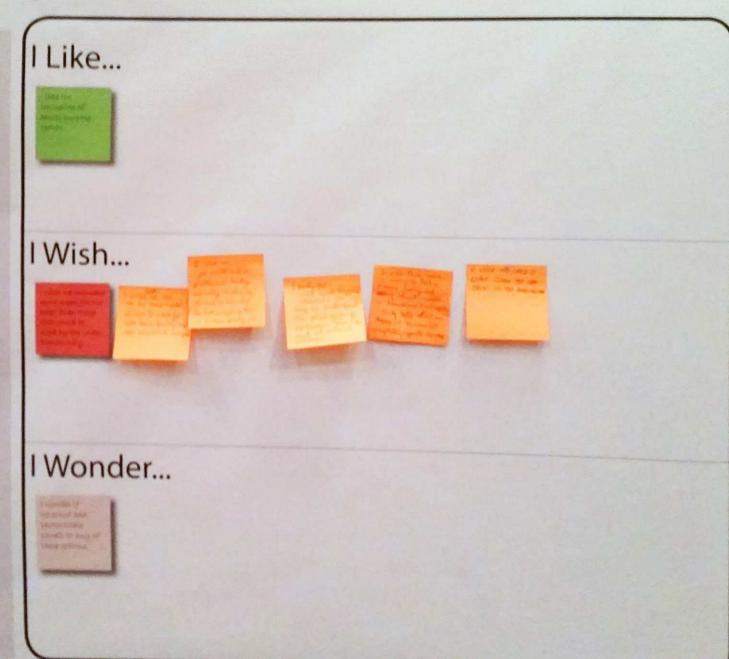
- 1. State of the Town Summary
- 2. Key Issues & Variables
- 3. Options
- 4. Questions & Answers
- 5. Feedback Activity
- 6. Wrap-up & Next Steps

1. State of the Town

Facility Needs Only - Options 1A & 1B







\$12.2M - \$29.2M **FULLY FUNDED BY LINCOLN** A La Carte Educational Enhancements - Options 2A, 2B, 2C, 2D, 2E, 2F
State of the Town Meeting | November 15, 2014 Like.. Support? I Wish... I Wonder... \$29.5M - \$47.6M **FULLY FUNDED BY LINCOLN**



Feedback Activity

Options 1A & 1B: Facility Needs Only 7 Support, 3.7%

Options 2A–2F: À La Carte Ed. Enhancements 38 Support, 20%

Options 3A–3D: Comprehensive Ed. Enhancements 145 Support, 76.3%

2. Key Issues & Variables

Key Issues

• MSBA

Participation?

Community Center

MSBA Participation

- Approximately 40% Reimbursement
- Address Facility & Educational Needs
- Uncertainty of Participation
- Timing Delay of at Least 18 months
 @ 3% 5% annual escalation
- MSBA Process
- Separation of School & Community
 Center Projects

Timing Comparison - Opt 3A

With MSBA Grant

Date	Milestones	Mths
4/15	Submission of SOI	7
11/15	Invitation from MSBA*	5
4/16	OPM Selection	3
7/16	Designer Selection	2
9/16	Feasibility Study	4
1/17	Schematic Design	6
7/17	Design Development	4
11/17	Construction Documents	6
5/18	Construction	25
6/20	Occupancy	

Initial Estimate	\$54.7M
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+ Additional Escalation......... \$3.3M

- Potential MSBA Grant...... - \$24.3M

Fully Funded by Town

Date	Milestones	Mths
6/15	OPM Selection	2
8/15	Designer Selection	1
9/15	Schematic Design	6
3/16	Design Development	4
7/16	Construction Documents	6
3/17	Construction	25
4/19	Occupancy	

Initial Estimate	\$54.7M
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+ Additional Escalation.......... \$0.0M

- Potential MSBA Grant...... - \$0.0M

Community Center

- Simultaneous Funding?
- Site Selection?
- Attached or Free-standing?
- Shared Spaces?

Key Variables

- Cost
- Educational Enhancements
- 2030 Town By-Law (Energy Effcy.)
- Extent of Preservation
- Project Timing
- Joint Use (School & Community)

Key Variables: Cost

- Construction Cost
- Phasing/ Escalation
- MSBA participation

Key Variables: Education

- Mechanical Systems
- Acoustical Improvements
- Flexible Multi-use Spaces
- Security
- Community Use
- Improvement of Exist. Classrooms

Key Variables: 2030 By-Law

- Building Enclosure (walls, roof, windows)
- Advanced HVAC Technology (geo-thermal)
- Power Production (solar or wind)

Key Variables: Preservation

- Historic Quality of 1948 wing
- Difference in construction Standards from 1948 to 2014
- Sentimental Aspects of the Buildings
- Relationship to Current Ed. Vision

Key Variables: Timing

- Estimated 3 phases of construction
- Approximately 25 Months of Construction
- Additional 18+ Months with MSBA

Key Variables: Community Use

- Degree of Sharing
- Efficient Use of Public Money
- Public versus Private Areas
- What types of Areas can be Shared

3. Options

Facility
Needs Only

À La Carte Educational Enhancements

Comprehensive Educational Enhancements



À La Carte Educational Enhancements

 2A
 2B
 2C
 2D
 2E
 2F

 \$29.5M
 \$29.8M
 \$32.0M
 \$36.6M
 \$36.9M
 \$47.6M

Comp. Ed. Enhancements

3A 3B 3C 3D \$54.7M \$55.8M \$58.8M \$66.3M

FACILITY NEEDS

Option 1A

Immediate + Code Triggered

\$12.2 M

0 - 5 Years

\$8.4M +\$3.8M Code Triggered

= \$12.2M

FACILITY NEEDS

\$8.4M

+ \$3.8M

Code Triggered

+\$17.0M

= \$29.2M

Option 1B

Immediate

- + Code Triggered
- + Near Term

\$29.2 M

0 - 10 Years

FACILITY NEEDS

Deferrable Needs: Approximately 10-15 Years

- Interior Finishes
- Remaining Lighting
- Furnishings & Equipment
- Girls' Locker Room
- Paving & Curbing
- Playfield Improvements

\$7.7M

À La Carte Educational Enhancements

Option 2A 1B

+ Acoustics

\$29.5 M

Option 2D

1B + Kitchens & Cafes

\$36.6 M

Option 2B

+ Small Group

1B

\$29.8 M

Option 2E

1B + 2A +2D

\$36.9 M

Option 2C

1B + 2nd Grade

\$32.0 M

Option 2F

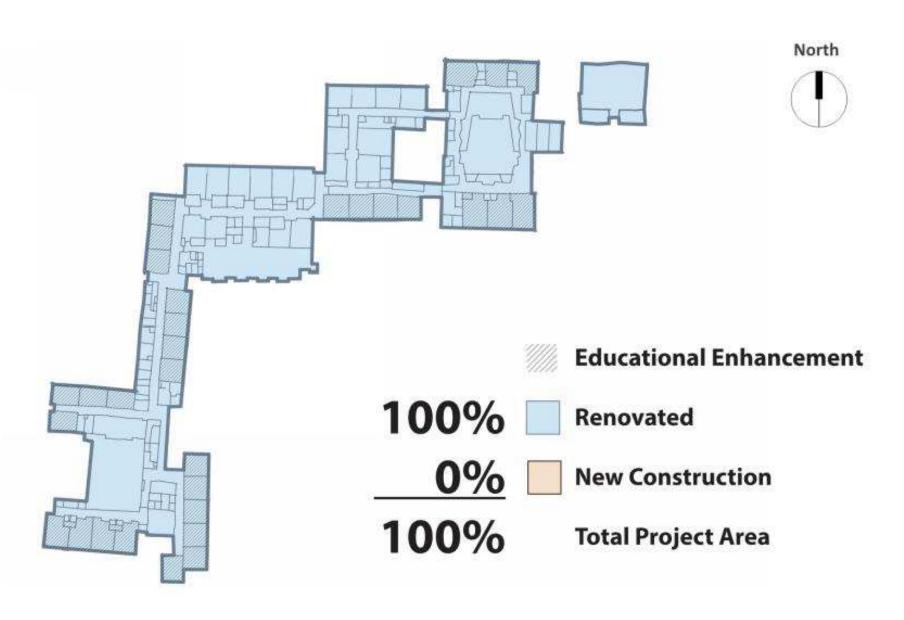
1B +2C

+ 2A +2D

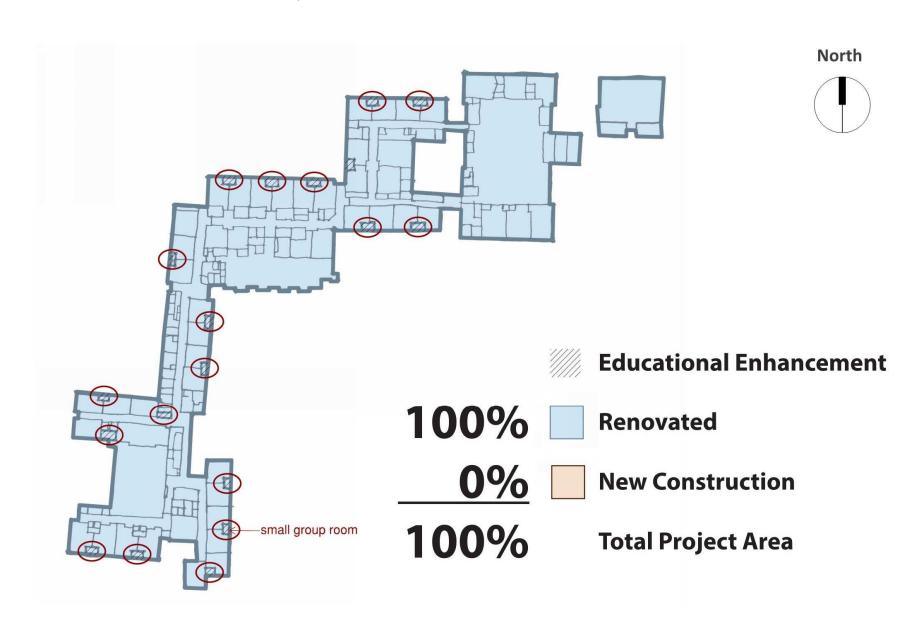
+ Def

\$47.6 M

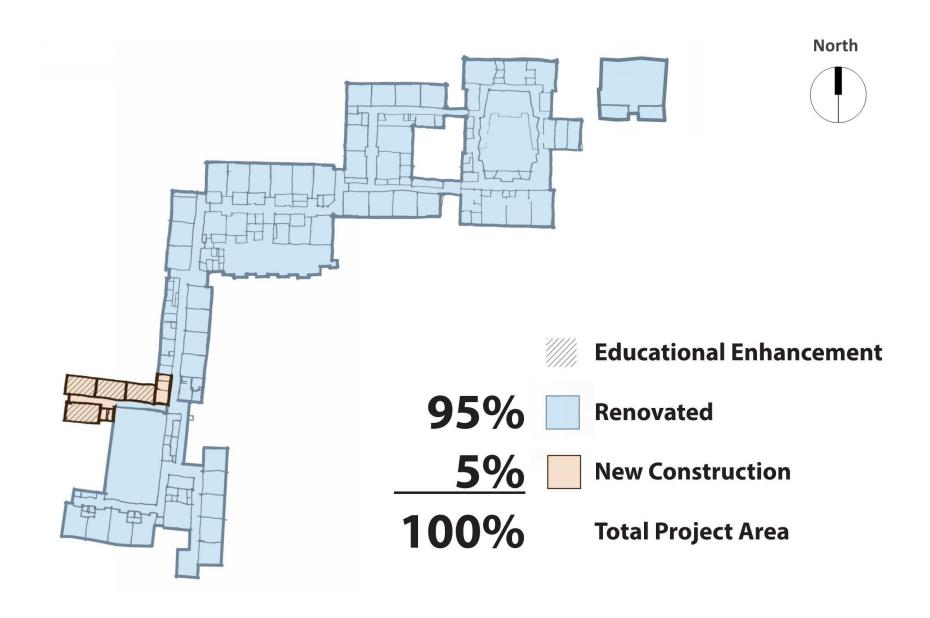
OPTION 2A, \$29.5M



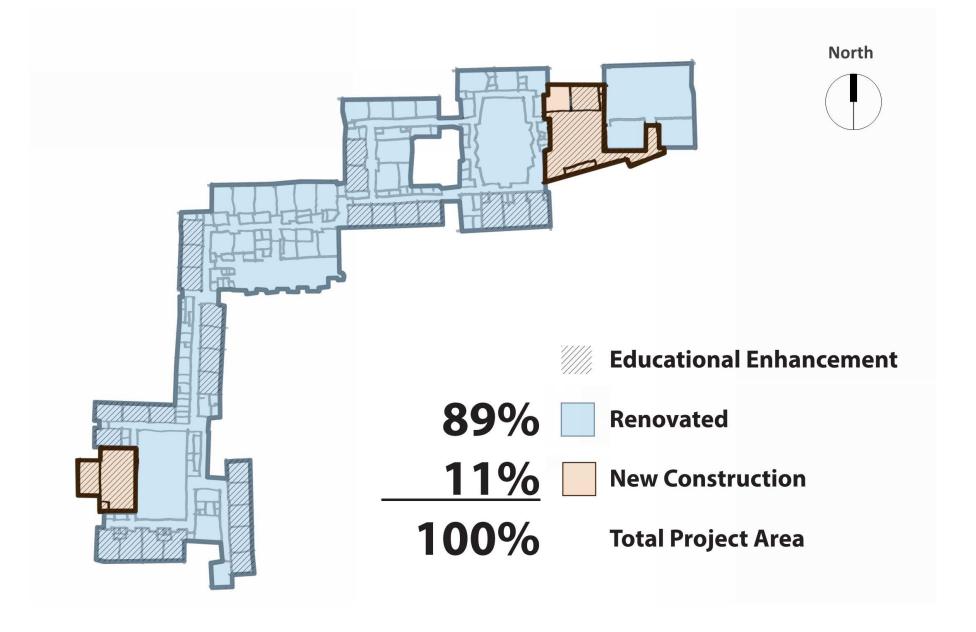
OPTION 2B, \$29.8M



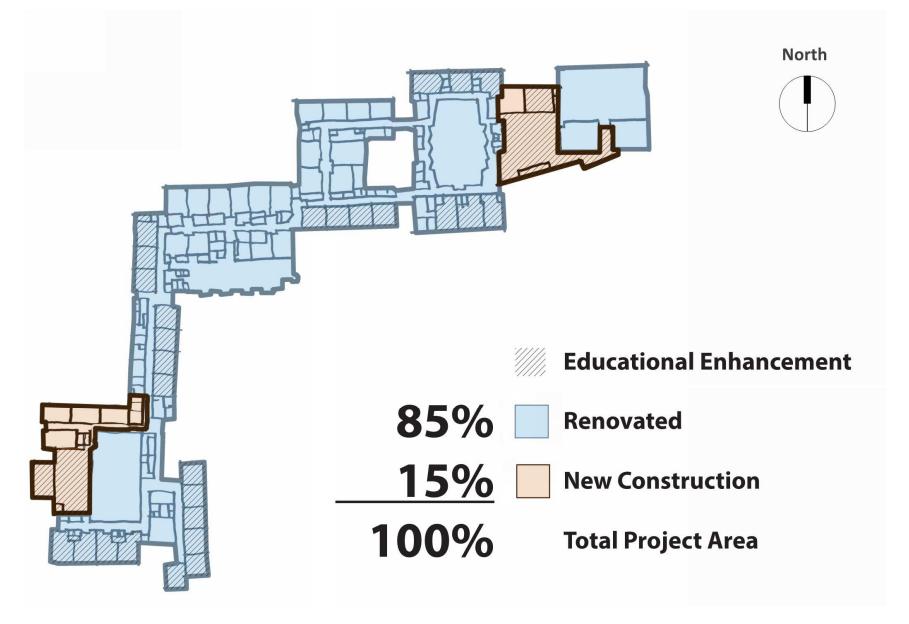
OPTION 2C, \$32.0M



OPTION 2D, \$36.6M & 2E, \$36.9M



OPTION 2F, \$47.6M



À La Carte Educational Enhancements

Option 2A

1B + Acoustics

\$29.5 M

Option 2D

1B + Kitchens & Cafes

\$36.6 M

Option 2B

+ Small Group

1B

\$29.8 M

Option 2E

1B + 2A +2D

\$36.9 M

Option 2C

1B + 2nd Grade

\$32.0 M

Option 2F

1B +2C

+ 2A +2D

+ Def

\$47.6 M

Comprehensive Educational Enhancements

Option 3A

Renov.
New

\$54.7 M

Option 3B

Renov.

\$55.8 M

Option 3C

Renov.

New

\$58.8 M

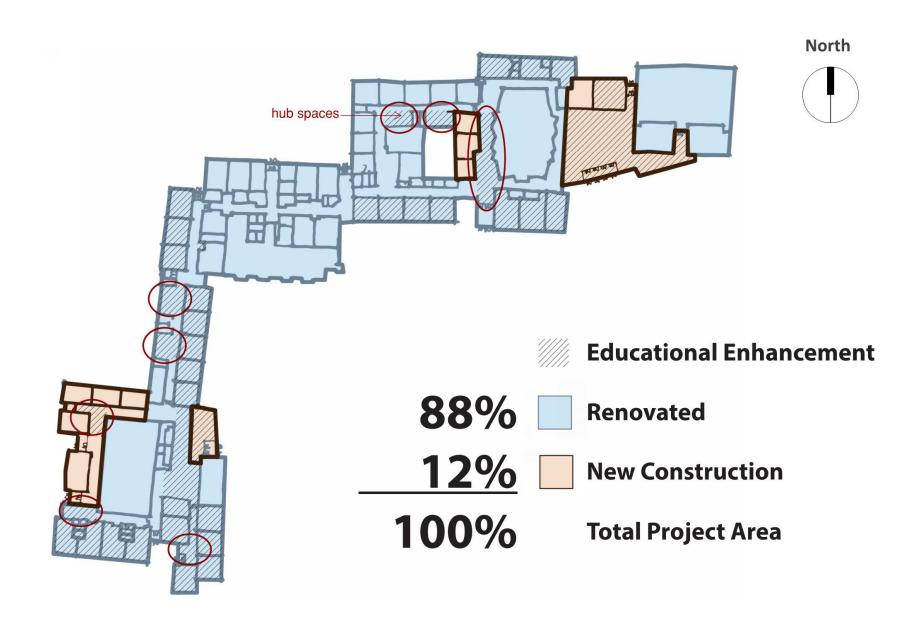
Option 3D

New

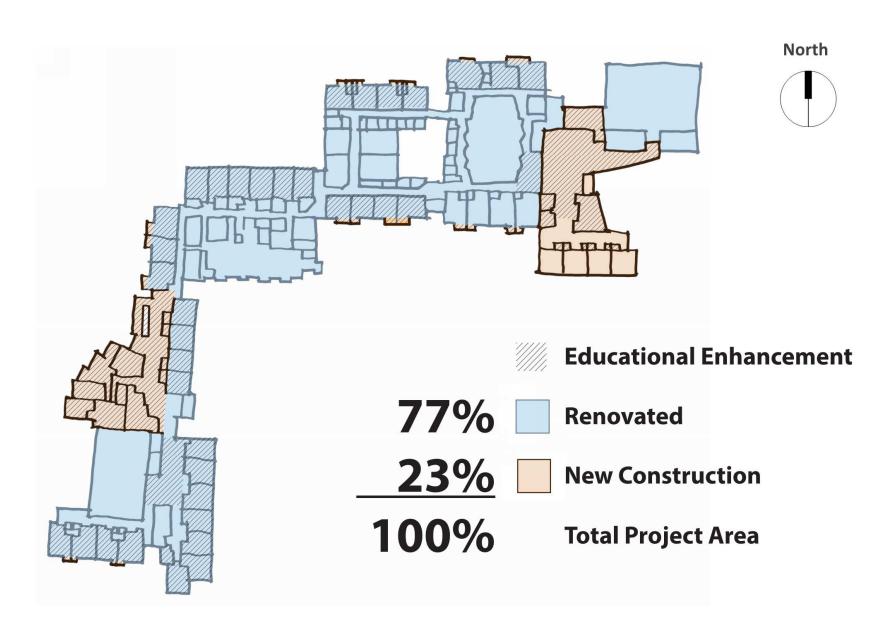
\$66.3 M

- Hub Spaces
- Neighborhood Expression
- Improved Spatial Relationships
- Improvements to Special Education Spaces
- Improvements to Entry Sequences
- Improvements to School Offices

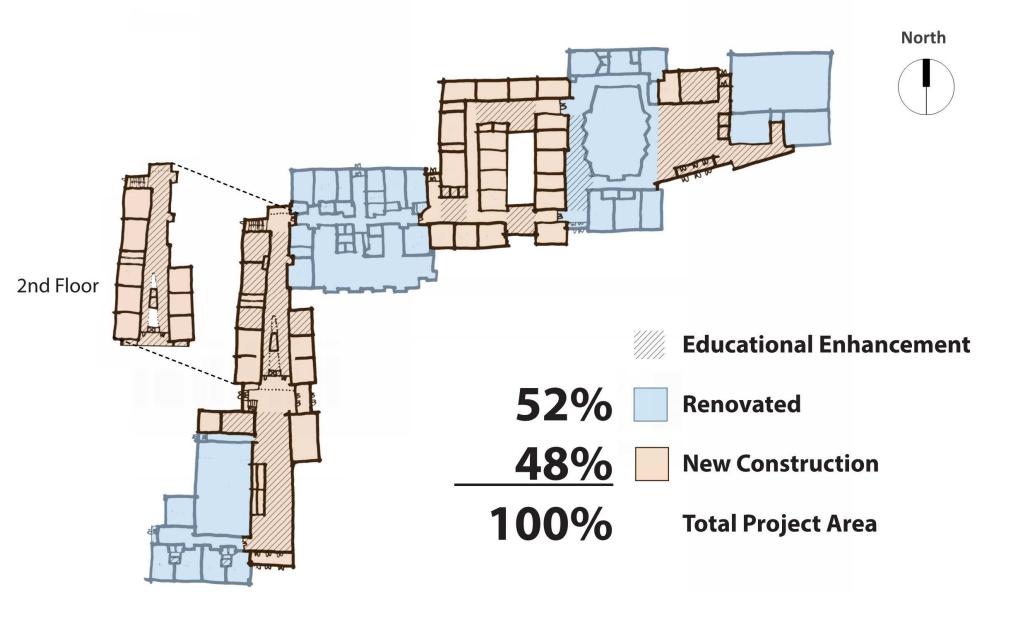
OPTION 3A, \$54.7M



OPTION 3B, \$55.8M



OPTION 3C, \$58.8M



OPTION 3D, \$66.3M

No Illustration Developed (cost for comparison purposes only)

Comprehensive Educational Enhancements

Option 3A

Renov.
New

\$54.7 M

Option 3B

Renov.

\$55.8 M

Option 3C

Renov.

New

\$58.8 M

Option 3D

New

\$66.3 M

- Hub Spaces
- Neighborhood Expression
- Improved Spatial Relationships
- Improvements to Special Education Spaces
- Improvements to Entry Sequences
- Improvements to School Offices



À La Carte Educational Enhancements

 2A
 2B
 2C
 2D
 2E
 2F

 \$29.5M
 \$29.8M
 \$32.0M
 \$36.6M
 \$36.9M
 \$47.6M

Comp. Ed. Enhancements

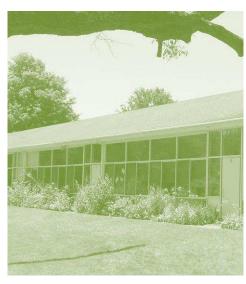
3A 3B 3C 3D \$54.7M \$55.8M \$58.8M \$66.3M



Lincoln Public Schools

Study of the Lincoln School









... establishing a credible pathway forward

QUESTIONS & COMMENTS

Handout for 1st Sticker Exercise:

a) Group discussion by table b) individuals to vote for 1st and 2nd priority among key variables



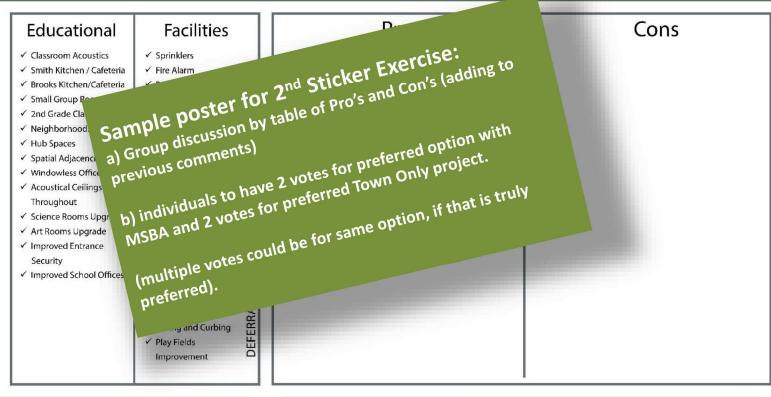
KEY VARIABLES minimize cost to town maximize educational enhancements meet 2030 energy by-law maximize preservation of existing building minimize time to occupancy maximize community use

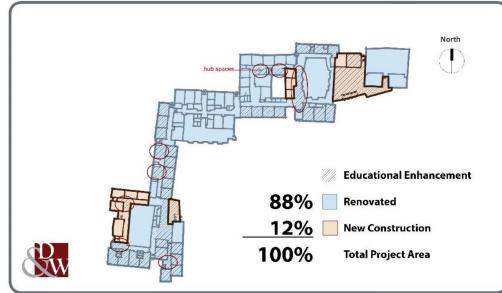
COMPREHENSIVE : EDUCATIONAL ENHANCEMENTS

Option 3A

Option 3A addresses all the facility needs and provides all the educational enhancements via comprehensive renovation augmented by new construction. This option reorganizes the Brooks and Smith classrooms to provide flexible learning spaces through the creation of neighborhoods, hub spaces, and small group rooms within the confines of the existing building. Additions at Brooks and Smith add kitchens and cafeterias for both schools.

Total Project Cost: \$54.7 M







TOWN OF LINCOLN – LINCOLN SCHOOL STUDY

PUBLIC MEETING #3, SMALL GROUP RESULTS

EXERCISE #1 – Key Variables

Overview

Dore & Whittier presented a short list of key variables. These key variables represented considerations that will impact both the design strategies and total project cost. Participants were invited to discuss these variables and their impacts on the project at their tables. They were then invited to indicate their individual prioritization of these variables. Participants were asked to place a red sticker on the variable with the highest priority and to place a green sticker on the variable with the second highest priority. A simple tabulation of these results is indicated below.

In addition to this simple tabulation, a numeric score for each variable was calculated based on the following methodology:

(Total First Priority Votes X 2) + (Total Second Priority Votes X 1) = TOTAL SCORE

Minimize Cost to Town

27

1st Priority: 8 2nd Priority: 11 Comments:

• MSBA or Be smart.

Maximize Educational Enhancements

120

1st Priority: 52 2nd Priority: 16 Comments:

Meet 2030 Energy By-Law

18

1st Priority: 4 2nd Priority: 10 Comments:

Maximize Preservation of Existing Building

10

1st Priority: 0 2nd Priority: 10 Comments:

• I don't want to preserve the bricks & mortar of the old/current building. However, the feel, shape and access to outdoors (with doors not just windows) is important.

Minimize Time to Occupancy

5

1st Priority: 0 2nd Priority: 5 Comments:

Maximize Community Use

16

1st Priority: 3 2nd Priority: 10 Comments:

Participant Added Variables

Return on Money Spent (Cost-effectiveness)

19

1st Priority: 5 2nd Priority: 9 Comments:

- Life cycle of equipment
- Best quality for price
- MSBA funding
- Highest educational value for incremental costs

EXERCISE #2 – Evaluation of Options

Overview

Dore & Whittier presented the full list of options developed. The presentation included information about the location of key spaces, conceptual project costs, and estimated town shares for those options that MSBA may qualify for grant funding.

In addition to the presentation of options, Dore & Whittier facilitated an exercise whereby participants evaluated each option by identifying pros and cons. Participants were invited to identify the pros and cons of the option at their table first. After a predetermined time, participants were asked to move to another option and add or refute the pros and cons identified by the previous table. Over the course of the exercise, each table moved four times and evaluated four different options. Each option evaluated by five different groups. A simple transcription of these pros and cons follows below.

To conclude the exercise, individual participants were invited to place a yellow sticker on the single option he or she would be willing to support, assuming MSBA participation. Similarly, individual participants were invited to place a blue sticker on the single options he or she would be willing to support without MSBA participation.

Option 1A & Option 1B

With MSBA Participation: Not Applicable Without MSBA Participation:1

PROS	cons
Low CostNo interruption of educationBetter than nothing	 Only short term solution Only limited benefits All costs borne by the Town
Faster Construction	 Neither option addresses deferrable needs Potential disruption when systems fail
	 Continuous Construction Solves almost nothing Higher costs and more risk of disruption in long run Low energy efficiency

Option 2A

With MSBA Participation: Not Applicable

Without MSBA Participation: 0

PROS	CONS
 Lower cost Preserves current building Better than 1B 	 Minimal educational "bang for the buck" Not comprehensive Too incremental Too short sighted No state funding possible Too expensive for very low educational impact Doesn't feel like "bang for the buck"

Option 2B

With MSBA Participation: Not Applicable

Without MSBA Participation: 2

PROS	CONS
 Lower cost Gets tutoring out of halls and closets Addresses rising need for extra services 	 Not enough space to build break out spaces No new construction Too short sighted Too incremental Not comprehensive Does not address poor acoustics Not enough educational enhancements Even smaller 2nd grade spaces Limited utility of new spaces

Additional comments:

• Without new specialists, it's not going to help all kids.

Option 2C

With MSBA Participation: Not Applicable

Without MSBA Participation: 3

PROS	CONS
 Less money, but would be better 	 MSBA won't consider
to get MSBA money	 A lot of money without fulfillment
 Solves the problem of the "worst" 	of educational
rooms in the school	 Helps 2nd grade and nobody else
	 Too short sighted
	 Not comprehensive
	 Very impractical – would never
	actually do this

Option 2D & Option 2E

With MSBA Participation: Not Applicable

Without MSBA Participation: 17

PROS	CONS
 Joining Brooks to gym Acoustics addressed Gets most important for reasonable "town only" financing 	 Doesn't include small group rooms or 2nd Grade classrooms MSBA won't consider A lot of money for minimal educational improvement Cafeteria for middle school should be with community center May be concerned later that we didn't do enough, or take a longterm enough view

Option 2F

With MSBA Participation: **7** Without MSBA Participation: **17**

PROS	CONS
 Eligible for MSBA with lowest cost Provides significant educational enhancements Only tearing down small portion of school 	 Not transformative in any way Expensive if don't get state funding Still too much money for not meeting educational enhancements Middle School cafeteria should be part of community center

Option 3A

With MSBA Participation: **4** Without MSBA Participation: **4**

PROS	CONS
 Historical precedent for CPA contribution Improves both ends of building, K end and 8th end New systems, acoustics, etc. Meets all educational improvements Lowest cost option that begins to meet educational needs 	 Cost: If Town alone Marginal cost of 3B is preferable Cost – overall not as good bang for the buck as opt 2E or 2F

Option 3B

With MSBA Participation: **10** Without MSBA Participation: **19**

PROS	CONS
 All three's improve school security Covers many educational enhancements Adds to both ends of the building More aesthetically pleasing balance of elementary classrooms with media Gets more than 3A for a little more money 	 Space is less flexible – fewer opportunities for hub spaces Cost New construction at Smith seems disorganized Appears cut-up

Option 3C

With MSBA Participation: **44** Without MSBA Participation: **11**

PROS	CONS
 Consolidated footprint 2nd floor energy efficiency gains Feels like original layout Highest educational value More flexible opportunities for educational spaces, hubs & reorganized/efficient interior spaces Easier to meet energy efficiency goals 	 Expensive – without MSBA is too much 2nd Floor expensive / need elevators Could there be a version of this all on one floor? 2nd floor destroys historic Smith Over scales cafeteria at both ends of complex. Scale back K-2 Cafeteria Not as good cost value as other options

Option 3D

With MSBA Participation: **7** Without MSBA Participation: **2**

PROS	CONS
 Energy Efficient 	Cost
 Maximum life span 	 Unknown design
 Chance to start fresh 	 Will never get approved – more
 Long-term flexibility 	controversy
	 Disruption to students
	Requires MSBA
	How strategic



minimize cost to town Spend money wisely + wi cost effective ness











maximize educational enhancements











meet 2030 energy by-law

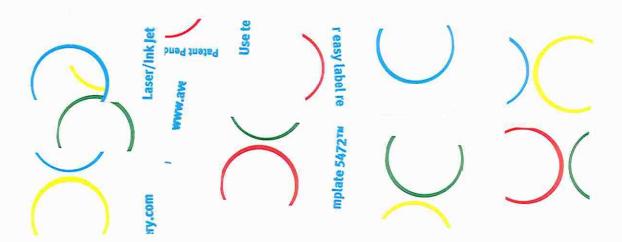


maximize preservation of existing building

minimize time to occupancy



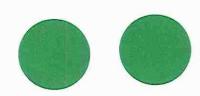


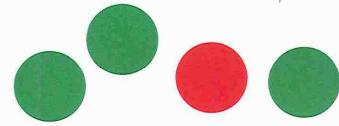




minimize cost to town

MSBA or be smart





maximize educational enhancements

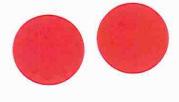












meet 2030 energy by-law

maximize preservation of existing building

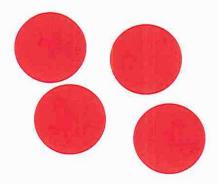
minimize time to occupancy

maximize community use

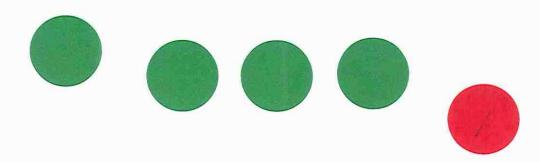
all 3rd votes go here



minimize cost to town (V& MSBA #)



maximize educational enhancements



meet 2030 energy by-law



SI don't want to preserve the bricks to mortar of the & LD/current bldg ->
However the feel, shape to accept to outdown S (W/Doors Not Tust windows I Simportant

minimize time to occupancy





minimize cost to town







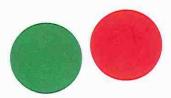




maximize educational enhancements









meet 2030 energy by-law





maximize preservation of existing building



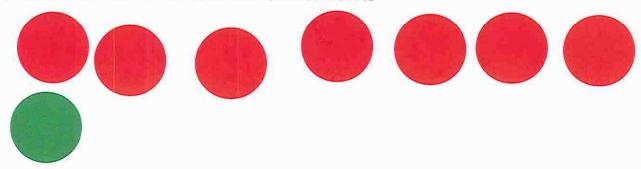
minimize time to occupancy



minimize cost to town



maximize educational enhancements

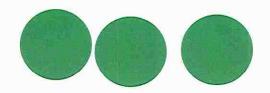


meet 2030 energy by-law



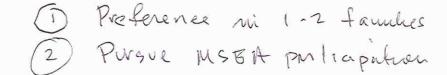
maximize preservation of existing building

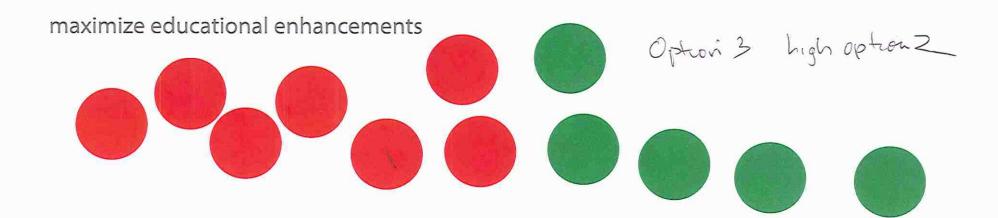
minimize time to occupancy





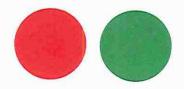
minimize cost to town



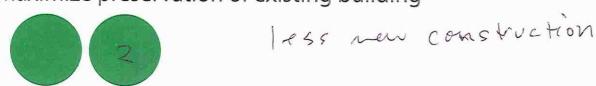


meet 2030 energy by-law

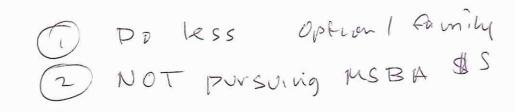
All options fall short of 2020 By-law The more new contraction, the closer you come.

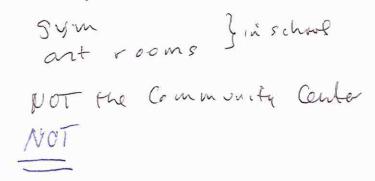


maximize preservation of existing building



minimize time to occupancy

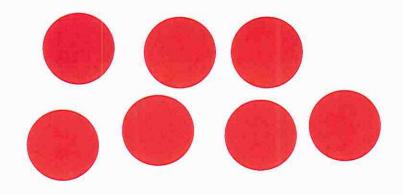






minimize cost to town

maximize educational enhancements



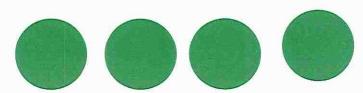
meet 2030 energy by-law



maximize preservation of existing building



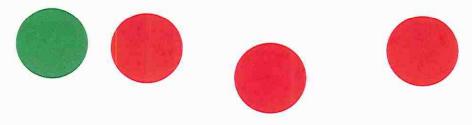
minimize time to occupancy





minimize cost to town

maximize educational enhancements



meet 2030 energy by-law

maximize preservation of existing building



minimize time to occupancy



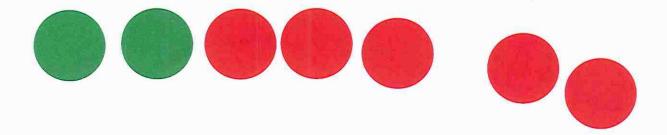
KEY VARIABLES



minimize cost to town



maximize educational enhancements



meet 2030 energy by-law



maximize preservation of existing building

minimize time to occupancy

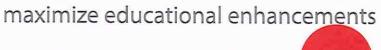
maximize community use

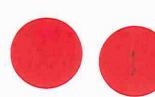


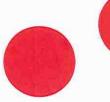


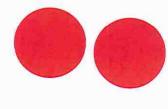


minimize cost to town

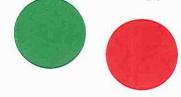




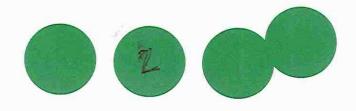




meet 2030 energy by-law



maximize preservation of existing building



minimize time to occupancy

maximize community use









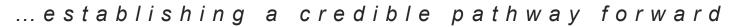
Lincoln Public Schools

Study of the Lincoln School









Public Forum 13 January 2015

AGENDA

- 1. Review of Study
- 2. Summary of Options
- 3. Public Outcomes
- 4. MSBA / Non-MSBA Pathways
- 5. Next Steps for Lincoln-SBAC
- 6. Feedback Activity

1. REVIEW OF STUDY

1. REVIEW OF STUDY

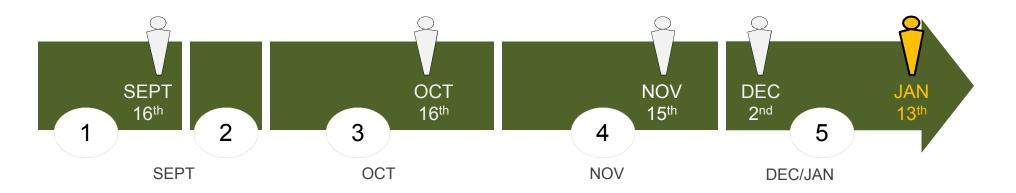
Study Objectives

- Build Community Understanding of the School's Needs
- Position the Town of Lincoln to
 - Decide on the School's Future

1. REVIEW OF STUDY

Study Tasks

- 1. Identify Facility Needs + Educational Enhancements
- 2. Detailed Cost Estimates
- 3. Develop & Truth Test Incremental Options
- 4. Conceptual Cost Estimates
- 5. Present Findings



2. SUMMARY OF OPTIONS

Facility
Needs Only

\$12 -\$29M

À La Carte Educational Enhancements

\$29 -\$47M

Comprehensive Ed. Enhancements \$54 -\$66M

Facility Needs 1 1A 1B \$12.2M \$29.2M





148 Facility Items

- Immediate
- Near-Term
- Deferrable

FACILITY NEEDS

Deferrable Needs: Approximately 10-15 Years

- Interior Finishes
- Remaining Lighting
- Furnishings & Equipment
- Girls' Locker Room
- Paving & Curbing
- Playfield Improvements

\$7.7M

À La Carte Educational Enhancements <90% of MSBA Guideline* Between 90% and 110% of MSBA Guideline* >110% of MSBA Guideline* No MSBA Guideline Third Party Use - Not Evaluated

À La Carte Educational Enhancements

Educational Enhancements – 33 Items

- Classroom Acoustics
 Hub Spaces
- Kitchens & Cafeterias
 Entry Sequence &
 (Multi-Purpose)
 School Offices
- 2nd Grade Classrooms
 Neighborhood
- Small Group Rooms Expression

+ Site and Interior Deferrable Needs

À La Carte Educational Enhancements

Option 2D Option 2A Option 2C Option 2B 1B 1B 1B 1B + 2nd +Kitchens + Small Grade & Cafes **Acoustics** Group \$29.5 M \$29.8 M \$32.0 M \$36.6 M

Option 2E

1B + 2A +2D

\$36.9 M

Option 2G

1B +2C +2A +2D

\$39.9 M

Option 2F

1B +2C + 2A +2D

+ Def

\$47.6 M

Comprehensive Educational Enhancements



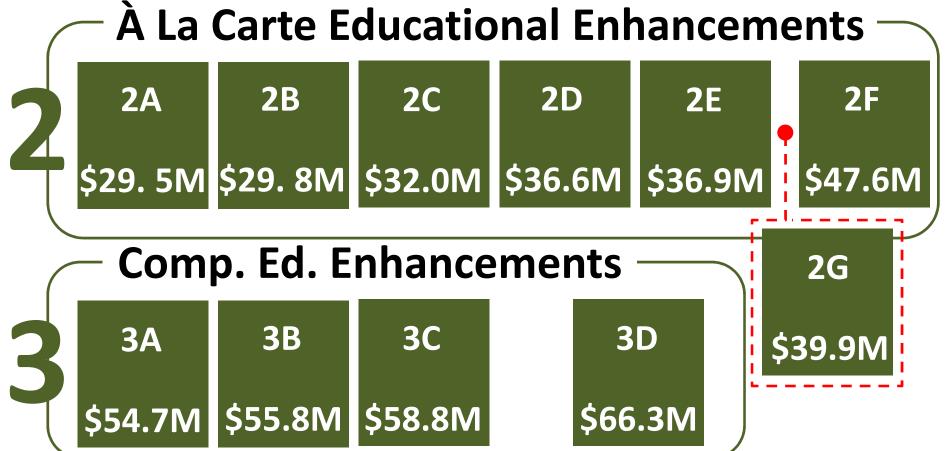






- Hub Spaces
- Neighborhood Expression
- Improved Spatial Relationships
- Improvements to Special Education Spaces
- Improvements to Entry Sequences
- Improvements to School Offices



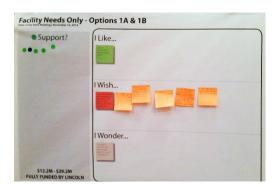


3. PUBLIC OUTCOMES

STATE OF TOWN

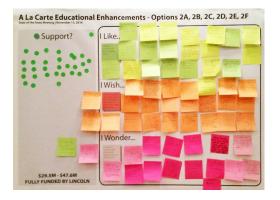
Facility Needs

7 Support, 3.7%



À La Carte

38 Support, 20%



Comprehensive

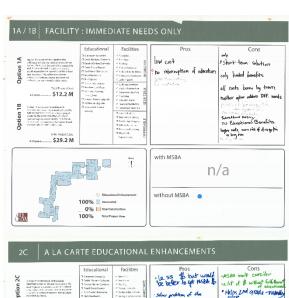
145 Support, 76.3%

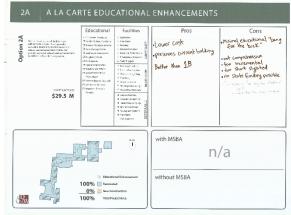


PUBLIC FORUM #3 KEY VARIABLES

- Minimize Cost to Town
- Return on Money Spent 19
- Maximize Ed. Enhancements 120
- Meet 2030 Energy Bylaw 18
- Preservation of Ex. Building 10
- Minimize Time to Occupancy 5
- Maximize Community Use 16

PUBLIC FORUM #3

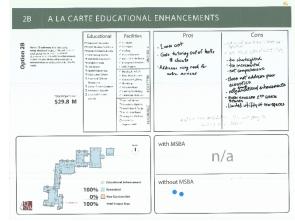


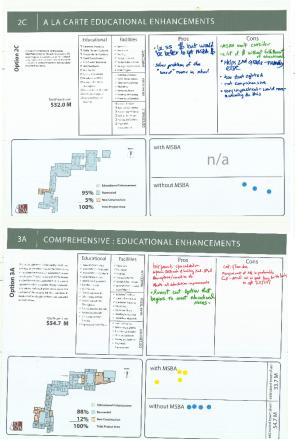


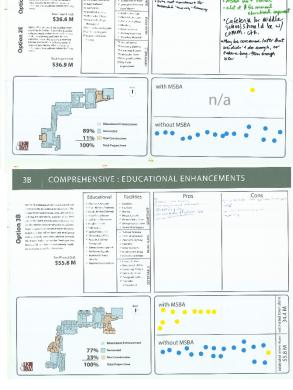
CONS STEET T IN CHOSES ENTRE SHAMP REAMS 2nd grade was NOT MARK, BUT HERN CELT.

MSBA unit consider

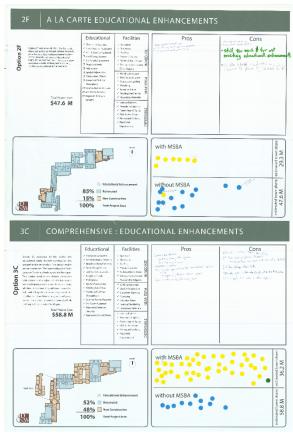
confetein 4 Mitches one assembled







\$36.6 M



4. PATHWAYS MSBA & TOWN ONLY

Key Cost Considerations

- Construction Cost
- Phasing/ Escalation
- Swing Space
- MSBA participation

MSBA Participation

- Approximately 40% Reimbursement
- Address Facility & Educational Needs
- Uncertainty of Participation
- Timing Delay of at Least 18 months
- MSBA Process
- Separation of School & Community Center Projects
- Full Feasibility Study Required

Town Only Project

- No Reimbursement
- Address Facility & Some Educational Needs
- No Timing Delay
- Lincoln Driven Process
- Consideration of Joint School & Community Center Projects
- No Feasibility Study Required

Facility Needs unlikely

POTENTIAL MSBA SUPPORT

À La Carte possible for higher end

Comprehensive most likely

TIMING COMPARISON

3A: w/ MSBA Grant

Date	Milestones	Mths
4/15	Submission of SOI	7
11/15	Invitation from MSBA*	5
4/16	OPM Selection	3
7/16	Designer Selection	2
9/16	Feasibility Study	4
1/17	Schematic Design	6
7/17	Design Development	4
11/17	Construction Documents	6
5/18	Construction	25
6/20	Occupancy	

Initial Estimate	\$54.7M
+ Additional Escalation	\$3.3M
- Potential MSBA Grant	\$24.3M

Town Share: \$33.7M

2G: Fully Funded by Town

Date	Milestones	Mths
6/15	OPM Selection	2
8/15	Designer Selection	1
9/15	Schematic Design	6
3/16	Design Development	4
7/16	Construction Documents	6
3/17	Construction	25
4/19	Occupancy	

Initial Estimate	\$54.7M
+ Additional Escalation	\$0.0M
- Potential MSBA Grant	- \$0.0M

Town Share: \$39.9M

Timing Comparison – Opt 3A

With MSBA Grant

Milestones	Mths
Submission of SOI	7
Invitation from MSBA*	5
OPM Selection	3
Designer Selection	2
Feasibility Study	4
Schematic Design	6
Design Development	4
Construction Documents	6
Construction	25
Occupancy	
	Submission of SOI Invitation from MSBA* OPM Selection Designer Selection Feasibility Study Schematic Design Design Development Construction Documents Construction

Initial Estimate	\$54.7M
+ Additional Escalation	\$3.3M
- Potential MSRA Grant	\$24 3M

\$33.7M

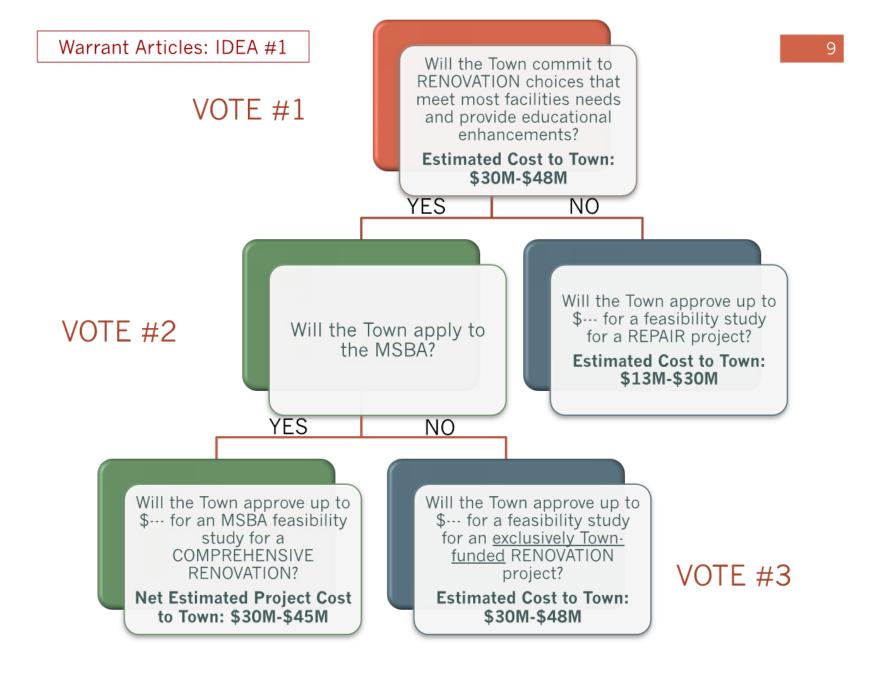
Fully Funded by Town

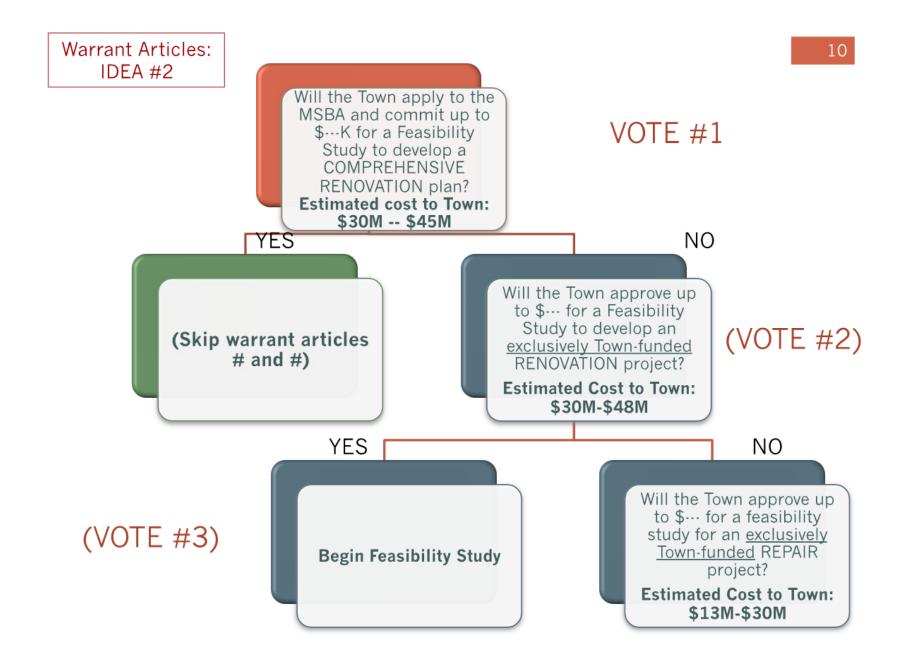
Date	Milestones	Mths
6/15	OPM Selection	2
8/15	Designer Selection	1
9/15	Schematic Design	6
3/16	Design Development	4
7/16	Construction Documents	6
3/17	Construction	25
4/19	Occupancy	

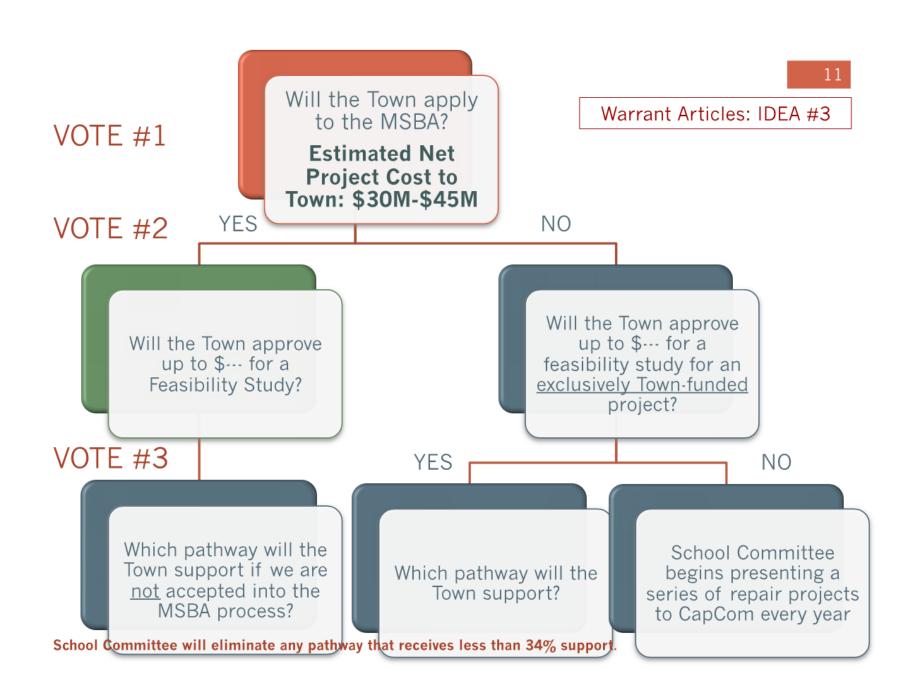
Initial Estimate	\$54.7M
+ Additional Escalation	\$0.0M
- Potential MSBA Grant	- \$0.0M

\$54.7M

5. NEXT STEPS FOR LINCOLN







6. DISCUSSION: BALLOT QUESTION