



Massachusetts School Building Authority
Funding Affordable, Sustainable, and Efficient Schools in Partnership with Local Communities

Module 3

Feasibility Study

January 2015

INTRODUCTION

Module 3 – Feasibility Study:

If the District has completed all tasks defined in Module 1 – Eligibility Period and Module 2 – Forming the Project Team, the District may now proceed with the Feasibility Study as outlined in this Module. Module 3 – Feasibility Study is one of eight MSBA modules intended to provide a guide to the procedures and approvals needed to work collaboratively with the MSBA. (The Program Overview and listing of eight modules is provided in Appendix 3A for reference.)

Welcome to Module 3 – Feasibility Study

During the Feasibility Study, the District and its team collaborate with the MSBA to generate an initial space summary based on the District's educational program, document existing conditions, establish design parameters, develop and evaluate preliminary and final alternatives, and recommend the most cost effective and educationally appropriate solution to the MSBA Board of Directors. The MSBA Board of Directors must approve the preferred solution for a project before the preferred solution may advance into schematic design. See this Module for additional detail.

Module 3 has been provided as a general guide for Districts and their teams to plan their work in a collaborative effort in accordance with the MSBA's procedures and requirements. This Module is not intended to replace and/or supersede the services required by the OPM and/or Designer contracts. The Designer and OPM each shall be solely responsible for performing the services required by its contract with the District, respectively, and nothing in this Module shall be construed as relieving the Designer or OPM from its duties and responsibilities.

Feasibility Study Participants should include, at a minimum, the following:

- **The School Building Committee**, as submitted by the District and approved by the MSBA in its School Building Committee Approval form, as well as elected officials and other District representatives, as deemed necessary by the District to show the educational and financial support of the city/town/regional school district for the preferred solution.
- **The Owner's Project Manager, ("OPM")** as submitted by the District and approved by the MSBA in accordance with MSBA regulations and policies.
- **The Designer** as selected locally by the District and approved by the MSBA for projects estimated to cost less than \$5 million or as selected through the MSBA's Designer Selection Panel for projects estimated to cost more than \$5 million.
- **The MSBA**, through the assigned MSBA Project Manager and Project Coordinator.

Feasibility Study Submittal Procedures

All documents and materials submitted to the MSBA during the course of the Feasibility Study must be transmitted by the Owner's Project Manager ("OPM"). The OPM is required to compile and coordinate all submittals prior to delivery to the MSBA. This includes those items required to be provided by the OPM, as well as those of the Designer and the District.

For each submittal to the MSBA, the Designer and District must submit the required materials to the OPM. The OPM shall compile the submittal with the items indicated in the Designer and OPM Contracts, confirm that the District's School Building Committee has officially approved the submittal and verify its completeness and conformity to MSBA requirements. The OPM shall then forward this submittal to the assigned MSBA Project coordinator under a separate cover letter signed by the OPM, including a certification from the OPM that the OPM has reviewed and coordinated the materials, and the submittal is complete, and a confirmation that the District has approved the materials for submission to the MSBA, in accordance with the OPM Contract which requires the OPM to assist the Owner in the preparation of all information, material, documentation and reports that may be required or requested by the Authority.

Preliminary Design Program – Submit one (1) binder with a hard-copy of materials including one (1) electronic file in PDF format.

Preferred Schematic Report – Submit one (1) binder of materials per this Module including conceptual floor plans not exceeding 18" x 24", and one (1) electronic file in PDF format.

Incomplete submittals or submittals not reviewed by the OPM will not be accepted. Partial submittals will not be accepted without prior approval by the MSBA.

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3.0 Feasibility Study

After all tasks defined in Module 1 – Eligibility Period and Module 2 – Forming the Team have been completed by the District and acknowledged by the MSBA, a District may proceed with the Feasibility Study. Please remember that an invitation from the MSBA's Board of Directors to collaborate on a Feasibility Study is *not* approval of a project. The purpose of the Feasibility Study is for the District, its Owner's Project Manager ("OPM") (for projects with estimated construction costs in excess of \$1.5 million), its Designer, and the MSBA to explore potential solutions that meet the requirements of the District's Educational Program, and to determine the most cost effective and educationally appropriate solution to recommend to the MSBA Board of Directors for its consideration and approval to proceed into schematic design. Moving forward in the MSBA's process requires collaboration with the MSBA, and communities that "get ahead" of the MSBA without MSBA approval will not be eligible for grant funding. To qualify for any funding from the MSBA, local communities must follow the MSBA's statute and regulations, which require MSBA collaboration and approval at each step of the process.

Due to the variety and nature of proposed appropriate solutions (e.g., non-construction alternatives such as redistricting, grade reconfigurations, repairs to a single building system, renovations to the entire facility, an addition, or a new school), each Feasibility Study will vary slightly as to the specific requirements, scope, cost and schedule. The particular requirements, scope, cost and schedule of a Feasibility Study will be outlined in the Feasibility Study Agreement between the District and the MSBA. The requirements may be based on many factors including the MSBA's review and evaluation of any previous studies as well as any meetings and discussions between the District and the MSBA.

In order to ascertain MSBA input and approval throughout the Feasibility Study process, the District is required to secure MSBA concurrence and/or approval of each of the following study reports before finalizing and submitting the next report:

- Preliminary Design Program
- Preferred Schematic Report

The OPM shall prepare and provide a work plan to the Owner and Authority within twenty-one (21) days of Design Contract execution.

3.1 Preliminary Design Program

The purpose of the Preliminary Design Program is to define the programmatic, functional, spatial, and environmental requirements of the educational facility necessary to meet the District's educational program, and perform the review and investigation required to clearly define the existing building deficiencies. Based upon a review of the District's educational program, the Designer will identify and prepare in written and graphic form for review, clarification, and agreement regarding the educational goals and programmatic space needs for the subject school. The space needs along with an evaluation of existing conditions and site development requirements will form the basis of the Designer's recommendation for an evaluation of alternatives upon which the most educationally appropriate and cost effective solution may be recommended.

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The Preliminary Design Program shall be provided in the form of a binder with the following clearly labeled tabs:

- Table of Contents
- Introduction
- Educational Program
- Initial Space Summary
- Evaluation of Existing Conditions
- Site Development Requirements
- Preliminary Evaluation of Alternatives
- Local Actions and Approval Certification
- Appendices

3.1.1 Introduction

The Introduction shall present a brief overview of the reason for the Feasibility Study, a list of all project participants, an outline of key data that informs the basis of the Study, and a summary of the process undertaken to examine, analyze, and conclude upon the findings of this Preliminary Design Program. The following shall be included:

- A brief summary of the facility deficiencies identified by the District in the Statement of Interest (SOI) at the time when the SOI was submitted. Include a copy of the most recent associated SOI in the Appendix of the submittal;
- The date of the invitation from the MSBA Board of Directors to conduct a Feasibility Study. Include a copy of the MSBA Board Action letter in the Appendix of the submittal;
- The agreed-upon design enrollment. (If the enrollment certification included multiple enrollments, then include the conditions associated with each enrollment). Include a copy of the executed study or design enrollment certification, as applicable, in the Appendix of the submittal;
- A brief narrative summary of the Capital Budget Statement indicating local available funding capacity, other ongoing and planned municipal projects, estimated budgets, and the target budget for the proposed project; The overall goal of the Capital Budget Statement is to document the total change in operational costs that the District expects as a result of the proposed project.
- A project directory with contact information for representatives of all District stakeholders (e.g., Mayor/Board of Selectmen, Superintendent, School Building Committee, School Committee, Local officials, and others involved in the project), Designer (point of contact and key support staff and sub-consultants) and OPM (and key support staff);
- Updated project schedule, including: 1) projected MSBA Board of Directors meeting for approval to proceed into Schematic Design, 2) projected MSBA Board of Directors meeting for approval of Project Scope and Budget Agreement, and 3) projected Town/City Vote for Project Scope and Budget Agreement. Identify any variances from the schedule outlined in the District's Feasibility Study Agreement with the MSBA. The Board of Directors meeting deadlines for submissions schedule is posted on the MSBA website and should be consulted

when developing the project schedule. A sample Project Schedule that includes major project milestones has been provided for reference in Appendix 3B.

3.1.2 Educational Program

The District will work with the Designer to document the existing educational program offered by the District and to define the proposed educational activities. The Preliminary Design Program must include documentation of the District's existing educational program, and new or expanded educational specifications if applicable. While developing the Educational Program, the District and the Designer should review the Educational Profile Questionnaire that was completed by the District during Eligibility Period. The Preliminary Design Program must include the process of collaboration, outcomes, and documentation of support among the stakeholders.

The Educational Program shall include a statement of the teaching philosophy and methods; a thorough, in-depth explanation of the District's curriculum goals; and, objectives of the program elements associated with the subject facility. Through the use of narratives, figures, and charts, the Educational Program shall describe and include, but not necessarily be limited to, the following as it relates to the current program, facility needs and proposed design features:

- Grade and school configuration policies;
- Class size policies;
- School scheduling method;
- Teaching methodology and structure (e.g., academies, departments, houses, teams, etc.);
- Teacher planning and room assignment policies;
- Pre-kindergarten (SPED only, tuition programs, locations, full day, half day, if applicable);
- Kindergarten (full day, half day, locations, if applicable);
- Lunch programs (number of servings, district kitchen, full service kitchens, warming kitchens, etc.);
- Technology instruction policies and program requirements (labs, in-classroom, media center, required infrastructure, etc.);
- Art programs (in-classroom, specialized area);
- Music/Performing Arts programs (in-classroom, specialized area);
- Physical Education programs;
- Special Education programs (in-house, collaborative, facility restrictions);
- Vocational Education programs;
- Transportation policies;
- Functional and spatial relationships;
- Key programmatic adjacencies; and
- Security and visual access requirements.

3.1.3 Initial Space Summary

Based upon the District's Educational Program as described above and the agreed-upon enrollment, the District, working with its Designer, must complete the Initial Space Summary to identify the educational spaces the District believes are needed to deliver its

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educational program. Once agreed upon by the MSBA, this Initial Space Summary will help inform the development of alternatives to be studied, upon which the most educationally appropriate and cost effective solution may be recommended.

The Initial Space Summary must be based on the agreed-upon design enrollment, supported by the District's Educational Program and must include the following:

- An itemization of each existing educational space;
- The total gross square footage of the existing facility;
- An itemization of each proposed educational space; and
- A total gross square footage for the proposed renovated/added-to/new facility.

MSBA regulations, 963 CMR 2.00, establish allowable gross square footage per student for different types of school facilities of varying scale. To assist Districts and their design teams in developing proposed Initial Space Summaries, the MSBA has created space summary templates (in Excel format), one each for elementary, K-8, middle, and high schools. Each template includes three separate columns as follows:

- The first column documents existing conditions;
- The second column documents proposed spaces subdivided by existing spaces proposed to remain, new spaces, and total; and
- The third column is the MSBA's guidelines. Other than inserting the agreed upon enrollment at the bottom, this column is not to be altered.

Refer to Appendix 3C Space Summary Templates for additional information.

As an attachment to the Initial Space Summary, Districts must provide scaled floor plans of the existing facility and narrative descriptions of the reasons for any variance between the District's proposed program/educational spaces and the MSBA guidelines for each category of spaces. Districts and their teams should consider the following when completing the Initial Space Summary:

- The initial space summary does not have to differentiate between existing spaces to remain and new spaces when generating the proposed program;
- The values for allowable spaces within the MSBA Guidelines column must not be adjusted as this will prevent a clear understanding of how the proposed program compares to the guidelines and potential limitations on MSBA participation. If this column is adjusted or edited, the proposed Initial Space Summary will be returned, without MSBA review comments, for correction and resubmission;
- The spreadsheet may be expanded by adding rows within the appropriate category to include entries for existing programs and spaces as needed to accurately describe existing educational spaces;
- Categories of space or room type not included in the initial space summary template (e.g., ROTC, computer lab, etc.) should be listed under the "Other" category; and
- If the MSBA and the District agree that more than one design enrollment is to be considered (i.e., proposed grade reconfigurations or redistricting) as part of the Feasibility Study, a separate Initial Space Summary must be generated for each potential enrollment.

3.1.4 Evaluation of Existing Conditions

The Designer will analyze existing conditions of all buildings that comprise the school, site, and environment. The Designer will assemble sufficient information on the problems and opportunities with the existing school building(s) and site, so that any major implications for future requirements and design can be accurately judged. This information is required to be of a level sufficient enough to assist in the development of the preliminary alternatives to be evaluated and must include, at a minimum, an outline of the potential scope, budget, and schedule impacts. The information should include the following:

- Determination that the District has legal title to the property, or alternatively, the required actions necessary to obtain clear title or to control, in accordance with the provisions of 963 CMR 2.05(1), and operate the Assisted Facility and Project Site for the useful life of the Assisted Facility;
- Determination that the property is available for development;
- Determination of any historic registrations and/or potential local and/or state interest/requirements regarding historic preservation or infill construction within a historic district and the associated potential impact on scope and time;
- Determination of any development restrictions that may apply;
- Initial Evaluation of building code compliance for the existing facility;
- Initial Evaluation of Architectural Access Board Rules and Regulations and their application to a potential project;
- Preliminary Evaluation of significant structural, environmental, geotechnical or other physical conditions that may impact the cost and evaluation of alternatives;
- Determination for need and schedule for soils exploration and geotechnical evaluation;
- Environmental site assessments consisting of, at a minimum, a Phase I: Initial Site Investigation conforming to 310 CMR 40.00, et seq. performed by a licensed site professional. (Results of the Phase I investigation may require additional environmental testing); and
- Assessment of the school for the presence of any hazardous materials including, but not necessarily limited to, lead, lead paint, PCBs, mercury, radon, mold and asbestos. Destructive testing may be required where hazardous materials potentially exist behind and within existing construction.

The District will furnish the Designer with all available studies, drawings, surveys, photographs and subsoil exploration reports of the proposed project's existing buildings (if any) and the site or sites.

The Designer shall include in the Preliminary Design Program Report a clear, written statement of the methods and assumptions of, and limitations on the accuracy of, any information provided. The Designer shall recommend during the course of the Feasibility Study what further investigatory work should be carried out prior to recommending an option as the Preferred Solution and what work should be carried out prior to submittal of the Schematic Design.

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3.1.5 Site Development Requirements

In narrative form, the Designer shall describe in general terms project requirements related to site development to be considered during the preliminary and final evaluation of alternatives and submit an existing site plan(s) including, but not limited to:

- Structures and fences;
- Site access and circulation;
- Parking and paving;
- Code requirements;
- Zoning setbacks and limitations;
- Accessibility requirements;
- Easements;
- Wetlands and/or flood restrictions;
- Emergency vehicle access;
- Safety and security requirements;
- Utilities;
- Athletic fields and outdoor educational spaces; and
- Site orientation and other location considerations and issues.

3.1.6 Preliminary Evaluation of Alternatives

Based upon the Educational Program, Initial Space Summary, evaluation of existing conditions, and site development requirements, the District, working with its Designer, shall perform a preliminary evaluation of alternatives. To ensure that the Feasibility Study determines the most cost effective and educationally appropriate solution that can be supported by the community and the MSBA Board of Directors, it is imperative that the preliminary evaluation of alternatives is sufficiently comprehensive in scope to initially consider all possible solutions. Each alternative should satisfy significant components of the Educational Program, Standards, Policies and Guidelines of the MSBA to the extent feasible, unless specifically authorized in writing by the MSBA.

The Preliminary Evaluation of Alternatives should include at least the following:

- Analysis of school district student school assignment practices and available space in other schools in the district;
- Tuition agreements with adjacent school districts (per MGL c.70B §8);
- Rental or acquisition of existing buildings that could be made available for school use (per MGL c.70B §8);
- Code Upgrade Option that includes repair of systems and/or scope required for purposes of code compliance; with no modification of existing spaces or their function (Please note that the MSBA would support a Code Upgrade Option that fulfilled the significant components identified by the district in its Statement of Interest and was reported to support delivery of the district's educational program);
- Renovation(s) and/or addition(s) of varying degrees to the existing building(s); and
- Construction of new building and the evaluation of potential locations.

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The Preliminary Evaluation of Alternatives shall include for each alternative: a description of the alternative; an examination of the degree to which the alternative fulfills and does not fulfill the stated Educational Program requirements; a description of the variation in spaces identified in the Initial Space Summary; how it addresses site and facility goals and objectives; an assessment of the impact of construction phasing; and estimated preliminary construction and project costs. The level of detail provided for each alternative and the associated conceptual cost estimates must be suitable for a comparative cost analyses for the various alternatives.

The results of the Preliminary Evaluation of Alternatives shall be presented in narratives, figures, and tables to clearly demonstrate to the District and the MSBA the evaluation criteria (e.g., existing space issues, the educational program, site requirements, etc.), how each alternative did or did not address the criteria, the advantages and disadvantages of each alternative, and the comparative cost analyses.

The Preliminary Evaluation of Alternatives shall conclude with a list of at least three distinct alternatives (including at least one renovation and/or addition option that maximizes use of the existing facility) that are recommended for further development and evaluation during the Final Evaluation of Alternatives. Alternatives shall retain the same title and designation between PDP, PSR, and SD submittal, therefore maintaining clarity in the documentation.

If the Preliminary Design Program does not include conceptual cost estimates or a list of at least three district alternatives that are being recommended for further development the MSBA will consider the submittal incomplete and will withhold MSBA review comments until submitted.

3.1.7 Local Actions and Approvals

The Preliminary Design Program, as with other submittals to the MSBA, must be reviewed and approved locally for submittal to the MSBA, in accordance with the state open meeting law and any other local requirements. Public participation and local approval procedures and practices may vary by community and by project. Districts are encouraged to consult with their local counsel to ensure that all applicable requirements are satisfied. The District must document local approval of the Preliminary Design Program and its submittal to the MSBA. The MSBA requires Districts to provide a certified copy of Minutes of the School Building Committee ("SBC") meeting(s) where the Feasibility Study related submittals were approved for submittal to the MSBA. The Minutes must include the specific language of the vote and the results of the vote, stating the number of SBC members who voted in favor of submittal to the MSBA, the number opposed, and the number of abstentions, if any.

The District also must list the relevant SBC meeting dates; provide copies of the agendas of such meetings; briefly describe the materials presented, if applicable; list the names and affiliations of specific stakeholders in attendance (e.g., representatives of the local historic commission, school committee members beyond those in the SBC, local community group representatives, etc.); and, list what materials are available for public review and where those materials may be viewed. The MSBA also requires Districts to

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provide similar information for public meetings and presentations conducted in connection with the proposed project, in addition to SBC meetings.

Refer to Appendix 3D Local Actions and Approvals Certification Template for additional information. A signed Local Actions and Approvals Certification on District letterhead is required for MSBA staff to provide review comments regarding the District's Preliminary Design Program or to consider inviting the District to present its proposed project to the MSBA Facilities Assessment Subcommittee.

3.2 MSBA Review of Preliminary Design Program

After a District has submitted a complete Preliminary Design Program that meets the requirements set forth above, the MSBA will review the Program to determine if it concurs with the Initial Space Summary, the preliminary evaluation of alternatives and if it accepts the District's recommendation of proposed preliminary alternatives to be further studied as part of the Final Evaluation of Alternatives.

Initial Space Summary:

The MSBA will provide a written response that: provides the MSBA's evaluation of the extent to which the initial space summary conforms to the MSBA guidelines and regulations; states the approval status of the proposed initial space summary; and, if applicable, lists the specific conditions that the MSBA will be monitoring as the Statement of Interest moves forward in the grant process.

The MSBA is committed to working with Districts to determine the most cost effective and educationally appropriate solution to meet their specific needs. To this end, the MSBA is willing to work with a District to better understand its Educational Program and any unique needs the District may have. As part of the Preliminary Design Program, the District should supply a sufficient description and substantiation of the educational program needs in order for the MSBA to consider variations to MSBA guidelines that are reasonable, required to deliver the educational curriculum and are likely to be financially supported by the community. To bolster the likelihood of success, foster a clear understanding of the MSBA's willingness to financially participate and define the conditions upon which alternatives will be developed, it is essential that the MSBA and the District reach agreement on the initial space summary. Therefore, MSBA approval of the initial space summary, or potentially a conditional approval, is required for the MSBA to continue working with the District on the Preferred Schematic Report. The MSBA may issue a conditional approval of the initial space summary solely for the purposes of evaluating the preliminary and final alternatives. The final approval of the space summary and the agreed upon square footages will be determined upon submission of the Preferred Schematic Report.

Preliminary Evaluation of Alternatives:

The MSBA will review the District's Preliminary Evaluation of Alternatives to determine if it is sufficiently comprehensive in scope to initially consider all appropriate solutions that could be supported by the community and the MSBA Board of Directors for a continued, more comprehensive, investigation during the Final Evaluation of Alternatives in the Preferred Schematic Report. The District and the MSBA must agree that the Preliminary Evaluation of Alternatives is sufficiently comprehensive and represents a scope of work that is mutually agreeable to both the MSBA and the District to continue working on the

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Preferred Schematic Report. The MSBA review of the Preliminary Evaluation of Alternatives may or may not result in consideration of additional and/or refined alternatives.

Once the MSBA has accepted the Preliminary Design Program, the District and its Designer should proceed with the final evaluation of the proposed alternatives.

3.3 Preferred Schematic Report

The purpose of the Preferred Schematic Report is to summarize the process and conclusions of the Preliminary and Final Evaluation of Alternatives and substantiate and document the District's selection and recommendation of a preferred solution. The Report should address all concerns and questions raised by the MSBA during its review of the Preliminary Design Program and clearly identify any changes incorporated by the District based on further evaluations and considerations.

The District, through its OPM, must submit the Preferred Schematic Report by the deadline established by the MSBA for a proposed Board action. This schedule is posted on the MSBA website and should have been incorporated as part of the updated schedule required in part 3.1.1 of the Preliminary Design Program.

The Preferred Schematic Report shall be provided in the form of a binder with the following clearly labeled tabs:

- Table of Contents;
- Introduction;
- Evaluation of Existing Conditions;
- Final Evaluation of Alternatives;
- Preferred Solution; and
- Local Actions and Approval Certification

The Preferred Schematic Report shall also be provided as an electronic file in PDF format. Conceptual Floor Plans and Existing Conditions Plans may be provided in half-sized (18" x 24") drawings for legibility when necessary.

3.3.1 Introduction

The Introduction shall summarize the process and conclusions of this Preferred Schematic Report and shall include:

- Overview of the process undertaken since submittal of the Preliminary Design Program that concludes with submittal of the Preferred Schematic Report, including any new information and changes to previously submitted information;
- Summary of updated project schedule including: 1) projected MSBA Board of Directors Meeting for approval of Project Scope and Budget Agreement, 2) projected Town/City vote for Project Scope and Budget Agreement, 3) anticipated start of construction, and 4) target move in date;
- Summary of the final evaluation of existing conditions;
- Summary of the final evaluation of alternatives;

