

INTRODUCTION

Purpose & Background

On April 5, 2016 the Gloucester Public School District submitted a Statement of Interest (SOI) to the Massachusetts School Board Authority (MSBA) for the East Gloucester Elementary School. The SOI, included in Appendix X.01, notes the following considerations as the priorities for the East Gloucester Elementary School:

- “replacement of or addition to the obsolete building in order to provide for a full range of programs consistent with state and approved local requirements”.

Based on the needs and priorities identified in the SOI, the District was invited into the Feasibility and Schematic Design phase of the MSBA building process. A copy of the Board Action Letter can be found in Appendix X.02. On November 06, 2018 the MSBA Designer Selection Panel awarded Dore & Whittier Architects the Feasibility and Schematic Design Study for this school. This report is the first submission in the study process.

The Feasibility Study includes two submissions to the MSBA; the Preliminary Design Program (PDP) and the Preferred Schematic Report (PSR). The goal of the PDP submission is to define the programmatic, functional, spatial, and environmental requirements of the educational facility to meet the District’s educational program. The PDP submission includes an analysis of the existing building and site conditions and outlines the capital improvements that would be required for the long-term sustainability of the facility. Based on the existing facility needs, site opportunities and constraints, and the educational program goals, a series of alternatives were developed and presented to the Working Group and School Building Committee for evaluation. The conclusion of the PDP is a ‘short list’ of the alternatives approved by the District for further study in the Preferred Schematic Report. The following Executive Summary outlines the process undertaken to identify the District’s educational goals and programmatic space needs.

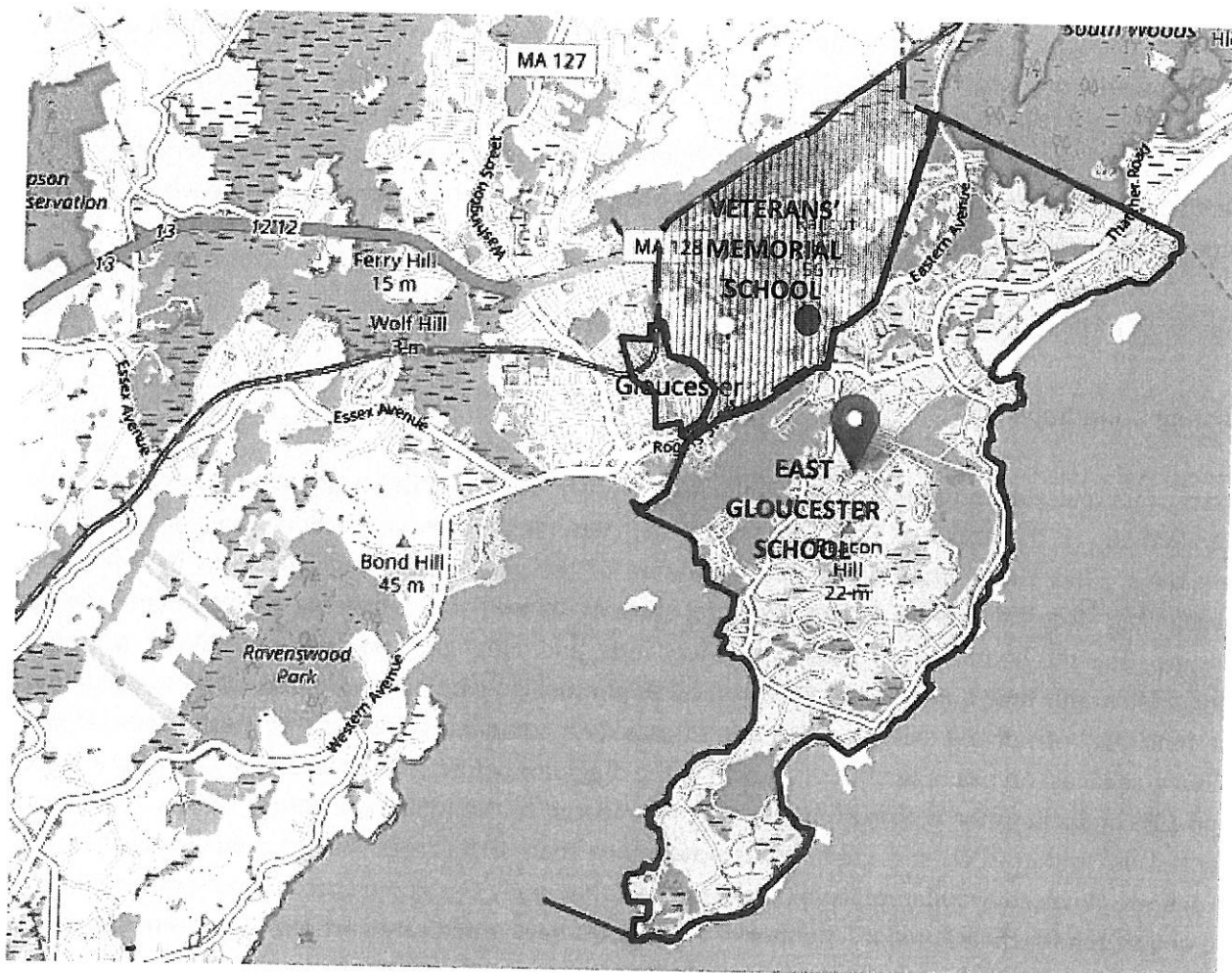
Executive Summary

The Request for Designer Services (RFS) was issued by the District on September 5, 2018. The RFS notes that the District is primarily interested in the consolidation of two schools, East Gloucester Elementary and Veterans' Memorial Elementary Schools. The MSBA has acknowledged this interest and issued a Design Enrollment Certification, see Appendix X.03, for two enrollment populations, 230 students for East Gloucester K-5 only, and 440 students for a combined East Gloucester and Veterans' Memorial K-5 Elementary School.

The East Gloucester Elementary School was constructed in 1948. A classroom wing was added in 1989 and modular classrooms were added in both 1990 and 2008 to accommodate the growing needs of the educational program. The modular classrooms currently serve as kindergarten classrooms and offices for special education. The existing school (exclusive of the modular classroom additions) is 26,852 sq. ft. and serves 230 students in grades K-5. A substantially separate special education program serves 10 students in grades 3-5. The facility lacks dedicated art, gym, and music rooms and has substantial space deficiencies for administration and special education. The shared cafeteria / gymnasium creates scheduling constraints as physical education must be scheduled around the necessary time required to setup, serve, and clean up from lunch each day. Additionally, this multi-purpose cafeteria / gymnasium is approximately 1/5th the size of the MSBA guidelines for an elementary school gym and substantially reduces the number of students and activities that can be conducted in the space.

Located less than two miles away, the 33,348 sq. ft. Veterans' Memorial Elementary School serves 217 students in grades K-5. This school was constructed in 1956. A classroom addition was added in 1992, and two modular classrooms were added in 2011. The modular classrooms currently serve as Grade 5 classrooms. A substantially separate special education program serves 5 students in grades K-2. Similar to the East Gloucester School, Veterans' Memorial lacks a dedicated art room, and the cafeteria also functions as the gymnasium and performance space which creates scheduling constraints throughout the week.

The map below shows the School Attendance Zones for the East Gloucester School (EGS) in red with the blue dot indicating the school location, and the School Attendance Zone for Veterans' Memorial School (VMS) in blue with the red dot indicating the location of the school. It is important to note that some students travel through the VMS catchment area to attend the East Gloucester School. A potential site for a consolidated school has been included in this study. The "School House Road Site" is bordered by Green Street to the southeast, Ledgemont Ave to the south, Dodge Street to the west, and Gloucester Crossing Road to the north. This site is located within the Veterans' Memorial School catchment area and is shown below with a yellow marker. The site contains an open sports field, playground, and basketball court for community use. There are no existing structures on this site.



Gloucester Public Schools - School Assignment Areas for East Gloucester & Veterans' Memorial Schools

Both the East Gloucester and Veterans' Memorial schools are located on sites with limited parking and inadequate circulation for parent, bus, and van pick-up and drop-off. Existing open space deed restrictions on the East Gloucester School site poses site constraints that limit the ability to expand the existing building footprint and improve the on-site circulation that impacts off-site traffic.

Due to the proximity of the two schools and the evident need for both facility and educational program improvements at each school, the Veterans' Memorial School has been included in the Feasibility Study for the East Gloucester School project. Per the MSBA Design Enrollment Certification Letter, included in Appendix X.03, the City of Gloucester School District was approved to study two different design enrollments based on the District's needs. The first design enrollment for grades kindergarten through five is for 230 students and would include the existing East Gloucester School students only. The second design enrollment of 440 students would combine the East Gloucester and Veterans' Memorial schools into one school. The proposed building sites identified for this study include the two existing school

sites and “The School House Road Site”, which is located between Green Street and Gloucester Crossing Road, a private road which extends off School House Road.

Considerations of renovations to the Veterans’ Memorial School for 230 students, or a new school for the Veterans’ Memorial School community only is not part of this study. Similarly, a new school for 230 students on the School House Road site has not been considered

Overview of Process

Existing Conditions

The process undertaken to develop the Preliminary Design Program (PDP) began with a comprehensive examination of the existing East Gloucester and Veterans’ Memorial School buildings and site conditions. This study includes the documentation of the existing building conditions including the mechanical, electrical, plumbing, and structural systems, as well as the building envelope and interior finishes. The site boundaries, delineation of wetlands, and initial geo-technical explorations were not conducted at this time but will take place in the PSR phase. Plan diagrams were developed to document the functional use of the existing space and to provide a comparative analysis of these spaces to the MSBA guidelines. An example of this is shown in the diagrams below. The spaces noted in red are more than 10% undersized for their current use when compared to the MSBA guidelines. Yellow spaces are ‘right sized’ within 10%, and green spaces are more than 10% larger than the dimensional MSBA guidelines. It is readily apparent from these diagrams that many classroom spaces in each of the schools are undersized for their function. Neither of the schools have a dedicated art room or gymnasium, and neither of the schools have sufficient administrative or special education spaces. For example, at the East Gloucester Elementary School, music class is held on the stage in the auditorium. The gymnasium serves as the cafeteria in both schools and as a performance area as well in the Veterans’ Memorial School. These spaces are undersized for an elementary school gymnasium (per MSBA guidelines) and are further reduced in size and safety by kitchen server equipment such as coolers and freezers, salad bar, and POS equipment that is stored on the gym floor due to the inadequate size of the kitchen area. Both schools lack sufficient special education teaching spaces, administration and guidance space, and meeting space for staff and conferences. The corridor serves as student pull-out teaching space in both schools, and in the Veterans’ Memorial School the egress corridor adjacent to the library is often used for PT. These ‘Functional Use Diagrams’ and the lack of dedicated teaching space is explained in further detail in Section 3.1.2 of this report.



With the guidance of the OPM and approval of the School Building Committee, a Working Group was formed to assist in the development of the educational programs for each of the design enrollments. This group met several times over the course of this study period to outline the existing educational program, define the limitations imposed by the existing facility, assist in the development of the space needs summary, develop the Guiding Principles for Design, and finalize the Options Scoring Criteria. Below is a summary of this work.

Educational Program Limitations Imposed by the Existing East Gloucester School Facility Include:

- undersized classrooms
- undersized library
- insufficient dedicated space for special education programs
- insufficient space for OT / PT
- no dedicated art or music room
- no dedicated PE space (shared cafeteria & gym)
- insufficient space for collaborative group work
- insufficient storage space
- no space for staff meetings
- no space for special education meetings
- inequitable program space across the district
- inadequate space for administration needs
- insufficient parking spaces for staff and visitors
- insufficient site circulation and safe drop-off zones

Educational Program Limitations Imposed by the Existing Veterans' Memorial School Facility Include:

- undersized classrooms
- insufficient dedicated space for special education programs
- no dedicated art room
- no dedicated PE space (shared cafeteria & gym)
- insufficient space for collaborative group work
- insufficient storage space
- no space for staff meetings
- no space for special education meetings
- inequitable program space across the district
- inadequate space for administration needs
- insufficient parking spaces for staff and visitors
- insufficient site circulation and safe drop-off zones

The development of the educational program was based on the existing educational needs, the MSBA guidelines, and the District's Educational Program Goals. D&W led a visioning session with the superintendent of Gloucester Public Schools, and the principals of the East Gloucester and Veterans' Memorial School. The Visioning Session included examples of different elementary school learning environments, the development of functional relationship models, and the review of guiding principles for design. The results of this meeting helped to shape the design alternatives that were developed and are included in this submission. The developed Guiding Principles were presented to the Working Group for their input and the final list was approved by the Building Committee.

Summary of Guiding Principles for Design

SITE

- Separation of site circulation – cars / buses / pedestrians
- Appropriate number of faculty, staff, and visitor parking spaces
- Design elements to provide for safety and security of building and site
- Provide age appropriate playgrounds for the agreed upon enrollment
- Provide dedicated space to support the District-wide garden program and outdoor learning opportunities

BUILDING

- Building zoned into public and private sections
- Provides 4 sections per grade Level (440 enrollment) or 2 sections per grade level (230 enrollment) with pairs of classrooms connected for interdisciplinary work and/or co-teaching
- Planning for 23 students per class, 18 students for Kindergarten
- Organize core academics into a minimum of two grade-level pairs with adjacent extended learning space
- Include individual student cubbies embedded into classrooms for grades K-5
- Provide all instructional areas with direct access to daylight and views
- Provide Special Education spaces to meet District needs
- Provide dedicated OT and PT spaces.
- Integrate special education spaces throughout the facility, and provide pull-out spaces adjacent to general education classrooms
- Provide acoustically separate but visually connected dining experiences in the cafeteria
- Provide dedicated spaces for PE, Music, & Art
- Provide sufficient Administration and Guidance space to meet staffing needs
- Provide separate staff dining spaces and teacher work rooms
- Provide performance space that meets MSBA guidelines and District educational program

- Provide spatial relationships between the music room and stage/cafeteria and between the media center and art room
- Flexibility of large group assembly spaces (gym, stage, cafeteria)
- Provide flexibility at a variety of scales, including space size and furniture to support various learning preferences and teaching methods
- Provide utilities and infrastructure to anticipate changing technology, student needs, and equipment
- Library/Media Center near the art room and divided into multiple activity areas to support project-based learning, presentation, literacy-based activities and instruction, and multiple group gathering
- Meet MSBA Requirements for additional 2% point
- Meet requirements for LEED-V4 for schools

Design Alternatives

The District's Educational goals, opportunities and constraints of each site, and the guiding principles for design provided the basis for the development of the design alternatives. Two different design enrollments, and several building options were explored.

A total of 14 alternatives were developed including a 'capital improvements only' plan for the East Gloucester Elementary School, addition and renovations to the existing East Gloucester School, and new school options on each of the three sites. An outline of the options explored is included below. Within this list are additional options (e.g. B1, B2, etc.). The full list can be found in section 3.1.6 – Preliminary Evaluation of Alternatives.

OPTION A:	CAPITAL IMPROVEMENTS ONLY EAST GLOUCESTER SCHOOL
OPTION B:	RENOVATIONS ONLY TO EAST GLOUCESTER SCHOOL -230 STUDENTS
OPTION C:	ADDITIONS & RENOVATIONS TO EAST GLOUCESTER SCHOOL – 230 STUDENTS
OPTION D:	ADDITIONS & RENOVATIONS TO EAST GLOUCESTER SCHOOL – 440 STUDENTS
OPTION E:	NEW SCHOOL ON EAST GLOUCESTER SCHOOL SITE – 230 STUDENTS
OPTION F:	NEW SCHOOL ON EAST GLOUCESTER SCHOOL SITE – 440 STUDENTS
OPTION G:	NEW SCHOOL ON SCHOOL HOUSE ROAD SITE – 440 STUDENTS

The estimated cost for each design option was developed by the designer's cost estimator and presented to the owners. A comparative evaluation of the options was conducted based on the Evaluation Criteria and Scoring Guidelines developed by the Working Group and approved by the Building Committee. Options were scored on a scale of 1-5 based on how well they met the established criteria. Design alternatives scored the highest marks based on their ability to:

- Serve a student enrollment of 440
- Meet the educational programming goals defined in the space summary
- Meet the educational goals outlined in the Guiding Principles

- Reduce phasing or time to completion
- Reduce impact to students and outdoor learning environments during construction
- Fit into the surrounding neighborhood context
- Project Cost (lower costs scored higher)

This evaluation process ultimately led to a “short list” of options for additional study in the PSR stage. Alternatives recommended for further exploration during the Preferred Schematic Report are listed below and described in detail in the body of this report.

Design Alternatives for further study in the PSR phase

- A1: Capital Improvements Only to East Gloucester School (230 students)
- A2: Renovations Only to the East Gloucester School (230 students)
- B1: Additions and Renovations to East Gloucester School (230 students) – no auditorium
- C1: Additions and Renovations to the existing East Gloucester School (440 students)
- D1: New School on East Gloucester Site (230 students)
- E2: New School on East Gloucester Site (440 students) – Split Level
- F2: New School on Veterans’ Memorial School Site (440 students) – on ballfield
- G1: New School on School House Road (440 students) – east / west orientation
- G2: New School on School House Road (440 students) – north /south orientation

Since the start of the Feasibility Study, the designers have held ten meetings each with the Working Group and the School Building Committee. We have presented to the School Committee and to the City Council on two occasions each, held informational presentations with the PTOs of each school and public presentations to both Ward 1 and Ward 2, where each of the sites are located. Copies of each of these presentations can be found in Appendix X-10, and meeting minutes can be found in Appendix X-9. The Educational Program, Space Summary, and graphic illustration of each Alternative was presented to the School Building Committee for final review and vote for recommendation of the Design Alternatives to be submitted to the MSBA as part of the Preliminary Design Program on 06/26/2019. The School Committee voted 5 to 1 to approve the PDP submission. The City Council granted their final approval of the PDP submission to the MSBA on 07/09/2019. Records of meetings and votes can be found in Appendix X-9 of this report.

Summary of Facility Deficiencies

As noted in the SOI, one of the District’s priorities is to resolve the facility and educational program constraints that exist at both the East Gloucester and the Veterans’ Memorial Schools in order to provide for ‘a full range of programs consistent with state and approved local requirements. These constraints included lack of dedicated and appropriate space for special education programs, dedicated

space for music and art, a flexible, multi-use library, flexible assembly space, teacher work and collaboration space, and conference rooms for both large and small groups.

The East Gloucester and Veterans' Memorial schools are two of five elementary schools in the district, including the recently constructed West Parish School which provides adequate and appropriate spaces for a full range of educational programs. The space inequities that exist at both the East Gloucester and Veterans' Memorial Schools do not allow for similar programs such as art, music, special education and physical education to be delivered with the same enrichment that exists at the West Parish Elementary School.

EAST GLOUCESTER ELEMENTARY SCHOOL

The East Gloucester Elementary School was constructed in 1948. A classroom addition was added in 1989, and modular classrooms were added in 2008. The building systems, mechanical, electrical and plumbing, are all original to the building. The heating and venting systems are of concern to the District as many spaces are not properly vented, and air quality has become an ongoing concern. The building size exceeds the maximum square footage for a building without an automatic fire suppression system based on the current code requirements, and many areas of the school do not meet MAAB or ADA accessibility requirements.

The building envelop has visible deterioration, rust, and rot especially around windows, doors, and vents. The modular classrooms have exceeded their useful life. This condition allows for the infiltration of air, water, and pests. Windows are single pane, further reducing the efficiency of the heating system and latching systems are old and difficult to operate. Moisture infiltration is a concern as ground water is visible in the unvented basement area adjacent to the boiler room. The electrical system, original to the building, has reached capacity and is at the end of its useful life. Without a full upgrade, the service cannot provide the power requirements to meet the needs of today's classroom environments or for an upgrade to the fire alarm system that would allow for all doors to be equipped with lighted EXIT signs and alarms.

As previously noted, the school was designed in 1948 for a smaller student population. The building at that time contained only six classrooms, the gym/cafeteria, a principal's office, library, and an auditorium. The five-classroom addition and the modular classroom additions provided additional teaching space but did not increase the size of the gym/cafeteria, or provide space for art, music, or administration. The building's gymnasium / cafeteria is considerably undersized for an elementary school. Use of the gymnasium for physical education must be scheduled around the needs of the cafeteria lunch program. The kitchen area is very small and requires the coolers and freezers, as well as, the POS stations to remain on the gym floor throughout the day, further reducing the gym program size. Other programs, such as music and art, lack dedicated spaces. Teacher workspaces and copy areas are in the hallways. Students receive special education services in the hallway. Music class is held on the

stage, art is on a traveling cart, and administration lacks a conference room or meeting space. Overall, the lack of space limits the delivery of educational programs that are consistent with other elementary schools in the district and with the district's goals.

VETERANS' MEMORIAL SCHOOL

The Veterans' Memorial School was built in 1957 and received an addition in 1992 that included a library, music room, kindergarten classroom, and practice rooms, which are currently serving as special education spaces. Modular classrooms were added in 2011 to serve the increase in student population. Currently, the library also serves as the meeting and conference area, which must be scheduled around student's use of the library.

A multi-purpose room serves as the cafeteria, gym, and performance space. The stage area is not handicap accessible, which limits the participation of students with disabilities from activities that take place on the stage. Physical Education classes must be scheduled around the lunch schedule including the time to set up and clean up. Due to the size of the space, PE is limited to only one class per teaching block. Other space limitations require that OT/PT services take place in the egress hallway between the library and special education classroom, and art is delivered to the classroom on a storage cart which limits the types of projects and medium that can be considered.

Some of the building systems have received upgrades including the boiler plant, which was upgraded in 1993, the fire alarm panel, some electrical panels and lighting. However, many parts of the systems remain original, outdated, and inefficient, including classroom unit ventilators, lighting controls, and security system.

The exterior envelop of the building is in poor condition. Much of the building is board and batten wood siding that has suffered from rot and deterioration, windows are single pane and the metal frames of both the windows and doors are rusting leaving gaps for insects and pest to enter the building. Interior finishes are mostly original and in poor condition.

Design Enrollment

The agreed upon Design Enrollment between the MSBA and the City of Gloucester, see Appendix X.03, considers two potential enrollments: a school for 230 students that would address the needs of the East Gloucester School only and an enrollment for 440 students that would combine the East Gloucester and the Veterans' Memorial Schools.

Capital Budget Statement

The Capital Improvement Plan for the City of Gloucester outlines the City's goal to replace both the East Gloucester and Veterans' Memorial Schools with a facility that will meet the educational program needs of the District's elementary school students and serve the district in a sustainable fashion for years to come.

The City reviewed and analyzed the affordability of this project as well as other capital needs projects in the City, including the capital improvements to City Hall, police / courthouse, and the library. It was determined that the City will require an override to support the cost of these projects. A copy of the City's Capital Budget Statement and Cover letter are included in Appendix X.04.

Project Directory & Project Schedule

A copy of the project directory with contact information for representatives of all district stake holders, designers, and owner's project manager can be found on the following pages. An updated schedule developed by the Owner's Project Manager follows the directory.

Key delivery dates are as follows:

PDP Submission:	August 1, 2019
PSR Submission:	Oct. 23, 2019
Project Scope and Budget Board of Directors Meeting:	December 11, 2019
Schematic Design Submission:	May 8, 2019