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SECTION 1

EXECUTIVE SUMMARY

NASHUA MIDDLE SCHOOLS STUDY

SECTION 1: EXECUTIVE SUMMARY

PROJECT GOALS AND OBJECTIVES

Harriman has been retained by the Nashua School District to conduct a study for Nashua Middle Schools. The goal of this study is to investigate existing facility and site conditions, summarize educational programmatic needs, and determine a scope of work that supports best practices in 21st century middle school design and fosters program equity at all Nashua Middle Schools.

FACILITY ANALYSIS

Harriman inventoried the existing conditions, surveys, studies, and reports for Elm Street Middle School, Fairgrounds Middle School, and Pennichuck Middle School. The facility analysis in the proceeding pages identifies areas where the building and its systems have deficiencies and recommendations for improving these systems.

Elm Street Middle School

The facility analysis determined a series of recommendations to upgrade the existing Elm Street Middle School to modern building standards and to support its educational programs. The original Elm Street Middle School was constructed more than 80 years ago. While the building is largely of sound construction, it is in need of significant investment to its physical infrastructure. Areas of greatest deficiency include the energy efficiency of the exterior masonry envelope and windows, combustibility of the wood floor and roof construction, deterioration of the 1961 concrete cafeteria addition roof structure, numerous accessibility issues, aged steam heating distribution system and building controls, improper classroom ventilation, aged power distribution systems, improper lighting controls, and classroom electrical capacity.

Fairgrounds Middle School

Fairgrounds Middle School was originally built in the 1960s and has undergone renovations and additions in the late 1990s. Although this building is quite sound, several areas of recommended improvements include, but are not limited to, pedestrian safety and traffic issues, eroding pavement, energy efficiency of the 1960s exterior masonry envelope, exterior door and

frame replacements, repointing of brick and masonry, window lintel and sill repair and replacements, gymnasium upgrades, locker replacements, accessibility issues, aged power distribution system, classroom electrical capacity, aged fire alarm system and lack of current access control systems.

Pennichuck Middle School

The analysis for Pennichuck Middle School identifies recommendations for the school built in the late 1980s. The recommendations include, but are not limited to, replacement of portable classrooms, exterior door and frame replacements, masonry repointing, lintel replacements, interior finish updates, gymnasium upgrades, library improvements, locker replacement, accessibility issues, storage cabinet updates, replacement of aged mechanical rooftop units, replacement of aged water heater, fire alarm system update, lack of current access control systems and intercom systems.

New Nashua Middle School

Analysis of a 20-acre property owned by the City of Nashua in the southwestern quadrant of the City (Parcel: C-2851) identified soils generally in good condition to support the development of a new school and related facilities. The site identified a wetlands area on the north side of the property. Utilities and access to the site can be served from the adjacent Cherrywood Drive. Additional adjacent parcels are being analyzed to determine possible access to the site from Buckmeadow Road.

EDUCATIONAL PROGRAMMING

Programming is the research and decision-making process that identifies the scope of work to be designed. Our research was centered around the goal of creating three Nashua middle schools that support a middle school teaming model, unified arts that align with high school CTE curriculum, and that focus on the following scope model:

- / 800 +/- Students Schools
- / Program Equity
 - / Special Education and Services
 - / Middle School Teaming
 - / S.T.E.M. / Unified Arts

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NASHUA MIDDLE SCHOOLS STUDY (CONT.)

SECTION 1: EXECUTIVE SUMMARY

- / Playfields and Outdoor Recreation
- / Life Safety / Code / Accessibility
- / Safety & Security

Harriman’s research yielded the following outcomes:

- / Space Allocation Summary
 - / A summary of spaces within the existing building and proposed concept designs that illustrates how program equity can be achieved—in particular team collaboration spaces, unified arts program spaces and additional special education spaces.
- / Existing building programming
 - / A summary of stakeholder surveys and meetings that guided the overall scope of work for the three middle schools.
- / Community forum summary
 - / An interactive exercise focused on 21st century best practices for middle school design that engage the community in arriving at a design statement that captures the essence of Nashua Middle Schools.

CONCEPT DESIGN

Utilizing the information and recommendations from the facility analysis and research conducted during Educational Programming Harriman developed a scope model that supports the goals and objectives of Nashua School Districts. Applying that scope model to the existing middle schools and a potential new middle school Harriman arrived at two options for creating three 800+/- Nashua Middle Schools. They are as follows:

- / Option 1: Renovation / Additions
 - / Elm Street Middle School
 - / Fairgrounds Middle School
 - / Pennichuck Middle School
- / Option 2: Renovation / Additions and New 800+ Middle School
 - / New Nashua Middle School
 - / Fairgrounds Middle School
 - / Pennichuck Middle School

FINANCIAL AND ENERGY ANALYSIS

Comprehensive financial and energy analyses were performed for the scope of work assigned to each of the existing middle schools and the proposed new school. Construction costs as prepared by Harvey Construction are presented in Section 5 of this report. These represent the total project costs for the construction work comprised of the contractor’s costs as well as fees for design consultants, equipment, and various owner expenses. An alternate price is included to construct additional classrooms to support the inclusion of District-wide special education spaces that are currently being held out-of-District.

Life cycle costs of the four school projects being considered (Elm Street Renovation, New Middle School, Fairgrounds Renovation, and Pennichuck Renovation) are also provided. The figures identify projected total project costs associated with the construction bonded over a 20-year period at an interest rate of 3%. The analysis also considers utility costs (fuel, water, electricity) to operate the facilities. For the thirty-year period, cumulative utility costs account for approximately 10% of the cost to construct and operate a new facility.

CONCLUSION

In conclusion, a majority of the goals and objectives of the Nashua Middle Schools projects can be met with both concept design options. Option 1 maintains a middle school at the Elm Street location and further evolves a building originally designed to serve as a high school over 80 years ago to support a contemporary learning campus for middle school students. Given the size, age and configuration of the school, the construction costs and operating costs of this option are higher than those of Option 2. Option 2 envisions a newly constructed school to support a 21st century learning model. By constructing the school on an undeveloped site, this provides an opportunity to create playfields at the Elm Street School replacement ensuring all three schools are provided with outdoor recreational and learning resources. Improvements at Fairgrounds Middle School and Pennichuck Middle School are the same in both design options.