Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

MSBA Feasibility Study

Preliminary Design Program (PDP)

February 14, 2018

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3.1.1 INTRODUCTION

A. Narrative Summary
B. Project Directory
C. Updated Project Schedule
D. Supporting Documents

3.1.1 INTRODUCTION

A. Narrative Summary

In July of 2017, Lamoureux Pagano Associates (LPA) was selected by the Town of Shrewsbury and the Massachusetts School Building Authority (MSBA) to conduct a Feasibility Study through schematic design for the Beal Early Childhood Center. The stated objectives of the study were to analyze options for a 750 student Kindergarten through Grade 1 facility and a 790 student Kindergarten through Grade 4 facility.

The Preliminary Design Program (PDP) portion of the study is included in this submission and will be followed, subject to MSBA review, by the Preferred Schematic Report (PSR) where one option will be presented as the best option to develop for the project. Upon approval of the PSR by the MSBA Board of Directors, the project will proceed into the Schematic Design phase of the study.

The major components of the PDP submission include: Program, Existing Conditions assessment, Site Analysis, Preliminary Options Development, and Recommendations of Options for further consideration in the PSR phase.

PROGRAM

Grade configuration: After intensive study of the implications of a K-1 vs. a K-4 grade configuration for the Shrewsbury school district, the K-4 option was unanimously endorsed by the Building Committee and the School Committee. The process involved surveys of staff and community members as well as analysis of the overall district impact of the two grade configuration options. Based on the decision that the K-4 option best addressed long term District objectives, the balance of the study focused on the **790 student K-4 option.**

Building Program: Following several programming sessions with Shrewsbury School representatives and appropriate town representatives, tours of similar elementary educational facilities, and executive committee decisions, the PDP space summary template reflects a total square footage of **142, 736 gross square feet.** This program aligns with the School Committee guidelines for class size and addresses the special education programs supporting the autism constituency and a strong inclusion program among other elements. Additionally, the overall program considers adjustments for class assignments **throughout the elementary level** to target District wide parity of services. To support the District's extensive extended learning program after school and during the summer, the school is programmed for **year-round use** of the entire facility.

Site Program: Through various input from school, transportation, town representatives, and data analyzed from existing Shrewsbury elementary schools, the following site program was established: bus queue for 15 busses, separate parent vehicle queue for 120 cars, parking for 320 – 350 cars, associated play areas, and full emergency access.

EXISTING CONDITIONS

Originally designed as the town's only high school, the Beal School facility was opened in 1922 and has been modified over the years to accommodate a younger school population after a new high school was opened in the 1950's. Many of the original design components do not address contemporary special education, curriculum delivery techniques, or technology advancements. Additionally, the original 3.8 acre site, located in the busy center of town, provides little opportunity to provide the site amenities required for an elementary school for 790 students. These deficiencies are described in the Statement of Interest (located in this section's Supporting Documents) as well as the Existing Conditions section of this document. These can be briefly described as follows:

- Lack of adequate spaces to support the District's Educational Program
- Out-of-date mechanical, electrical, technology, data, security, and communication systems.
- No fire suppression system
- Inefficient exterior envelope systems
- Hazardous material abatement requirements
- Lack of site area to meet site program

Following the issuance of the Existing Conditions report, the Building Committee recognized that lack of opportunity to develop the existing building and site to meet the program and established a Reuse Committee to analyze adaptive reuse options for the Beal School facility.

SITE ANALYSIS

Particularly since the existing Beal site does not present reasonable opportunities for development to meet the program, the analysis of alternative sites in town that could potentially support the program was an important element of the study. The initial site program indicated that a site of 12-14 developable acres would be the target size and 31 potential sites were presented by the town for further analysis. With consideration of site access, topography, wetlands, utilities, permitting and acquisition issues, and traffic, the initial 31 were eventually distilled to two: **the Glavin Center site on Lake Street and the Allen Farm site on South Street.** Both sites would provide an elementary school that would serve the southeast region of town which is currently underrepresented and this factor weighed heavily in the Building Committee deliberations.

PRELIMINARY OPTIONS DEVELOPMENT

Using the building and site programs, test fit analysis was conducted to assess the following options:

- **Base Repair** of the Existing Beal facility: status quo benchmark analysis to determine the town's investment in the Beal school if it was to remain in the District without programmatic improvements.

PDP construction/project budget recommendation: $14-16m/$18-20m

- **Existing Site Options:** Phased addition/renovation and new construction on the existing site
  Since it is clear that the existing site does not have a practical opportunity to meet the program in either option, this is primarily a diagrammatic illustration.
  PDP construction/project budget recommendation: $70-75m/$87-94m
- **Glavin Center Site** for New Construction: Test fit shows that this site has the potential to meet the full building and site program. Demolition and hazardous material abatement of the existing structures is anticipated for this option. Currently state-owned property, the acquisition costs are unknown at this time and are not included in the project estimate.
  PDP construction/project budget recommendation: $69-74/$86-93m
- **Allen Farm Site** for New Construction: With significant wetlands on the overall site, the northern portion was the focus for the analysis. The test fit shows that the site is reasonable for further study, but may have compromises in terms of meeting the full site program. Since the property is town owned, it is considered readily developable for the school project.
  PDP construction/project budget recommendation: $67-72m/$83-90m

Comparative budgets are based on preliminary program and site information as appropriate in the PDP phase, current construction data, and escalation to the predicted 2020 bid date. Project costs are based on a factor of construction budget multiplied by 1.25. As future phases of the project evolve and more detailed information comes forward, both construction and project budgets will be refined.

RECOMMENDATIONS FOR FURTHER DEVELOPMENT

Especially due to the lack of development opportunity at the existing Beal site to meet the 790 student K-4 program, the following options have been endorsed by the Building Committee for further development in the Preferred Solution Report (PSR) phase of the Feasibility Study:

- Base Repair
- New Construction at Glavin Center Site
- New Construction at Allen Farm Site

The PSR phase will focus on analyzing additional site information related to the two prospective new construction sites including: traffic, geotechnical and Phase 1 21E environmental assessments. Additionally, a public hearing will be scheduled to establish sustainable design objectives for the project. It is anticipated that the results of these efforts will assist the Building Committee with the decision for the preferred solution.

Copies of MSBA's invitation to the City to participate in a Feasibility Study process as well as the student enrollment agreement are also included in this section's Supporting Documents.

A narrative summary of the Shrewsbury's Capital Budget Statement is located in this section's Supporting Documents.

The following PDP report is organized in accordance with the MSBA Module 3 – Feasibility Study Guidelines (dated January 2015).

A full Directory of the Feasibility Study participants is included with this section for reference (3.1.1, B). Throughout the course of the Study, numerous meetings were held with Shrewsbury Public Schools, Owner's Project Manager, Beal School Building Committee, Shrewsbury Boards/Officials/Committees, representatives of the School District, other project constituents and the Design Team; copies of applicable meeting memos are included in this study where relevant.

An updated Project Schedule, prepared by the Owner's Project Manager, is also included with this section's Supporting Documents and includes key milestones, including the following:

- 27 June 2018 MSBA Board of Directors meeting has been targeted for approval of Preferred Schematic Report (PSR) and to authorize proceeding into the Schematic Design (SD) phase.
- 31 October 2018 MSBA Board of Directors meeting has been targeted for approval of Project Scope and Budget.

3.1.1 INTRODUCTION

B. Project Directory

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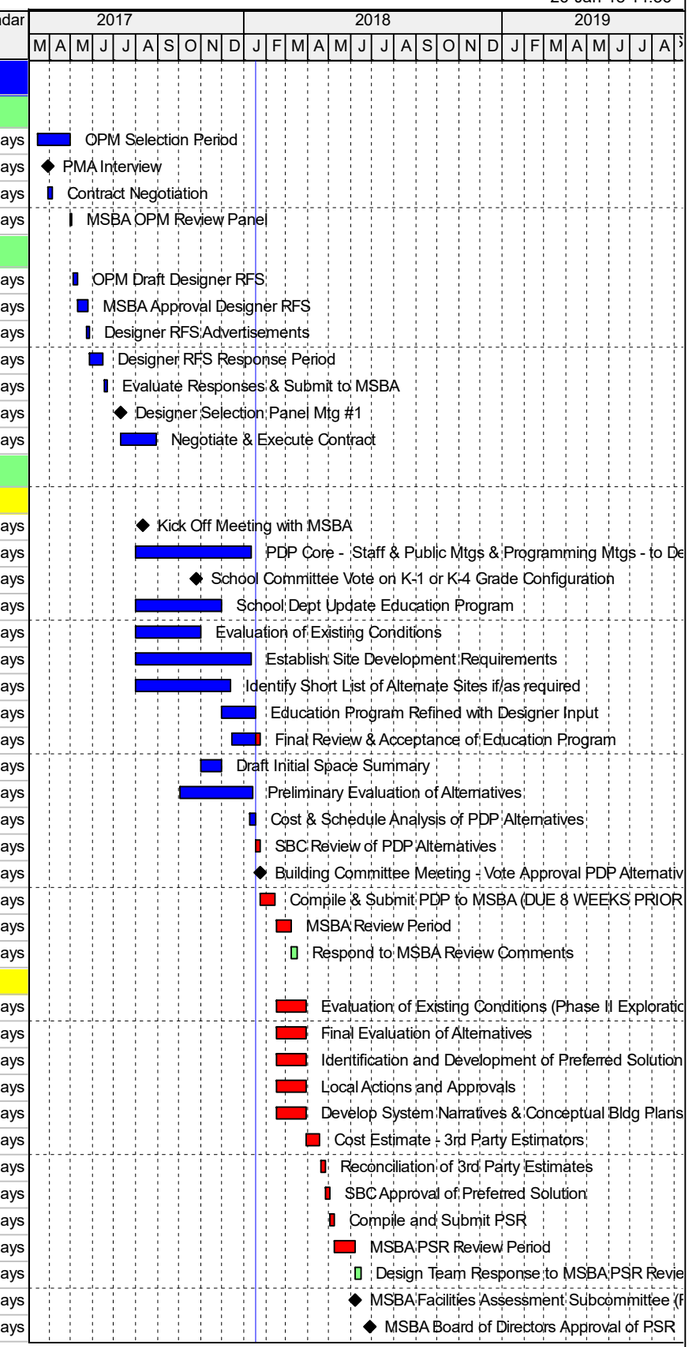
3.1.1 INTRODUCTION

C. Updated Project Schedule

Activity ID	Activity Name	Original Duration	Start	Finish	Actual Start	Actual Finish	Total Float	Calendar
Update 5 Beal Early Childhood Center (ES) Project - MSBA FS/SD Schedule								
OPM Selection								
A1010	OPM Selection Period	33	15-Mar-17 A	01-May-17 A	15-Mar-17	01-May-17		Standard 5 Day Workweek w holidays
A1000	PMA Interview	0		30-Mar-17 A		30-Mar-17		Standard 5 Day Workweek w holidays
A1020	Contract Negotiation	4	31-Mar-17 A	06-Apr-17 A	31-Mar-17	06-Apr-17		Standard 5 Day Workweek w holidays
A1380	MSBA OPM Review Panel	2	01-May-17 A	03-May-17 A	01-May-17	03-May-17		Standard 5 Day Workweek w holidays
Designer Selection								
A1030	OPM Draft Designer RFS	6	04-May-17 A	12-May-17 A	04-May-17	12-May-17		Standard 5 Day Workweek w holidays
A1040	MSBA Approval Designer RFS	10	12-May-17 A	26-May-17 A	12-May-17	26-May-17		Standard 5 Day Workweek w holidays
A1060	Designer RFS Advertisements	3	24-May-17 A	29-May-17 A	24-May-17	29-May-17		Standard 5 Day Workweek w holidays
A1050	Designer RFS Response Period	13	29-May-17 A	16-Jun-17 A	29-May-17	16-Jun-17		Standard 5 Day Workweek w holidays
A1070	Evaluate Responses & Submit to MSBA	4	17-Jun-17 A	23-Jun-17 A	17-Jun-17	23-Jun-17		Standard 5 Day Workweek w holidays
A1080	Designer Selection Panel Mtg #1	0		11-Jul-17 A		11-Jul-17		Standard 5 Day Workweek w holidays
A1100	Negotiate & Execute Contract	27	12-Jul-17 A	30-Aug-17 A	12-Jul-17	30-Aug-17		Standard 5 Day Workweek w holidays
FEASIBILITY STUDY - 9 MONTHS								
Preliminary Design Program (6 Months)								
A1390	Kick Off Meeting with MSBA	0		11-Aug-17 A		11-Aug-17		Standard 5 Day Workweek w holidays
A1560	PDP Core - Staff & Public Mtgs & Programming Mtgs - to Develop Grade Configuration	59	01-Aug-17 A	11-Jan-18 A	01-Aug-17	11-Jan-18		Standard 5 Day Workweek w holidays
A1570	School Committee Vote on K-1 or K-4 Grade Configuration	0		25-Oct-17 A		25-Oct-17		Standard 5 Day Workweek w holidays
A1110	School Dept Update Education Program	85	01-Aug-17 A	01-Dec-17 A	01-Aug-17	01-Dec-17		Standard 5 Day Workweek w holidays
A1130	Evaluation of Existing Conditions	43	01-Aug-17 A	01-Nov-17 A	01-Aug-17	01-Nov-17		Standard 5 Day Workweek w holidays
A1140	Establish Site Development Requirements	85	01-Aug-17 A	11-Jan-18 A	01-Aug-17	11-Jan-18		Standard 5 Day Workweek w holidays
A1400	Identify Short List of Alternate Sites if/as required	85	01-Aug-17 A	12-Dec-17 A	01-Aug-17	12-Dec-17		Standard 5 Day Workweek w holidays
A1190	Education Program Refined with Designer Input	36	30-Nov-17 A	18-Jan-18 A	30-Nov-17	18-Jan-18		Standard 5 Day Workweek w holidays
A1200	Final Review & Acceptance of Education Program	25	15-Dec-17 A	23-Jan-18	15-Dec-17		0	Standard 5 Day Workweek w holidays
A1120	Draft Initial Space Summary	6	01-Nov-17 A	30-Nov-17 A	01-Nov-17	30-Nov-17		Standard 5 Day Workweek w holidays
A1150	Preliminary Evaluation of Alternatives	71	02-Oct-17 A	12-Jan-18 A	02-Oct-17	12-Jan-18		Standard 5 Day Workweek w holidays
A1210	Cost & Schedule Analysis of PDP Alternatives	10	10-Jan-18 A	18-Jan-18 A	10-Jan-18	18-Jan-18		Standard 5 Day Workweek w holidays
A1220	SBC Review of PDP Alternatives	3	18-Jan-18 A	23-Jan-18	18-Jan-18		0	Standard 5 Day Workweek w holidays
A1320	Building Committee Meeting - Vote Approval PDP Alternatives	0		23-Jan-18			0	Standard 5 Day Workweek w holidays
A1160	Compile & Submit PDP to MSBA (DUE 8 WEEKS PRIOR TO PSR SUBMISSION)	16	24-Jan-18	14-Feb-18			0	Standard 5 Day Workweek w holidays
A1170	MSBA Review Period	15	15-Feb-18	08-Mar-18			0	Standard 5 Day Workweek w holidays
A1180	Respond to MSBA Review Comments	6	09-Mar-18	16-Mar-18			9	Standard 5 Day Workweek w holidays
Preferred Schematic Report (3 Months)								
A1230	Evaluation of Existing Conditions (Phase II Exploration)	30	15-Feb-18	29-Mar-18			0	Standard 5 Day Workweek w holidays
A1240	Final Evaluation of Alternatives	30	15-Feb-18	29-Mar-18			0	Standard 5 Day Workweek w holidays
A1250	Identification and Development of Preferred Solution	30	15-Feb-18	29-Mar-18			0	Standard 5 Day Workweek w holidays
A1260	Local Actions and Approvals	30	15-Feb-18	29-Mar-18			0	Standard 5 Day Workweek w holidays
A1410	Develop System Narratives & Conceptual Bldg Plans/Site Plans	30	15-Feb-18	29-Mar-18			0	Standard 5 Day Workweek w holidays
A1420	Cost Estimate - 3rd Party Estimators	13	30-Mar-18	18-Apr-18			0	Standard 5 Day Workweek w holidays
A1430	Reconciliation of 3rd Party Estimates	5	19-Apr-18	25-Apr-18			0	Standard 5 Day Workweek w holidays
A1440	SBC Approval of Preferred Solution	4	26-Apr-18	01-May-18			0	Standard 5 Day Workweek w holidays
A1310	Compile and Submit PSR	5	02-May-18	08-May-18			0	Standard 5 Day Workweek w holidays
A1280	MSBA PSR Review Period	21	09-May-18	07-Jun-18			0	Standard 5 Day Workweek w holidays
A1300	Design Team Response to MSBA PSR Review Comments Due	6	08-Jun-18	15-Jun-18			8	Standard 5 Day Workweek w holidays
A1290	MSBA Facilities Assessment Subcommittee (FAS Mtg)	0		06-Jun-18*			0	Standard 5 Day Workweek w holidays
A1270	MSBA Board of Directors Approval of PSR	0		27-Jun-18*			0	Standard 5 Day Workweek w holidays



Remaining Level of Effort | Remaining Work | ◆ Milestone
Actual Work | Critical Remaining Work

Note: Preliminary Schedule

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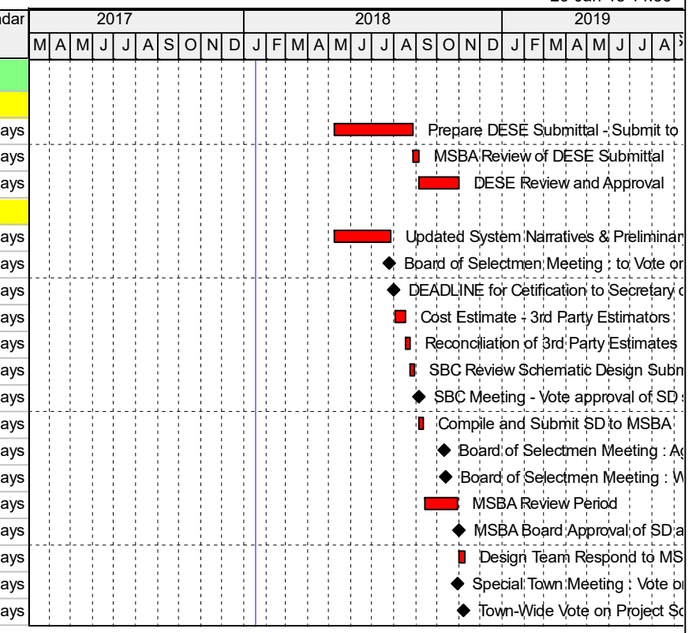
Activity ID	Activity Name	Original Duration	Start	Finish	Actual Start	Actual Finish	Total Float	Calendar
SCHEMATIC DESIGN (5 1/2 Months)								
DESE Submittal								
A1450	Prepare DESE Submittal - Submit to MSBA	77	09-May-18	27-Aug-18			0	Standard 5 Day Workweek w holidays
A1460	MSBA Review of DESE Submittal	5	28-Aug-18	04-Sep-18			0	Standard 5 Day Workweek w holidays
A1470	DESE Review and Approval	40	05-Sep-18	31-Oct-18			0	Standard 5 Day Workweek w holidays
Schematic Design Submittal								
A1480	Updated System Narratives & Preliminary SD Drawings - for Estimator Pricing	56	09-May-18	27-Jul-18			0	Standard 5 Day Workweek w holidays
A1580	Board of Selectmen Meeting : to Vote on Exclusion Warrant for Town-Wide Vote	0		24-Jul-18			6	Standard 5 Day Workweek w holidays
A1590	DEADLINE for Cetification to Secretary of State for Exclusion on Ballot	0		01-Aug-18			0	Standard 5 Day Workweek w holidays
A1490	Cost Estimate - 3rd Party Estimators	11	02-Aug-18	16-Aug-18			0	Standard 5 Day Workweek w holidays
A1500	Reconciliation of 3rd Party Estimates	5	17-Aug-18	23-Aug-18			0	Standard 5 Day Workweek w holidays
A1510	SBC Review Schematic Design Submittal	5	24-Aug-18	30-Aug-18			0	Standard 5 Day Workweek w holidays
A1520	SBC Meeting - Vote approval of SD submittal and budget	0		04-Sep-18			0	Standard 5 Day Workweek w holidays
A1330	Compile and Submit SD to MSBA	6	05-Sep-18	12-Sep-18			0	Standard 5 Day Workweek w holidays
A1600	Board of Selectmen Meeting : Agenda Posted	0		10-Oct-18			2	Standard 5 Day Workweek w holidays
A1610	Board of Selectmen Meeting : Warrant Signed	0		12-Oct-18			2	Standard 5 Day Workweek w holidays
A1340	MSBA Review Period	33	13-Sep-18	30-Oct-18			0	Standard 5 Day Workweek w holidays
A1530	MSBA Board Approval of SD and PS&BA	0		31-Oct-18			0	Standard 5 Day Workweek w holidays
A1350	Design Team Respond to MSBA Review Comments	6	01-Nov-18	08-Nov-18			0	Standard 5 Day Workweek w holidays
A1540	Special Town Meeting : Vote on Project Scope & Budget Agreement	0		29-Oct-18			2	Standard 5 Day Workweek w holidays
A1550	Town-Wide Vote on Project Scope & Budget Agreement (PS&BA)	0		06-Nov-18			2	Standard 5 Day Workweek w holidays



Remaining Level of Effort | Remaining Work | ◆ Milestone
Actual Work | Critical Remaining Work

Data Date: 18-Jan-18

Note: Preliminary Schedule

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3.1.1 INTRODUCTION

D. Supporting Documents

1. Current Statement of Interest (SOI)
2. MSBA Board Action Letter
3. Executed Design Enrollment Certification
4. Capital Budget Narrative
5. MSBA Enrollment Letter

Massachusetts School Building Authority

School District Shrewsbury

District Contact Joseph Sawyer TEL: (508) 841-8400

Name of School Beal School

Submission Date 4/8/2015

SOI CERTIFICATION

To be eligible to submit a Statement of Interest (SOI), a district must certify the following:

- ☑ The district hereby acknowledges and agrees that this SOI is NOT an application for funding and that submission of this SOI in no way commits the MSBA to accept an application, approve an application, provide a grant or any other type of funding, or places any other obligation on the MSBA.
- ☑ The district hereby acknowledges that no district shall have any entitlement to funds from the MSBA, pursuant to M.G.L. c. 70B or the provisions of 963 CMR 2.00.
- ☑ The district hereby acknowledges that the provisions of 963 CMR 2.00 shall apply to the district and all projects for which the district is seeking and/or receiving funds for any portion of a municipally-owned or regionally-owned school facility from the MSBA pursuant to M.G.L. c. 70B.
- ☑ The district hereby acknowledges that this SOI is for one existing municipally-owned or regionally-owned public school facility in the district that is currently used or will be used to educate public PreK-12 students and that the facility for which the SOI is being submitted does not serve a solely early childhood or Pre-K student population.
- ☑ After the district completes and submits this SOI electronically, the district must sign the required certifications and submit one signed original hard copy of the SOI to the MSBA, with all of the required documentation described under the "Vote" tab, on or before the deadline.
- ☑ The district will schedule and hold a meeting at which the School Committee will vote, using the specific language contained in the "Vote" tab, to authorize the submission of this SOI. This is required for cities, towns, and regional school districts.
- ☑ Prior to the submission of the hard copy of the SOI, the district will schedule and hold a meeting at which the City Council/Board of Aldermen or Board of Selectmen/equivalent governing body will vote, using the specific language contained in the "Vote" tab, to authorize the submission of this SOI. This is not required for regional school districts.
- ☑ On or before the SOI deadline, the district will submit the minutes of the meeting at which the School Committee votes to authorize the Superintendent to submit this SOI. The District will use the MSBA's vote template and the vote will specifically reference the school and the priorities for which the SOI is being submitted. The minutes will be signed by the School Committee Chair. This is required for cities, towns, and regional school districts.
- ☑ The district has arranged with the City/Town Clerk to certify the vote of the City Council/Board of Aldermen or Board of Selectmen/equivalent governing body to authorize the Superintendent to submit this SOI. The district will use the MSBA's vote template and submit the full text of this vote, which will specifically reference the school and the priorities for which the SOI is being submitted, to the MSBA on or before the SOI deadline. This is not required for regional school districts.
- ☑ The district hereby acknowledges that this SOI submission will not be complete until the MSBA has received all of the required vote documentation and certification signatures in a format acceptable to the MSBA. If Priority 1 is selected, your Statement of Interest will not be considered complete unless and until you provide the required engineering (or other) report, a professional opinion regarding the problem, and photographs of the problematic area or system.

Chief Executive Officer *	**School Committee Chair**	**Superintendent of Schools**
Daniel J. Morgado	Dr. B. Dale Magee	Joseph M. Sawyer
Town Manager		
(signature)	(signature)	(signature)
Date 4/9/2015	Date 4/8/15	Date 4/8/15

* Local chief executive officer: In a city or town with a manager form of government, the manager of the municipality; in other cities, the mayor; and in other towns, the board of selectmen unless, in a city or town, some other municipal office is designated to the chief executive office under the provisions of a local charter. Please note, in districts where the Superintendent is also the Local Chief Executive Officer, it is required for the same person to sign the Statement of Interest Certifications twice. Please do not leave any signature lines blank.

Massachusetts School Building Authority

School District Shrewsbury

District Contact Joseph Sawyer TEL: (508) 841-8400

Name of School Beal School

Submission Date 4/8/2015

Note

Dear MSBA Board of Directors & Administration:

With the unanimous support of the School Committee and Board of Selectmen of the Town of Shrewsbury, I am pleased to submit this 2015 Statement of Interest for the Beal School. We were glad that the MSBA Board saw fit to invite this project into the eligibility period in March 2014, and you may recall that the Shrewsbury School Committee and Board of Selectmen respectfully declined that invitation because of the uncertainty of local support due to an operational override question that was then under discussion. I am confident that should the MSBA Board see fit to again invite this project into the eligibility period there will be support for Shrewsbury to move forward with the next step of the process.

Thank you for your time and effort in reviewing this updated submission. Please don't hesitate to contact me with questions.

Respectfully,

Joseph M. Sawyer, Ed.D.
Superintendent of Schools
Shrewsbury Public Schools

The following Priorities have been included in the Statement of Interest:

1. ☐ Replacement or renovation of a building which is structurally unsound or otherwise in a condition seriously jeopardizing the health and safety of school children, where no alternative exists.
2. ☐ Elimination of existing severe overcrowding.
3. ☐ Prevention of the loss of accreditation.
4. ☐ Prevention of severe overcrowding expected to result from increased enrollments.
5. ☑ Replacement, renovation or modernization of school facility systems, such as roofs, windows, boilers, heating and ventilation systems, to increase energy conservation and decrease energy related costs in a school facility.
6. ☐ Short term enrollment growth.
7. ☑ Replacement of or addition to obsolete buildings in order to provide for a full range of programs consistent with state and approved local requirements.
8. ☐ Transition from court-ordered and approved racial balance school districts to walk-to, so-called, or other school districts.

SOI Vote Requirement

☑ I acknowledge that I have reviewed the MSBA's vote requirements for submitting an SOI which are set forth in the Vote Tab of this SOI. I understand that the MSBA requires votes from specific parties/governing bodies, in a specific format using the language provided by the MSBA. Further, I understand that the MSBA requires certified and signed vote documentation to be submitted with the SOI. I acknowledge that my SOI will not be considered complete and, therefore, will not be reviewed by the MSBA unless the required accompanying vote documentation is submitted to the satisfaction of the MSBA.

Potential Project Scope: Potential New School

Is this SOI the District Priority SOI? YES

School name of the District Priority SOI: 2015 Beal School

Is this part of a larger facilities plan? NO

If "YES", please provide the following:

Facilities Plan Date:

Planning Firm:

Please provide an overview of the plan including as much detail as necessary to describe the plan, its goals and how the school facility that is the subject of this SOI fits into that plan:

Please provide the current student to teacher ratios at the school facility that is the subject of this SOI: 21 students per teacher

Please provide the originally planned student to teacher ratios at the school facility that is the subject of this SOI: 19 students per teacher

Does the District have a Master Educational Plan that includes facility goals for this building and all school buildings in District? NO

Does the District have related report(s)/document(s) that detail its facilities, student configurations at each facility, and District operational budget information, both current and proposed? YES

If "YES", please provide title, author, and date of report in area below.

FY2015 Building Profile, Cecelia Wirzbicki, March 2015

Please include a hard copy of these report(s)/document(s) with your hard copy Statement of Interest submittal.

Is there overcrowding at the school facility? YES

If "YES", please describe in detail, including specific examples of the overcrowding.

The priority for "severe overcrowding" is not selected for this SOI as the existing number of students enrolled at Beal School allows basic functionality. However, there are issues related to overcrowding that inform the priority of "offering a full range of programs" both at Beal School and across the district's early childhood and elementary program. At the Beal School, the cafeteria is undersized for the enrollment, requiring the use of a small room off of the cafeteria to seat all of the students, and requiring more lunch seatings as even with this additional space used only three classes at a time can be seated. There is also not sufficient space to provide enough classrooms to offer all students full day kindergarten, and some specialized instruction must take place in basement rooms and/or in very small spaces (e.g., media center, small group special education and English language learner instruction, etc.). We are concerned that we will have difficulty complying with special education and English language education mandates for appropriate instructional space if these populations continue to increase, especially now that a classroom has been converted to a specialized room for the education of students with severe special needs (typically on the autism spectrum), which is a new development since the last SOI was submitted. It should be noted that some small group instruction must take place in office spaces, which then displaces staff and significantly limits opportunities for conducting normal business (parent meetings, teacher meetings, paperwork, etc.). It is also very important to note that Beal is currently housing four sections of overflow first grade students from the Floral Street School, as the district does not have sufficient space at the elementary level to house all of the students in grades one through four while maintaining reasonable class sizes and necessary instructional spaces. Further, the preschool program for the district currently requires the rental of a two-room school building that was

formerly a private preschool, and additional space would allow the district to use its own facilities to house the preschool program.

Has the district had any recent teacher layoffs or reductions? NO

If "YES", how many teaching positions were affected? 0
At which schools in the district?
Please describe the types of teacher positions that were eliminated (e.g., art, math, science, physical education, etc.).

Has the district had any recent staff layoffs or reductions? NO

If "YES", how many staff positions were affected? 0
At which schools in the district?
Please describe the types of staff positions that were eliminated (e.g., guidance, administrative, maintenance, etc.).

Please provide a description of the program modifications as a consequence of these teacher and/or staff reductions, including the impact on district class sizes and curriculum.

"Does Not Apply"

Please provide a detailed description of your most recent budget approval process including a description of any budget reductions and the impact of those reductions on the district's school facilities, class sizes, and educational program.

The budget approval process includes line item approval by the School Committee with a bottom line approval through a Town Meeting vote in May. The budget is based on student enrollment and state curriculum standards as well as operational needs. In June 2014 Shrewsbury citizens voted by a 2:1 margin to approve an operational override which benefitted the School Department by $3,728,039, avoiding additional staff reductions and resulting in the hiring of new teachers to assist in reducing class sizes, while providing for implementation of mandated curriculum changes throughout the district. This current fiscal year, Beal School added an additional special education teacher to address mandates and more dedicated instructional coaching/curriculum coordination from an FTE increase. A new math program to align with the state curriculum frameworks was also funded. The impact of adding even limited numbers of personnel is to stress the existing lack of space even further. Ironically, the improved level of funding through the override actually reduced the number of seats available for full day kindergarten, as rooms at Beal that were being used for full day kindergarten needed to be converted to first grade overflow rooms for Floral Street School students, in order to resolve extremely high class sizes at Floral Street School. Therefore, approximately 80 students who would have received full day kindergarten this year are in half day kindergarten this year instead.

General Description

BRIEF BUILDING HISTORY: Please provide a detailed description of when the original building was built, and the date(s) and project scopes(s) of any additions and renovations (maximum of 5000 characters).

The building was constructed in 1922 as a Junior/Senior High School. There have not been any major renovations to the building.

TOTAL BUILDING SQUARE FOOTAGE: Please provide the original building square footage PLUS the square footage of any additions.

32100

SITE DESCRIPTION: Please provide a detailed description of the current site and any known existing conditions that would impact a potential project at the site. Please note whether there are any other buildings, public or private, that share this current site with the school facility. What is the use(s) of this building(s)? (maximum of 5000 characters).

The site consist of 3.5 acres bound on three sides by public ways. The site is generally flat and is in the center of Town. The sites parking and layout is not conducive to bus and parent pick-up and drop-off traffic.

ADDRESS OF FACILITY: Please type address, including number, street name and city/town, if available, or describe the location of the site. (Maximum of 300 characters)

1 Maple Avenue, Shrewsbury, MA 01545

BUILDING ENVELOPE: Please provide a detailed description of the building envelope, types of construction materials used, and any known problems or existing conditions (maximum of 5000 characters).

The three story building has exterior brick and interior brick load bearing walls. Floors and roof structure are wooden. The windows are wood framed, original and single paned. Exterior doors have been replaced but are not energy efficient and should be replaced.

Has there been a Major Repair or Replacement of the EXTERIOR WALLS? NO
Year of Last Major Repair or Replacement:(YYYY) 1922
Description of Last Major Repair or Replacement:
No major repair or replacement of the exterior walls have been done since the original construction of the building in 1922.

Roof Section A
Is the District seeking replacement of the Roof Section? NO
Area of Section (square feet) 12672
Type of ROOF (e.g., PVC, EPDM, Shingle, Slate, Tar & Gravel, Other (please describe)
EPDM Roof was installed with two inches of insulation in 1988.
Age of Section (number of years since the Roof was installed or replaced) 27
Description of repairs, if applicable, in the last three years. Include year of repair:
Entire roof was re-seamed in 2007. A 10'x50' section of EPDM roofing and insulation was replaced November of 2012 due to damage during snow removal.

Window Section A
Is the District seeking replacement of the Windows Section? NO
Windows in Section (count) 129

Type of WINDOWS (e.g., Single Pane, Double Pane, Other (please describe))
Single Pane original windows
Age of Section (number of years since the Windows were installed or replaced) 93
Description of repairs, if applicable, in the last three years. Include year of repair:
Repaired glazing putty and painted all sash and frames 2014.

MECHANICAL and ELECTRICAL SYSTEMS: Please provide a detailed description of the current mechanical and electrical systems and any known problems or existing conditions (maximum of 5000 characters).

The electrical system had several updates but at this time it is under sized and outdated. The building is heated by two cast iron gas fired steam boilers installed in 1981, supplying steam to original equipment cast iron radiators throughout the building. There is no working mechanical ventilation in the building. The plumbing system has been repaired and altered many times, the latest in 1987 replacing most of the fixtures and piping. The number an location of plumbing fixtures does not serve the current building use. Cast iron plumbing below basement concrete flooring is original. The building does not have a fire sprinkler system but has smoke and heat fire detection throughout, monitored by a central station.

Boiler Section 1
Is the District seeking replacement of the Boiler? NO
Is there more than one boiler room in the School? YES
What percentage of the School is heated by the Boiler? 100
Type of heating fuel (e.g., Heating Oil, Natural Gas, Propane, Other)
Two cast iron, natural gas fired steam boilers installed in 1981.
Age of Boiler (number of years since the Boiler was installed or replaced) 34
Description of repairs, if applicable, in the last three years. Include year of repair:
Replacement of boiler operational controls.

Has there been a Major Repair or Replacement of the HVAC SYSTEM? NO
Year of Last Major Repair or Replacement:(YYYY) 1922
Description of Last Major Repair or Replacement:
None

Has there been a Major Repair or Replacement of the ELECTRICAL SERVICES AND DISTRIBUTION SYSTEM? YES
Year of Last Major Repair or Replacement:(YYYY) 2001
Description of Last Major Repair or Replacement:
The building electrical system was upgraded to accommodate an elevator by the addition of a three phase sub-panel.

BUILDING INTERIOR: Please provide a detailed description of the current building interior including a description of the flooring systems, finishes, ceilings, lighting, etc. (maximum of 5000 characters).

Majority of the interior walls have original plaster which is coming loose from the wood lathe sub straight. Several classroom asbestos tile floors have been covered by carpeting that need abatement. Interior doors, hardware and woodwork need replacement. All wood frame windows are original and should be replaced.

PROGRAMS and OPERATIONS: Please provide a detailed description of the current programs offered and grades served, and indicate whether there are program components that cannot be offered due to facility constraints, operational constraints, etc. (maximum of 5000 characters).

Beal School offers Kindergarten and First Grade classrooms and programs to approximately 315 students. Special education students are included in the regular education classrooms, while one classroom is dedicated to a self-contained program for students with severe special needs (this is a new program at Beal since the last SOI was submitted). The preschool severe special education population continues to grow and Shrewsbury Public Schools needs to accommodate this group; we are very concerned that Beal School will not able to meet this growing need in this outdated and undersized

building.

CORE EDUCATIONAL SPACES: Please provide a detailed description of the Core Educational Spaces within the facility, a description of the number and sizes (in square feet) of classrooms, a description of science rooms/labs including ages and most recent updates, a description of the cafeteria, gym and/or auditorium and a description of the media center/library (maximum of 5000 characters).

The outdated floor plan and the necessity to retrofit spaces not designed for instructional needs in 2015 make Beal School far from ideal for the education of young children. The basement is being used as classroom space, media center, cafeteria, two therapy rooms, two offices for staff coordinators and tutoring space. The basement is not an appropriate space for these uses and the space was not intended for this use. The other two floors house the principal's office, nurse and classroom space. The number and location of plumbing fixtures does not serve the current building use. The twelve core classroom spaces range from 645 to 780 square feet. These twelve classrooms are undersized compared to current standards which impacts program and delivery. There is no science/lab space. The cafeteria is 940 square feet. The building's three story layout is challenging for students with significant mobility issues, and the school is experiencing an increase in students with significant special needs that include such mobility issues. Recent updates include the installation of interactive white boards in all core classrooms; this was a challenging installation due to the outdated structure and electrical system.

CAPACITY and UTILIZATION: Please provide a detailed description of the current capacity and utilization of the school facility. If the school is overcrowded, please describe steps taken by the administration to address capacity issues. Please also describe in detail any spaces that have been converted from their intended use to be used as classroom space (maximum of 5000 characters).

Capacity issues have been addressed by retrofitting office spaces for small group instructional spaces and using hallways as possible to provide small group instruction; using an additional small room to address cafeteria overcrowding; combining art and music instructional space and scheduling these classes so they do not conflict; and restricting space use for other purposes such as meetings and staff collaboration. The basement has been converted into educational space and was never intended for this use. Below is a list of classes and class sizes:
Full Day Kindergarten - 6 classrooms - Average Class Size - 20.2
AM Kindergarten - 3 classrooms - Average Class Size - 20.3
PM Kindergarten - 3 classrooms - Average Class Size - 14.3
Grade One - 4 classrooms - Average Class Size - 21.0

MAINTENANCE and CAPITAL REPAIR: Please provide a detailed description of the district's current maintenance practices, its capital repair program, and the maintenance program in place at the facility that is the subject of this SOI. Please include specific examples of capital repair projects undertaken in the past, including any override or debt exclusion votes that were necessary (maximum of 5000 characters).

The Beal Early Childhood Center, as with all buildings in Shrewsbury receives daily custodial care and maintenance by the Town's Public Building Department. There is a day custodial staff of 1 FTE that provides day service, lawn and grounds care. Daily custodial cleaning is provided by contractual services. Building Maintenance is provided by a town wide maintenance staff of 9 FTE (1 Director, 2 office clerks, 1 working maintenance supervisor, 1 working custodial supervisor, 1 plumber, 1 electrician, 1 carpenter, 1 general maintenance worker). The building department has in place service contracts for fire alarms, elevators, electrical, DDC controls, HVAC repairs and maintenance, grounds care in order to supplement the town staff in delivering preventative maintenance and repair. Capital Repair projects have included an EPDM roof replacement in 1988, two new boilers in 1981, installation of a three story elevator in 2001, and installation of a handicap ramp in the front of the building in 2000. There has been no override or debt exclusion work undertaken.

Priority 5

Question 1: Please provide a detailed description of the issues surrounding the school facility systems (e.g., roof, windows, boilers, HVAC system, and/or electrical service and distribution system) that you are indicating require repair or replacement. Please describe all deficiencies to all systems in sufficient detail to explain the problem.

- The building is heated by two cast iron gas fired steam boilers installed in 1981, supplying steam to original equipment cast iron radiators throughout the building. The system is old, not energy efficient and is beyond its useful life. Any replacement to upgrade the system would be a significant capital expense.

- The electrical system had several updates but at this time is undersized and outdated.

- All exterior wood frame windows are single paned and original and are not functional or energy efficient and should be replaced.

- Since the building does not have a mechanical ventilation system there is no air flow to get fresh air to students and staff without having to open windows. Updating the heating and ventilation system will improve air quality, decrease energy consumption and decrease energy related costs.

- Majority of the interior walls have original plaster which is coming loose from the wood lathe sub straight.

- Carpeting is covering asbestos tile that needs abatement.

- Plumbing and toilet facilities are inadequate and undersized. Toilet facilities are not ADA compliant.

- The building's basement is being used as classroom space, media center, cafeteria, two therapy rooms, two office spaces for staff coordinators and a tutoring space. The basement is not an appropriate space for these uses and was not intended for this use.

- Congested traffic flow due to inadequate road access/egress and parking. Each afternoon many "parent pick-up cars" enter the building parking lot along with buses. Given the site's parking characteristics and its central location to downtown, traffic and parking is hindered and difficult to maneuver.

Priority 5

Question 2: Please describe the measures the district has already taken to mitigate the problem/issues described in Question 1 above.

*The district has conducted indoor air quality tests to determine health and air quality and escalated cleaning practices to help eliminate any mold or dust. Teachers have been instructed to ventilate areas by opening exterior windows as needed and to store materials and food in ways that limit microbial growth and rodent activity.

* Asbestos has been removed or maintained per AHERA regulation.

*Plans have been created and implemented to improve drop-off and pick-up times for students.

Priority 5

Question 3: Please provide a detailed explanation of the impact of the problem/issues described in Question 1 above on your district's educational program. Please include specific examples of how the problem prevents the district from delivering the educational program it is required to deliver and how students and/or teachers are directly affected by the problem identified.

As mentioned previously, the use of retrofitted spaces originally designed for a high school in 1922 for early childhood education does not meet current standards. Because of the age of the structure and its lack of or outdated spaces and mechanical systems, the educational program is affected in various ways:

• Staff must open windows during winter months to ensure adequate fresh air flow due to the lack of a mechanical system; uneven heating can create classroom conditions that can compromise the learning environment.

• Out of date bathroom facilities are challenging for students with mobility needs, and current expectations are for more facilities to better serve student needs

• The building currently can barely meet demand and adequacy for specialized instructional space to meet the needs of students with severe special needs or English language learning needs, and these populations are growing. The spaces that are currently used are not up to current expectations for a newer facility, and compromise other program needs such as space for parent and staff meetings and office work.

Priority 5

Question 4: Please describe how addressing the school facility systems you identified in Question 1 above will extend the useful life of the facility that is the subject of this SOI and how it will improve your district's educational program.

Addressing the mechanical ventilation system, the plumbing facilities and the overall condition of the building will extend the useful life of the building (or be addressed through a new building), thereby allowing students and staff to work in well ventilated and uniform temperatures. This will increase and improve overall comfort and well being of students and staff while allowing for a more productive educational environment, while conserving energy with newer systems.

The building's systems and design are not properly serving the needs of the program because of the variety of issues mentioned previously, because of both the building's age and its unintended age group use. This is particularly concerning regarding the provision of specialized instructional spaces for students with special needs, English language learners, and for staff collaboration and office work.

Given that this is a 1922 facility with minimal upgrades over time, the needs in this priority area are very significant. The MSBA took this priority into account when issuing its invitation to eligibilty for a potential Beal School project in 2014.

Please also provide the following:

Have the systems identified above been examined by an engineer or other trained building professional?:
YES

If "YES", please provide the name of the individual and his/her professional affiliation (maximum of 250 characters):
Lamoureux Pagano Associates, Architects, Worcester, MA

The date of the inspection: 10/15/1997

A summary of the findings (maximum of 5000 characters):

A facilities study was conducted. The findings for Beal School were:

- Design capacity as an early childhood center should be 186 students
- Classrooms were undersized
- It lacked appropriate specialized spaces for special education art, music, media/library
- Specialized instructional spaces were lacking
- All building systems would require replacement
- The kitchen/cafeteria requires expansion
- Handicap accessibility should be addressed
- Parking should be expanded

Priority 7

Question 1: Please provide a detailed description of the programs not currently available due to facility constraints, the state or local requirement for such programs, and the facility limitations precluding the programs from being offered.

Shrewsbury Public Schools special needs population requires specialized program, space and equipment to meet its needs. The building's limitations do not allow us to deliver the full range of programs that we are mandated to deliver.

The preschool severe special education population continues to grow and the school district must accommodate this group. Preschool enrollment over the past twelve years has grown from 131 to a projection of 264 students by the end of this year, with a large percentage of these students having special needs. Additionally, the types of student disabilities have become increasingly complex, hence the reality that now each one of our early childhood and elementary schools has a dedicated, self-contained program for students with severe special needs (typically on the autism spectrum).

Currently, the Beal School does not have sufficient dedicated instructional spaces for mandated small group instruction for students with special education or English language learner needs, and some that do exist are in a basement setting. The school must utilize office or common hallway spaces for this type of instruction, compromising other needs such space for teacher collaboration, parent meetings, and other operational functions.

Beal School does not have separate spaces for music and art class, rather these programs currently share an undersized classroom. The media center is undersized and located in the basement.

As mentioned earlier, the presence at Beal of overflow first grade classrooms from an elementary school district restricts the ability for the district to offer full day kindergarten to all students, resulting in a significant waiting list for this benefit.

As educational technology becomes more ubiquitous and necessary, the 1922 infrastructure, smaller classrooms, and outdated building systems make providing digital learning experiences a significant challenge.

Currently, Beal School is also not able to meet expectations related to holding school community events for families. Because of the limited amount of parking and the very small cafeteria and gymnasium, the school must either schedule multiple sessions of the same family event or hold the event at another campus.

Priority 7

Question 2: Please describe the measures the district has taken or is planning to take in the immediate future to mitigate the problem(s) described above.

Mitigation of these issues has involved the following:

• Intervening as aggressively as possible during the preschool years in an attempt to help students require less intensive special education services when they enter kindergarten; this is not always possible.

• Sharing instructional spaces as possible, including utilizing basement space, staff office space, and hallway space for instruction that would happen in spaces designed for that purpose in a more recent school. The limited space available for specialized instructional spaces for special education, English language education, art, and music creates significant scheduling limitations for service delivery personnel and times.

• Utilizing some spaces in other elementary schools to house full day kindergarten sections in order to be able to provide the greatest number of full day seats as possible.

The reality is that many of these issues cannot be mitgated without additional space or spaces that are designed for how education is delivered in 2015. We believe the MSBA took this into account when issuing an invitation to eligibility for the Beal School in 2014.

Priority 7

Question 3: Please provide a detailed explanation of the impact of the problem described in this priority on your district's educational program. Please include specific examples of how the problem prevents the district from delivering the educational program it is required to deliver and how students and/or teachers are directly affected by the problem identified.

The impact of having an outdated, undersized building that was not designed for its current purpose is significant:

• If the population of students with significant special needs continues to grow, some number of students may not be able to be educated within their community school, but rather in specialized programs outside of the district, at greater cost to the district and the state.

• If more current typical classrooms are claimed for special education purposes, even fewer students will have access to full day kindergarten experiences, despite the very high demand and demonstrated educational efficacy of full day programming.

• The lack of appropriate instructional spaces results in small group mandated instruction taking place in converted basement rooms, office spaces, or hallways for students with special education needs and English language learning needs.

• The lack of dedicated space for music and art restricts the scheduling of classes and may result in experiences that are different than peers educated in other schools with such spaces.

• Teacher collaboration and parent meetings are baseline expectations for all schools in 2015. Space for such activities is lacking, as office and conference spaces are severely limited or are used instead for intstructional purposes.

• Given infrastructure limitations, the access of Beal School students to technology could become increasingly limited compared to peers in other district schools.

REQUIRED FORM OF VOTE TO SUBMIT AN SOI

REQUIRED VOTES

If the SOI is being submitted by a City or Town, a vote in the following form is required from both the City Council/Board of Aldermen **OR** the Board of Selectmen/equivalent governing body **AND** the School Committee.

If the SOI is being submitted by a regional school district, a vote in the following form is required from the Regional School Committee only. FORM OF VOTE Please use the text below to prepare your City's, Town's or District's required vote(s).

FORM OF VOTE

Please use the text below to prepare your City's, Town's or District's required vote(s).

Resolved: Having convened in an open meeting on _____, prior to the closing date, the _____ *[City Council/Board of Aldermen, Board of Selectmen/Equivalent Governing Body/School Committee]* of _____ *[City/Town]*, in accordance with its charter, by-laws, and ordinances, has voted to authorize the Superintendent to submit to the Massachusetts School Building Authority the Statement of Interest dated _____ for the _____ *[Name of School]* located at _____ *[Address]* which describes and explains the following deficiencies and the priority category(s) for which an application may be submitted to the Massachusetts School Building Authority in the future

_____

_____

_____

_____

_____

_____; *[Insert a description of the priority(s) checked off on the Statement of Interest Form and a brief description of the deficiency described therein for each priority]*; and hereby further specifically acknowledges that by submitting this Statement of Interest Form, the Massachusetts School Building Authority in no way guarantees the acceptance or the approval of an application, the awarding of a grant or any other funding commitment from the Massachusetts School Building Authority, or commits the City/Town/Regional School District to filing an application for funding with the Massachusetts School Building Authority.

CERTIFICATIONS

The undersigned hereby certifies that, to the best of his/her knowledge, information and belief, the statements and information contained in this statement of Interest and attached hereto are true and accurate and that this Statement of Interest has been prepared under the direction of the district school committee and the undersigned is duly authorized to submit this Statement of Interest to the Massachusetts School Building Authority. The undersigned also hereby acknowledges and agrees to provide the Massachusetts School Building Authority, upon request by the Authority, any additional information relating to this Statement of Interest that may be required by the Authority.

Chief Executive Officer *	**School Committee Chair**	**Superintendent of Schools**
Daniel J. Morgado	Dr. B. Dale Magee	Joseph M. Sawyer
Town Manager		
(signature)	(signature)	(signature)
Date 4/9/2015	Date 4/8/15	Date 4/8/15

* Local Chief Executive Officer: In a city or town with a manager form of government, the manager of the municipality; in other cities, the mayor; and in other towns, the board of selectmen unless, in a city or town, some other municipal office is designated to the chief executive office under the provisions of a local charter. Please note, in districts where the Superintendent is also the Local Chief Executive Officer, it is required for the same person to sign the Statement of Interest Certifications twice. Please do not leave any signature lines blank.

Massachusetts School Building Authority

Deborah B. Goldberg
Chairman, State Treasurer

James MacDonald
Interim Chief Executive Officer

John K. McCarthy
Executive Director / Deputy CEO

February 15, 2017

Mr. Daniel J. Morgado, Town Manager
Town Managers Office
Town of Shrewsbury
100 Maple Avenue
Shrewsbury, MA 01545

Re: Town of Shrewsbury, Beal Early Childhood Center

Dear Mr. Morgado:

I am pleased to report that the Board of the Massachusetts School Building Authority (the "MSBA") has voted to invite the Town of Shrewsbury (the "Town") to partner with the MSBA in conducting a Feasibility Study for the Beal Early Childhood Center. The Board's vote follows the Town's timely completion of all of the requirements of the MSBA's Eligibility Period.

I do want to emphasize that this invitation to partner on a Feasibility Study is ***not*** approval of a project, but is strictly an invitation to the Town to work with the MSBA to explore potential solutions to the problems that have been identified. 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, regulations, and policies which require MSBA collaboration and approval at each step of the process.

During the Feasibility Study phase, the Town and the MSBA will partner pursuant to the terms of the Feasibility Study Agreement to find the most fiscally responsible and educationally appropriate solution to the problems identified at the Beal Early Childhood Center. The Feasibility Study, which will be conducted pursuant to the MSBA's regulations and policies, requires the Town to work with the MSBA on the procurement of an Owner's Project Manager and Designer, which will help bring the Town's Feasibility Study to fruition.

We will be contacting you soon to discuss these next steps in more detail. In the meantime, however, I wanted to share with you the Board's decision and provide a brief overview of what this means for the Town of Shrewsbury.

I look forward to continuing to work with you as part of the MSBA's grant program. As always, feel free to contact me or my staff at (617) 720-4466 should you have any questions.

Sincerely,

John K. McCarthy
Executive Director

Cc: Legislative Delegation
Maurice M. DePalo, Chair, Shrewsbury Board of Selectmen
Sandra Fryc, Chair, Shrewsbury School Committee
Dr. Joseph Sawyer, Superintendent, Shrewsbury Public Schools
Patrick C. Collins, Assistant Superintendent for Operations and Finance, Shrewsbury Public Schools
File: 10.2 Letters (Region 2)

MASSACHUSETTS SCHOOL BUILDING AUTHORITY
TOWN OF SHREWSBURY
BEAL EARLY CHILDHOOD CENTER
STUDY ENROLLMENT CERTIFICATION

As a result of a collaborative analysis with the Massachusetts School Building Authority (the "MSBA") of enrollment projections and space capacity needs for the Beal Early Childhood Center (the "Proposed Project"), the Town of Shrewsbury hereby acknowledges and agrees that the design of alternatives, which may be evaluated as a part of the feasibility study for the Beal Early Childhood Center, shall be based in accordance with the following:

Enrollment for Grades K-1 (Current Configuration)	Enrollment for Grades K-4
750 students	790 students

The Town of Shrewsbury further acknowledges and agrees that, pursuant to 963 CMR 2.00 *et seq.*, the MSBA shall determine the square feet per student space allowance and total square footage according to the enrollments noted above. The Town of Shrewsbury acknowledges and agrees that it has no right or entitlement to any particular design enrollment, square feet per student space allowance, or total square footage and that it has no right or entitlement to a design enrollment any greater than any of the enrollments noted above, and further acknowledges and agrees that it shall not bring any claim or action, legal or equitable, against the MSBA, or any of its officers or employees, for the purpose of obtaining an increase in the design enrollment for the Proposed Project that it has acknowledged and agreed to herein. The Town of Shrewsbury further acknowledges and agrees that, among other things, the design enrollment, square feet per student space allowance, and total square footage of the Proposed Project shall be subject to the approval of the MSBA's Board and that the final approval of a Proposed Project shall be within the sole discretion of the MSBA's Board.

The undersigned, for themselves and the Town of Shrewsbury, hereby certify that they have read and understand the contents of this study enrollment certification and that each of the above statements is true, complete and accurate. The undersigned hereby certify that they have been duly authorized by the appropriate governmental body to execute this Certification on behalf of Town of Shrewsbury and to bind the Town of Shrewsbury to its terms.

Chief Executive Officer

10/25/16
Date

Sandra M. Fryc
Duly Authorized Representative of School Committee

10-27-16
Date

Superintendent of Schools

10/27/16
Date

In January of 2017, Lamoureux Pagano Associates (LPA) was selected by the Town of Shrewsbury and the Massachusetts School Building Authority (MSBA) to conduct a Feasibility Study through schematic design for

The following Capital Budget Narrative was prepared by the Town Manager's Office:

The Town of Shrewsbury continues to be a desirable community in which to live and consequently has seen a steady upward trend in population and public school enrollment growth. Capital planning is an integral part of the financial planning process and the Beal Early Childhood Center Project is the top priority for capital projects requiring long-term debt funding.

In the past several years the town has tended to its capital needs by making a major renovation and addition to its public library and installing new HVAC systems into two elementary schools. Both projects were successfully financed with a Moody's Bond Rating of Aa2, a rating it has earned and retained since FY10.

We have displayed two comparative benchmarks of a municipality's debt load as published by the Massachusetts Department of Revenue, using FY16 data, the latest available from their databank. Shrewsbury compares favorably with both the Debt Service as a Percent of Budget and Debt Service as a Percent of EQV.

	Debt Service as % Of Budget	Debt Service as % Of EQV
Shrewsbury	7.59%	.19%
State Average- All Municipalities	6.91%	.19%

The Town expects to finance the Beal Project via a bond issue contingent upon successful passage of a Proposition 2 ½ debt exclusion vote. This planned borrowing would be permissible under the Board of Selectmen's Debt Management Policy. Given our project timeline, we would expect permanent financing to occur in FY24 and use of Bond Anticipation Notes [BAN] in the interim. By FY24, our debt service load will have fully paid off three school projects [Shrewsbury High School, Spring Street School Renovation, Parker Road Preschool] totaling more than $3.24M in annual bond payments allowing for insertion of the Beal project debt service with a reduced net impact to the taxpayer.

As of this writing, the conceptual project cost estimates range from approximately $83M to $93M with 50.16% of eligible project costs reimbursable by the Massachusetts School Building Authority.

Massachusetts School Building Authority

Deborah B. Goldberg
Chairman, State Treasurer

Maureen G. Valente
Chief Executive Officer

John K. McCarthy
Executive Director / Deputy CEO

RECEIVED
16 OCT 17 AM 9:57
TOWN MANAGER'S OFFICE

October 13, 2016

Mr. Daniel J. Morgado, Shrewsbury Town Manager
Town Managers Office
100 Maple Avenue
Shrewsbury, MA 01545

Re: Town of Shrewsbury, Beal Early Childhood Center

Dear Mr. Morgado:

I would like to thank you and other local officials for participating in a conference call with Massachusetts School Building Authority (the "MSBA") staff on July 21, 2016 during which enrollment projections and methodologies were reviewed for the Beal Early Childhood Center (the "proposed project") in the Town of Shrewsbury (the "District"), resulting in the additional information provided on September 1, 2016 and a follow-up conference call on September 16, 2016. As discussed, the next critical step is for the MSBA and the District to agree on a study enrollment for the Beal Early Childhood Center.

The Beal Early Childhood Center presently serves a portion of the District's grades K-1 enrollment, however, the MSBA understands that the District would like the feasibility study for this project to examine a K-4 grade configuration at the Beal Early Childhood Center to be more consistent with the grade configuration of the District's four other elementary schools. The MSBA also understands that one of the District's goals for this proposed project is to relieve current and future overcrowding at the District's other four elementary schools.

The table on page 2 illustrates the District's K-12 enrollment during the most recent ten year period, including enrollment for the previous school year (2015-2016) as reported by the Department of Elementary and Secondary Education ("DESE"). The total grades K-4 enrollment in the Town of Shrewsbury as reported by the District for the 2015-2016 school year is 2,139 students, which reflects a decrease of 104 students (-4.6%) from the grades K-4 enrollment reported in 2006-2007, which was the maximum grade K-4 enrollment reported in the preceding ten years. Additionally, the current year's grade K-4 enrollment reflects a decrease of approximately 51 students (-2.3%) from the average grades K-4 enrollment reported during the preceding ten year period.

YEAR	K-4	5-6	7-8	9-12
2006	2,243	950	950	1,578
2007	2,205	946	934	1,629
2008	2,210	917	941	1,639
2009	2,191	908	906	1,624
2010	2,233	934	915	1,617
2011	2,207	961	905	1,631
2012	2,159	989	940	1,658
2013	2,173	980	961	1,646
2014	2,135	956	1,007	1,683
2015	2,139	972	1,027	1,668

The MSBA understands that the District is proposing a design enrollment to accommodate approximately 850 students in grades K-4 at the Beal Early Childhood Center. The enrollment in grades K-1 reported to DESE for the 2015-2016 school year at the Beal Early Childhood Center was 311 students.

With respect to future enrollments, the MSBA's base enrollment forecast indicates the District's grade K-4 enrollment will be stable over the next 4-5 years and then experience an increasing trend through 2025-2026. The average grade K-4 enrollment forecast for the projected period through the 2025-2026 school year is 2,225 students.

As a result of a sensitivity analysis performed by the MSBA on this base enrollment projection and further discussion with the District, the following adjustments have been made to the base enrollment projection:

- Out-of-District Enrollment
  - In order to adjust for fluctuations to the out-of-district enrollment patterns of the District's residents over time, the MBSA has made an additional adjustment to the base enrollment projection;
  - In order to make this adjustment, the MSBA adjusted the grade to grade survival ratios for grades K-4 by a total of 3.3% throughout a four year period in the projection; and
  - This adjustment added approximately 60 students to the average grades K-4 enrollment as compared to the projection without this adjustment.

- Development
  - Based on discussions between the District and the MSBA, and the anticipated development information provided by the District, the MSBA enrollment model has been adjusted to use the five-year 75th percentile cohort survival rate for 2016 and 2017 rather than the five-year average cohort survival rate, which is utilized throughout the base enrollment forecast; and
  - This adjustment added approximately 35 students to the average total grades K-4 enrollment as compared to the projection without this adjustment.

As a result of analysis on the base enrollment projection, the adjustment to the base projection described above, and based on the historical enrollment trends of the District, the average adjusted K-4 enrollment forecast for the projected period through the 2025-2026 school year is 2,320 students.

In order to recommend a design enrollment for an appropriately sized project for the Beal Early Childhood Center, the MSBA performed capacity analyses of the District's current elementary schools. The capacity analyses was based upon the MSBA's 2010 Needs Survey data, capacity information provided by the District, as well as the District's class size policies indicated in the Educational Profile Questionnaire, as follows:

- Kindergarten: 17-19 students per class
- Grades 1-2: 20-22 students per class
- Grades 3-4: 22-24 students per class

The District's four elementary schools, not including the Beal Early Childhood Center, currently contain (7) kindergarten classrooms, (33) grade 1-2 classrooms and (36) grade 3-4 classrooms, which accommodate 1,571 students based on the District's minimum student/classroom policies. Accordingly, if the Beal Early Childhood Center remains in a grade K-1 configuration, the MSBA recommends a design enrollment of 750 students for the Beal Early Childhood Center.

As previously stated, the District is considering a K-4 grade configuration at the Beal Early Childhood Center to be more consistent with the grade configuration of the District's four other elementary schools, as well as to relieve current and future overcrowding across the District. With reconfiguration, the District's four elementary schools, not including the Beal Early Childhood Center, would contain (16) kindergarten classrooms, (30) grade 1-2 classrooms and (30) grade 3-4 classrooms, which accommodate 1,532 students based on the District's minimum student/classroom policies. Accordingly, if the Beal Early Childhood Center reconfigures to become a grade K-4 configuration, the MSBA recommends a design enrollment of 790 students.

Please note School Committee approval of a detailed draft plan to redistrict students in accordance with a K-4 grade configuration for the District's five elementary schools is required prior to the approval of a Project Scope and Budget Agreement associated with this proposed project.

The MSBA believes that this study enrollment recommendation will position the District to efficiently meet space capacity needs throughout future enrollment variations. Please sign and return the attached certification within 21 calendar days to confirm agreement on this study enrollment. If the District feels that this study enrollment does not meet the needs of the District, please respond to this letter via e-mail to Katie DeCristofaro and propose three meeting/conference call times for which the District can be available to discuss enrollment.

If you have any questions regarding this matter, please do not hesitate to contact me or Katie DeCristofaro (Kathryn.DeCristofaro@MassSchoolBuildings.org) at 617-720-4466.

Sincerely,

Mary Pichetti
Director of Capital Planning

Cc: Legislative Delegation
Maurice M. DePalo, Chair, Shrewsbury Board of Selectmen
Sandra Fryc, Chair, Shrewsbury School Committee
Dr. Joseph Sawyer, Superintendent, Shrewsbury Public Schools
Patrick C. Collins, Assistant Superintendent, Shrewsbury Public Schools
File: 10.2 Letters (Region 2)

MASSACHUSETTS SCHOOL BUILDING AUTHORITY
TOWN OF SHREWSBURY
BEAL EARLY CHILDHOOD CENTER
STUDY ENROLLMENT CERTIFICATION

As a result of a collaborative analysis with the Massachusetts School Building Authority (the "MSBA") of enrollment projections and space capacity needs for the Beal Early Childhood Center (the "Proposed Project"), the Town of Shrewsbury hereby acknowledges and agrees that the design of alternatives, which may be evaluated as a part of the feasibility study for the Beal Early Childhood Center, shall be based in accordance with the following:

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The undersigned, for themselves and the Town of Shrewsbury, hereby certify that they have read and understand the contents of this study enrollment certification and that each of the above statements is true, complete and accurate. The undersigned hereby certify that they have been duly authorized by the appropriate governmental body to execute this Certification on behalf of Town of Shrewsbury and to bind the Town of Shrewsbury to its terms.

_____
Chief Executive Officer

_____
Date

_____
Duly Authorized Representative of School Committee

_____
Date

_____
Superintendent of Schools

_____
Date

3.1.2 EDUCATIONAL PROGRAM

A. Narrative
B. Teaching Philosophy Statement
C. Supporting Documents

3.1.2 EDUCATIONAL PROGRAM

A. Narrative

INTRODUCTION

For the Beal study, the programming process was structured to consider two major components sequentially: the selected grade configuration for the District and the associated building program for the final configuration.

The two grade configuration options studied included:

- 750 student K-1 Early Childhood Center
- 790 student K-4 Elementary School

Once the K-4 option was endorsed, the balance of the programming focused on the appropriate building program to serve 790 elementary students.

GRADE CONFIGURATION

For the grade configuration deliberation, the Shrewsbury District surveyed staff and community members and held public hearings for discussion. (See supporting documents of this section for summary results of the process and District analysis/recommendations. Further information is also included in the Educational Teaching Philosophy Statement). The Building Committee and the School Committee unanimously endorsed the District recommendation to develop a 790 student K-4 option. In the supporting documents section C.3.Item 7 includes further delineation of the overall impact on the elementary level that is afforded by the K-4 grade configuration including:

- K-4 grade configuration throughout the elementary level
- Greater parity in all elementary schools relative to services provided at each

PROGRAMMING PROCESS

In order to engage a multitude of relevant constituencies, several techniques were used to derive the program and develop the associated Space Summary Template for the selected option. The approach included tours of similar facilities and focus group programming meetings. Summaries of the school tours and minutes of the meetings are included in the supporting documents section.

The Executive Committee included:

- Joseph Sawyer, Superintendent of Schools
- Patrick Collins, Asst. Superintendent for Finance and Operations
- Amy Clouter, Asst. Superintendent for Curriculum
- Chris Girardi, Principal Beal School
- Meg Belsito, Director of Special Education

Additional input was received from:

- Town staff representatives including Facilities, Engineering, School Transportation, Fire and Police
- District transportation services company
- SELCO electrical, IT and telecommunications
- School representatives for major departments, elementary principals, and food service and cafeteria personnel.

From this process, the Space Summary Template was developed, initially totaling more than 150,000sf. Following several reviews by the team to refine the program to best meet the needs of the District in the most efficient manner, the gross square footage was reduced to **142,736sf.**

PROPOSED PROGRAM SYNOPSIS

The major tenets of the Beal School program include the following:

- Cluster organization to support a Kindergarten grouping and 1-4 grade classroom groups supported by flexible use common rooms and teacher planning areas as appropriate for project- based learning and STEAM curriculum
- Year-round facility to support District wide elementary special education and extended learning programs
- Core facility organization to support significant after hours extended learning and community use
- Media Center/Art adjacencies developed to incorporate Maker Space to enhance project-based learning as described in the Educational Program
- No more than one floor elevation change between classrooms and core facilities
- Site circulation to support separate vehicular traffic for busses, and parent pick-up/drop off

SUMMARY

Based on these intensive efforts, the Space Summary Template was finalized and are included in the next section along with supporting organizational bubble diagrams.

3.1.2 EDUCATIONAL PROGRAM

B. Teaching Philosophy Statement

BEAL 2.0
EDUCATIONAL PROGRAM

A description prepared for Feasibility Study submission

to the Massachusetts School Building Authority

January, 2018

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INTRODUCTION

As part of the feasibility study phase for a for the Beal Early Childhood Center, this document aims to describe the educational program that is needed in order to meet the requirements of the Department of Elementary and Secondary Education (DESE). At the same time, a description of the existing school program and deficiencies is provided. Given the evolving needs of students and families in Shrewsbury, our new facility will need to be far bigger than the existing structure in order to accommodate increased demand on our public schools across the district.

The Beal Early Childhood center is a vibrant, close-knit school community currently serving students in Kindergarten and first grade. The building is busy with activity, and a collegial atmosphere is pervasive. Parents, extended family, and community members provide an array of services such as volunteering, providing reading, writing, and math enrichment for the classroom, attending sing-a-long sessions, serving on the PTO or School Council, and upgrading and maintaining the facility including the playground, garden and greenhouse.

As of October 2017, there were 310 children enrolled at Beal. 254 children attend Kindergarten in a mix of half day and full-day programming, which is approximately 70% of the total Kindergarten student population in Shrewsbury. The combination of space limitations in Beal's aging building (built in 1922 as Shrewsbury's first Junior/Senior High school) and increases in student enrollment over time have limited programming inside and outside the structure.

The Statement of Interest submitted to the Massachusetts School Building Authority (MSBA) in 2015 demonstrates that the current Beal building only allows for basic functionality. Going forward, the existing facility will be inadequate for delivery of the educational program for the following reasons:

- There is insufficient space to offer all students full day Kindergarten, resulting in the addition of four additional full-day Kindergarten sections in three district elementary schools.
- The cafeteria space is undersized for the enrollment, requiring the use of a small room off the cafeteria to seat all the students and requiring more lunch seatings, which in turn impacts classroom schedules.
- Space limitations force some special education and other student support services (such as English language education and small group Reading support) to be delivered in the lobby, gymnasium, hallways, and basement rooms.

- Specialist classes such as Art and Music are constrained due to lack of space. Art and Music classes share one basement room. Additionally, Music equipment storage is located on another floor due to lack of space.
- Space limitations constrain the ability of educators to collaborate with parents or other professionals. Some small group instruction must take place in offices, which means that parent and teacher meetings must take place in more public settings and/or after hours.
- The site consists of 3.5 acres bound on three sides by public ways. For this reason, dismissal routines must be tightly coordinated. The space is not conducive to today's dismissal routines.

For these reasons, the district's first step in the planning process was to decide which grade configuration would best serve Shrewsbury's students in the future. The factors considered by the district in the research review are detailed in the Beal Grade Configuration Educational Report, which can be found online at: http://schools.shrewsburyma.gov/sc/documents/BealGradeConfigurationEducationalConsiderationsReport.pdf. After due consideration of the research, Dr. Joseph Sawyer, Superintendent of Schools in Shrewsbury, made a final recommendation to School Committee. Dr. Sawyer's memo lists several reasons for his decision to recommend a K-4 configuration for the new Beal School. The memo states:

The K-4 model will be more beneficial for the following reasons:

1. *A review of the educational research literature indicates that factors other than grade configuration are most important regarding student success and the quality of a school community; in other words, there is no evidence that a certain grade configuration is more effective than another educationally.*
2. *A review of the educational research literature indicates some concern that transitions between schools can compromise student achievement. Having fewer transitions was also seen by parents, community members, and staff as a strong benefit of the K-4 model.*
3. *Several other benefits are associated with the K-4 configuration regarding having fewer transitions, including:*

    a) Students remaining in one school for five years allows families to be more familiar with the school and its staff, and vice versa, and for students to become familiar with a smaller group of classmates

    b) Vertical articulation of curriculum from grade to grade is stronger when educators from more grades are working together in the same building

c) Knowledge of students' needs from year to year is more cohesive when remaining in the same building for more grades, and this is especially important for students who are experiencing difficulties or who have special learning needs

4. *Logistically, a K-4 configuration provides several benefits that a significant majority of parents, community members, and staff found desirable, including:*

    a) The climate of the school having a "neighborhood" feel, where older students serve as role models for younger students

    b) Siblings within the grade range are at the same school, facilitating both bus transportation for children in the same family as well as parent transportation to and from school and/or extended care

    c) Transportation on school buses will require fewer routes that are shorter in duration compared to the alternative; this is a logistical benefit as well as avoidance of significant additional cost that would require financial resources to be redirected from the educational program (see accompanying document)

    d) The student population of Kindergarten and Grade 1 students is projected to be significantly higher than what can be accommodated by a proposed new Beal School, meaning that there isn't a way to provide the same grade configuration model to all students (projection for 2022 is for approximately 900 students in Grades K and 1; if the "new" Beal were a 750 student K-1 school, 150 students would need to attend a different school for those two grades, creating an equity issue). A universal K-4 configuration across five elementary schools provides more flexibility to distribute students across the schools in an equitable manner.

Following this recommendation and several public forums, the School Committee elected to move away from an Early Childhood K-1 model. The district's priority of offering tuition-free full day Kindergarten within the next five years combined with the potential approval of a new building project in Shrewsbury means that if the project is approved, the new Beal School is slated to serve students in Grades K-4. Significantly, this transition will also allow for consistent and equitable Elementary programming across the district.

Just as important, "Beal 2.0" will serve a larger student population. With an estimated enrollment of 790 students, the new Beal will become the biggest Elementary school in Shrewsbury. It's hoped that the addition of a building this size will relieve space pressures in the district's existing elementary schools and ensure that all Shrewsbury's students can attend

a neighborhood school for grades K-4. In transitioning from an Early Childhood model to accommodate the needs of a wider grade level span, the Beal school community will proudly join existing schools in Shrewsbury in modeling exemplary Elementary practices.

Presently there is a total of five Elementary Schools in Shrewsbury, including:

School	***Current Grades Served***	***Current Enrollment***
Beal Early Childhood Center	K & 1	310
Calvin Coolidge School	K-4	413
Floral Street School	1-4	751
Walter J. Paton School	K-4	342
Spring Street School	K-4	358

As with our existing school communities across the district, the plan for a new Beal Elementary School was crafted with the mission of the Shrewsbury Public Schools in mind, namely that *our schools will partner with the community to provide students with the skills and knowledge for the 21st century, an appreciation of our democratic tradition and the desire to continue to learn throughout life*. Most importantly, the work of Beal's educators is driven by the deeply held belief that all our schools should be inclusive and engaging learning communities that prepare students to become skillful, ethical, resilient, empathetic, informed, and thoughtful citizens. Accordingly, educators at the Beal School embrace the responsibility of teaching our students to be curious learners, skillful students, healthy community contributors and kind people. These values explain Beal's commitment to fostering connections beyond the school.

At the heart of Shrewsbury's educational philosophy is the concept of *empowered learners*. Students and staff alike pursue their interests through the infusion of technology in day-to-day activities, the promotion of project-based learning at all grade levels, and through integrated curriculum that fosters inquiry-based, arts-infused learning experiences and STEAM (Science, Technology, Engineering, Arts and Mathematics) concepts. This pedagogical approach, combined with a differentiated model of instruction and a fully articulated Response to Intervention system, provides students with an academic foundation that allows for agency,

rigor, and equitable access for all students. Small group instruction is a critical component of student success in Shrewsbury; so too is the collaborative culture embraced by our teaching staff.

The Shrewsbury Public Schools have devoted considerable time and resources to developing capacity for high level collaboration. The results are depicted well at Beal and at the Elementary level in general. Teacher teams regularly gather to review achievement data, to share student work, to create instructional materials and to plan lessons. For this reason, our new facility must support professional collaboration during the day, as well as meeting space for educators to meet with parents in both private and public forums. Effective collaboration is at the heart of a successful school community and must be supported by sufficient, flexible space.

In preparing the Preliminary Design Program (PDP) and submission the District has worked with Lamoureux, Pagano and Associates. This relationship has also informed the educational program as well as the proposed space template. The planning process included multiple sessions with architect Katie Crockett, her associate Sean Brennan and project manager Paul Queeney as well as district staff and administration. Public forums helped elicit input from parents and residents and feedback was instrumental in developing an understanding of the strengths of the current program as well as the constraints and challenges posed by the existing facility.

<u>Key components of the District's Educational Program include:</u>

- A new grade configuration of Kindergarten to Grade 4,
- The creation of inclusive, mixed grade level communities in a "neighborhood" layout that allow for impromptu small group gatherings and community meetings
- The inclusion of specialist staff and half classroom spaces included within each grouping
- Attention to preserving the Early Childhood feel of Kindergarten by clustering classrooms at this level together and in proximity to the outdoors
- A focus on Project Based Learning and STEAM education, including incorporating a Maker Space in the Media Center
- Promoting access to information and technology at the primary and upper elementary levels, with an emphasis on peer assisted learning in a small group context, and
- A site plan that facilitates outdoor learning for each learning community and age appropriate play areas for all students

The proposed building configuration supports these goals. There are two distinct wings on both floors, and each wing supports several "neighborhood" learning communities. Music, Art, and Media Center spaces are positioned with the Gymnasium and Cafetorium at the core of the building to promote student use of these areas for multiple project based activities as well as public exhibitions of student work. A Maker Space area is also included in the Media Center, in proximity to the Art rooms and available for use by all students. Outdoors, a nature trail and a mix of athletic and arts options in different play areas are proposed. Finally, for safety reasons, Beal's youngest students as well as students and families participating in Extended School Care after hours will be able to access the school through a dedicated entrance in the Cafetorium.

Given the transition from an early childhood center to an Elementary configuration, it will be important that the district commit to ensuring that Kindergarten and Grade 1 students enjoy the proper furniture, equipment, and instructional materials for their age. Additionally, an early childhood environment will be enhanced by clustering the Kindergarten classrooms together. At the same time, the proximity of these rooms to the building's core will facilitate "learning buddy" relationships with students in other grades as well.

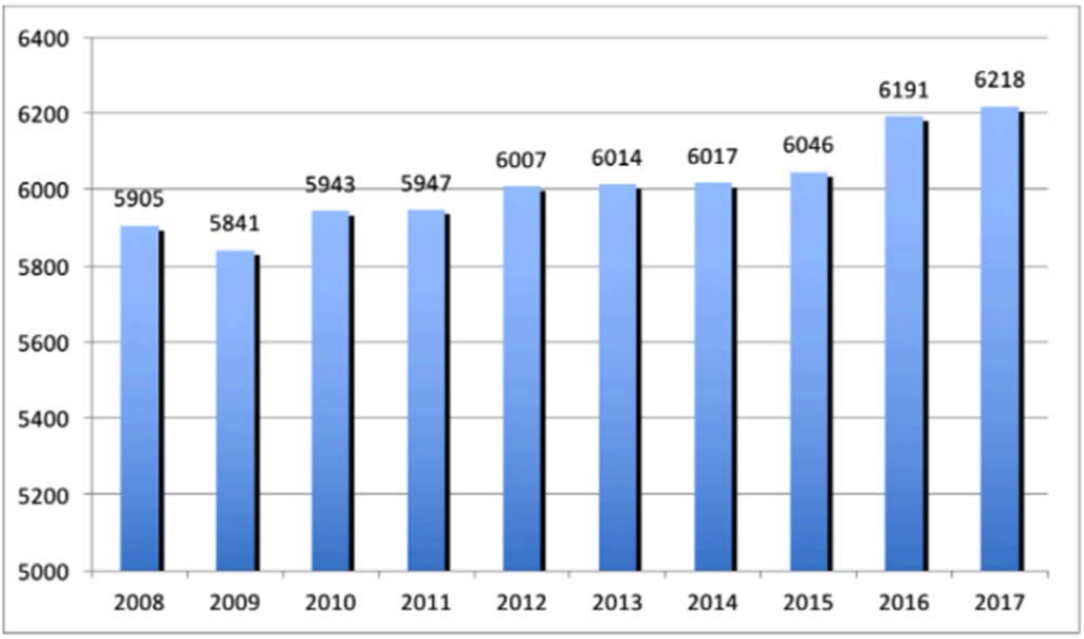
II. ADDITIONAL INFORMATION

A. GRADE AND SCHOOL CONFIGURATION POLICIES

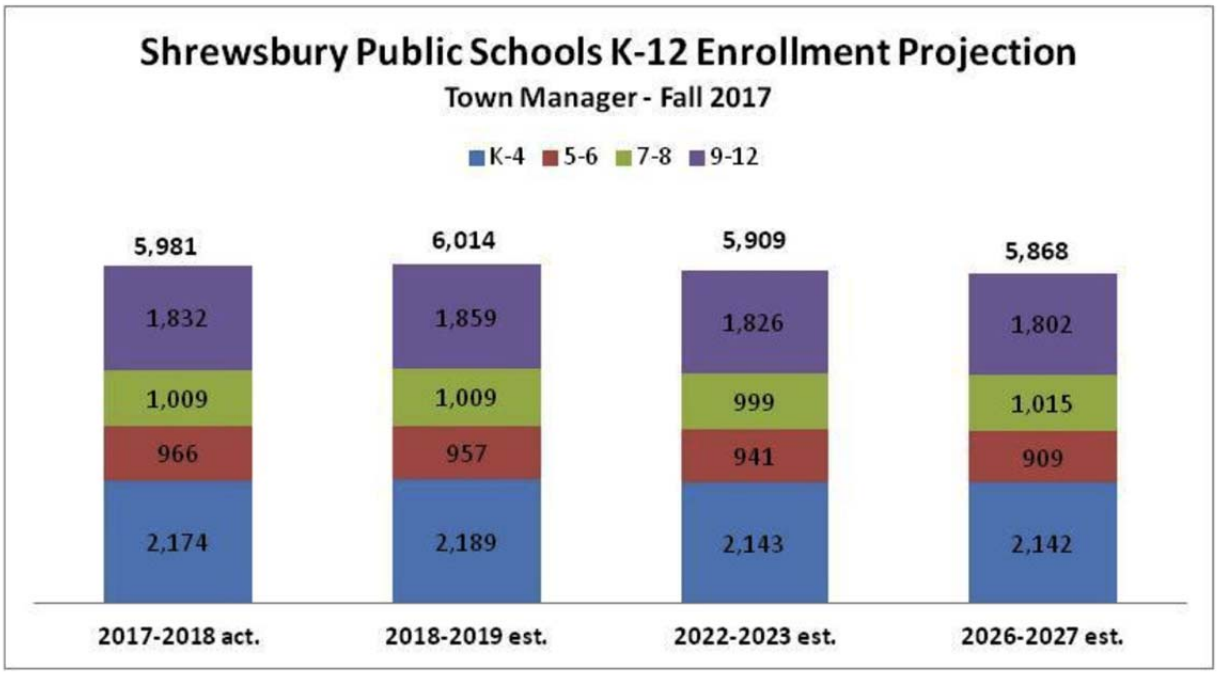
The Shrewsbury Public Schools provide educational programs for students in Preschool through Grade 12. As of October, 2017, there were 6,218 total students enrolled in the town's public schools.

It's likely that our student enrollment numbers will continue to climb, as evidenced by the graph below. The chart illustrates the district's enrollment for the past 10 school years, which reflects growth from 5905 to 6218, an increase of 313 students over the past decade. The increase from 2016 to 2017 was from 6191 to 6218, a gain of 27 students in just one year.

PreK-12 ACTUAL ENROLLMENT 2008-2017 (as of 10/1 each year)



In his annual report to the School Committee, Patrick Collins, Assistant Superintendent for Finance and Operations in Shrewsbury shared projections for future enrollment, which can be seen in the chart below:



The new Beal School will be designed to serve 790 students in grades Kindergarten through Grade 4. Grade levels within the school will be organized by level and location: Kindergarten classrooms are clustered within the Early Childhood wing; Grades 1 through 4 are organized within "neighborhood" learning communities. Within the wings, smaller classroom spaces support co-teaching, project-based learning, specialized instruction and academic intervention efforts.

Additionally, configuring grades into heterogeneous range groupings allows for greater flexibility in programming. For example, classrooms can accommodate different numbers of grade level sections necessitated by changes in student enrollment. More importantly, configuring spaces into "neighborhoods" allows for the intentional planning of space needed for shared small group instruction, for project-based learning and for shared use of material resources and staff. Furthermore, this mixed model promotes collaboration and/or peer coaching between older and younger students and facilitates more diversified learning experiences.

At all grade levels classrooms are organized in a self-contained design, where students remain with their homeroom teachers for most core content subjects throughout the course of the academic day. At the same time, teachers now plan more collaboratively for interdisciplinary

project-based learning experiences and instructional supports, so instructional spaces must support a flexible approach to grouping students. Recently, classroom spaces have been used to support combined instruction, co-teaching, peer coaching and cross-grade learning collaborations.

Notably, Special Education programming occurs within a full inclusion model wherever possible. This means that most academic services are provided directly within or adjacent to the classroom setting. 1:1 Special Education services required by an Individualized Education Program (IEP) are provided in smaller classroom areas located within available spaces located in each classroom wing. For this reason, clear glass, hallway access, adjoining doors and ample space for specialist educators must also be considered in the overall design of instructional spaces.

B. CLASS SIZE POLICIES

There has been substantial research over time regarding the impact of class size on students. Some research indicates that there is a correlation between class size and student achievement. Other studies suggest that "on task" behavior diminishes as class size grows (University of London, Institute of Education, 2008). Still other studies indicate that improving student achievement is more complex than simple adjustments to class size (Douglas D. Ready, 2008). In Shrewsbury, survey results show that parents and teachers believe that small class size is an important component of high quality instruction for their children.

A similar belief is depicted in the class size policy statement from Shrewsbury's School Committee, which states:

> *Smaller class size supports higher student achievement, more productive classroom environments, and the enhanced ability of teachers to meet the needs of all students. In Shrewsbury, where nearly all students are included in regular education classrooms, small class size is important if teachers are to effectively meet the learning requirements represented in the total and diverse student population. Additionally, the Shrewsbury Public Schools has high expectations for students and teachers. With small class size, it is more likely that high expectations can be met. At the same time, Shrewsbury must temper its support for small class size with the reality of school space and fiscal limitations. The class size guidelines below represent a balanced approach to the issue:*

Kindergarten: 17-19 students

Children enter kindergarten with a wide variety of home and preschool experiences. There are significant differences in their physiological, social, emotional, and intellectual development. The greater the diversity in the classroom, the greater the need for individualized attention and instruction. The professional literature suggests that the greatest benefit of small class sizes is in the early grades. Additionally, the research indicates that the benefits of small class size in the early years are maintained in later grades.

Grades 1 & 2: 20-22

Grades 3 & 4: 22-24

Students in the elementary grades exhibit great variety in their personal experiences, aptitudes, learning styles, and interests. The curriculum is both challenging and multifaceted at this level; the district has set high standards for children's academic growth in reading, writing, mathematics, science and social studies. Small class size is particularly critical in the primary grades; younger children require considerable amounts of individual attention. Elementary classrooms in Shrewsbury are "workshops" of student activity. Instructional practices such as inquiry-based science and process writing require a high degree of interaction between students and the teacher. Class size is also a determinant in the teacher's ability to design curriculum and instruction for the full range of student learning needs and abilities."

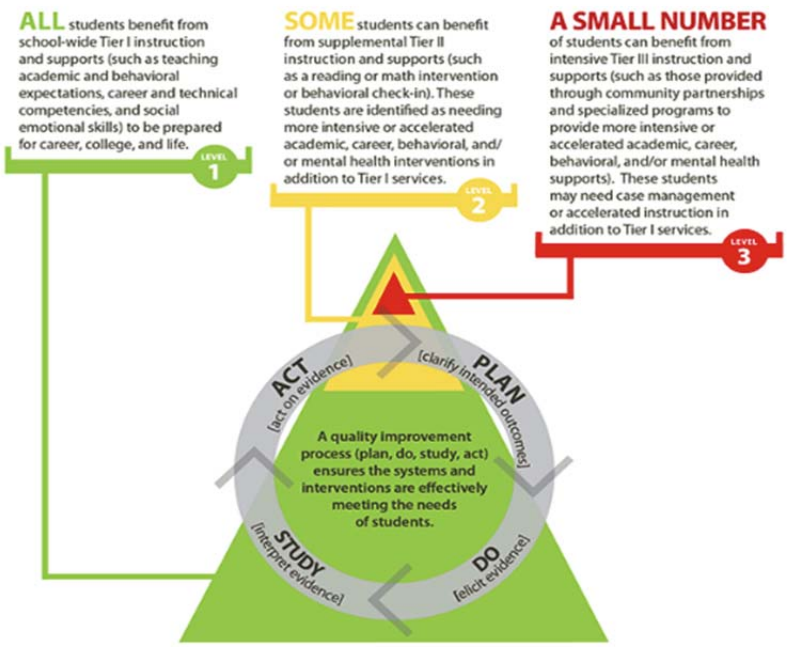
Of course, the class size recommendations for each level are intended as planning and staffing guidelines. The exact size of classes in any given building will depend upon the availability of physical space, financial resources in a given year, changes in enrollment, the grade level of the students, as well as a number of other circumstances.

The proposed space template for grades K – 4 in the new Beal School includes eight classrooms per grade. At an enrollment projection of 790 students, this would translate into approximately 158 students per grade or approximately 20 students per classroom overall, with the understanding that the number of classrooms per grade level may fluctuate slightly as different cohorts of students move through the school.

C. SCHOOL SCHEDULING METHOD

Academic programming at the Beal Elementary School is centered around the philosophy of a tiered system of supports, which promotes a data-informed instructional response to three instructional tiers - *whole-group instruction* for all students, skill-specific "double dose" *small group instruction* for students not meeting grade level benchmarks, and *intensive instructional support* for the few students whom data determines are academically at-risk.

The schedule is designed around five academic blocks that are designed to personalize student learning by providing students with opportunities to extend, enrich, review or remediate skills in each content area (English Language Arts, Mathematics, Science and Social Studies) as well as the Allied Arts (Music, Art, Physical Education, Media Studies, and Health). At the Elementary level, each instructional block is 40-minutes in length; English Language Arts and Mathematics occur simultaneously over multiple blocks and are staggered to accommodate both whole-group and small group instruction.



Program guidelines encourage teachers to attend to specific curriculum guides by content area as outlined in the table below:

Content Area	**Scheduled Time**	**Block length**
English Language Arts	450 minutes / week	90 minutes/ day
Mathematics	400 minutes / week	80 minutes/ day
Science	135 minutes / week	45 minutes, 3 times / week
Social Studies	90 minutes / week	30 minutes, 3 times /

		week
Allied Arts (Art, Media, Music, Physical Education, Health)	200 minutes / week	40 minutes / day

At the Elementary level, all students are taught core academic subjects by their classroom teacher in a self-contained model. It's important to note, however, that at the Elementary level teachers typically integrate content areas. For example, when studying Wampanoags as part of a Social Studies unit in Grade 3, students also learn how to read nonfiction and interpret graphs. Moreover, students engaged in project-based learning as an instructional approach can access the curriculum via multiple content areas. This means that PBL opportunities are not constrained by the schedule, rather they are integrated into the existing schedule.

Physical Education, Art, and Music are taught by educators that specialize in this area. Media is led by a paraprofessional overseen by the district librarian. However, teachers often collaborate as grade level teams or with colleagues from other grade levels in a vertical way. Accordingly, all teachers are provided with a 40-minute preparation block each day and a 45-minute weekly meeting time to allow for data analysis, team planning or intervention discussions.

In Shrewsbury, educators at all levels are encouraged to plan with the needs of the students they serve foremost in mind. For this reason, assessment practices also inform instructional decisions. Benchmark assessments provide teachers with student learning data are conducted three times each year - at the beginning of the school year (September), at mid-year (January), and at end-of-year (May/June); the data generated and analyzed during these benchmark assessment periods allow staff to identify the skills, for all students at all grade levels, that need enrichment, review, and remediation. The schedule provides the central instructional focus for skill development and intervention efforts.

Allied Arts classes are scheduled around the academic schedule and are also 40-minutes in length. All students at the Elementary level have the opportunity to visit the Media Center once each week to take out books. Students at Beal enjoy Physical Education once a week.

Moreover, all students participate in a weekly Art lesson. Music classes for Grades 1, 2, 3 and occur once each week. Grade 4 enjoys an additional Chorus block. Finally, all grade levels access the Beal Media Center, both during their weekly instructional block and in less formal ways to access the resources needed for independent projects.

Start and end times for the elementary school are staggered with middle and high school end times, allowing for the same buses to complete separate routes for students by level.

D. TEACHING METHODOLOGY AND STRUCTURE

Presently, Beal School is organized by grade level and schedule. Primarily teachers are organized into three teams: Half Day Kindergarten, Full-Day Kindergarten and First Grade. Beal Elementary School will house teaching teams in a similar structure but it will feature many more of them. With eight classrooms per grade, teams at all levels K-4 will be comprised of "regular education" teachers (classroom teachers and special classes such as Art, Music and P.E.) as well as "specialists" (Special Education teachers and English Language Education teachers). All educators will subscribe to a varied teaching methodology. The focus, as a district, on inclusive, "high expectations" teaching and learning has expanded opportunities for teachers to utilize approaches such as project-based learning in the classrooms as well as in an integrated approach to curriculum. Project-Based Learning (PBL) and exhibition opportunities provide creatively integrated learning experiences that directly connect classroom concepts to real-life context through problem solving.

While the preferred pedagogy of the Shrewsbury Public Schools is one of active, project- and inquiry-based learning that engages students and encourages critical thinking, collaboration, creativity, communication and problem solving, educators at the Beal Elementary School will continue to utilize differentiated teaching methodologies to personalize learning in response to student interests, skill gaps and learning styles. Additionally, Shrewsbury's commitment to helping students develop a "growth mindset" means that educators at all levels will encourage students to take a more active role in setting goals, monitoring their progress, reflecting on their needs and documenting their efforts over time.

Ideally, teaching methodologies are matched to student need. Because every child is unique, instructional approaches are widely varied. At the same time, learning experiences should have some elements in common. The most effective lessons engage students in critical thinking practices. Accordingly, classroom design must be flexible enough to allow for frequent transitions from whole group instruction, to small group instruction, to peer-assisted interaction. At the Beal Elementary School, student learning occurs in a collaborative context.

Students sit at tables, then move to create smaller ad hoc "circles" on the rug or in their chairs to participate in discussions or engage in discovery. Classroom design should accommodate this flexibility with an intentional focus on mobility of space (walls that move to accommodate large groups of students, or which can be drawn to create smaller, more intimate learning spaces) to accommodate co-teaching models when indicated. In addition to small group instructional classroom spaces located in each learning community, it is important to have nooks where small groups of students can meet to research, discuss, and create within the learning process, thereby providing for more individualized and personalized instruction at all grade levels. Lastly, given the importance of flexible grouping and co-teaching to supporting the diverse needs of today's learners, the design for the new Beal should facilitate the regular use of shared "neighborhood" spaces for differentiated instruction. Common spaces support multiple teaching delivery methods including small group inquiry, Socratic circles, reciprocal teaching, team instruction and tutorials. Communicating doors between learning spaces allow for easy communication and workflow for both students and staff.

An Elementary classroom should be designed with active, curious and creative young learners in mind. Typically, modern classrooms feature furniture that's easily moved to accommodate a variety of learning experiences and group sizes. Interior windows allow teachers and visitors to view and monitor students who are accessing resources or working in small groups. Natural lighting and furniture that allows for less restrictive movement and more comfort will allow students the opportunity for greater focus. Easy access to outdoor spaces, with perhaps an outdoor classroom area for each learning community, allows for greater integration of nature themes into academic curricula. Adequate storage within each classroom for project-based learning is key for hands-on learning.

One of the highlights of a Beal School education is time spent in the solarium with the butterflies. Yet given scheduling demands and space limitations, not every class can access this space in equitably, and this is but one opportunity for students to engage with the living world. These rich and varied learning experiences hinge on collaboration and communication. As students develop and apply 21st century skills, the content of the curriculum in Shrewsbury may change. No matter the subject, however, teachers must enjoy the flexibility to combine classrooms and groups of students. Students may work on the floor or in smaller areas outside their "homerooms" to create the space needed for this interactive learning. Clearly, space must be arranged to support the ability of teachers to expand these learning opportunities. Finally, the connected nature of learning should be taken into account. Increasingly students are using i Pads outside classroom spaces or designated "technology" areas to collect, share and present information and outlets should be configured accordingly.

By design, smaller classroom spaces within each classroom cluster allow for maximal adult

support for intervention efforts, when needed. Classrooms in each learning community convene around spaces used by special educators, English language instructors and reading tutors; this is essential particularly for younger students who require more direct instruction. It's estimated that in the new Beal School, approximately 140 students will receive Reading support, and that we'll need eight tutors to provide this important intervention in a school of this size.

Significantly, in the district's last Coordinated Program Review (CPR) Shrewsbury Public Schools were cited under Civil Rights for Comparability of facilities (CR23), the primary concern being that ELL students are not provided facilities comparable to those offered to other students in the district. Specifically, the DESE observed that some ELL instruction takes place in a small storage room, poorly lit, with low ventilation and noise from adjacent areas. Additionally, some ELL instruction occurred in the cafeteria concurrent with other activities. This causes distractions during English language acquisition instruction. For these reasons, corrective action was required. As has been noted elsewhere in this document, given the constraints of the current facilities at Beal, these conditions persist for many students requiring specialized instructional supports there. It's the hope of the district that plans for the new Beal will be in keeping with current regulations and guidelines so that we are capable of meeting the diverse needs of our students and DESE expectations in advance of our next review.

The use of technology is inherently woven into the instructional program at Beal Elementary School. Teachers embrace technology daily as they use interactive whiteboards, iPads, Chromebooks and the Internet to connect learners and to present information in the content areas. Teachers have been trained in the use of various software tools, and students and staff alike use Google Docs as a means of collaborative communication. IPad carts provide students with opportunities for whole class connectivity, and teachers utilize web-based programs like Schoology and SeeSaw to engage students in review of content that fosters deeper levels of understanding. Students use a variety of technology tools to chronicle their learning, to collect information, to conduct research, and to create and introduce presentations that demonstrate their understanding of what they are learning. Use of the mobile iPad carts assists students in making learning flexible as learning can now happen anywhere students gather, whether in a classroom, in a hallway, in the Media Center, or outside - teachers at Beal School understand that today's learners need choices in how they will learn.

Teachers at the Beal School have invested time and energy in strengthening their professional learning community (or "PLC"). Over time, teachers at Beal have leveraged time to develop "power standards" that guide content learning. Taken from the Massachusetts Curriculum

Frameworks, quality instruction is provided in a standards-based environment, and the development of common assessments help educators to measure student progress against grade level benchmarks in all content areas. This attention to assessment assists in the development of learning experiences designed to maximize student success.

E. TEACHER PLANNING

Currently, teachers at the Beal School are assigned rooms in classroom wings in two types of clusters. The Kindergarten classrooms are grouped together by grade level on the first floor. In all other wings, classrooms are mixed by grade level to promote instructional collaboration and to allow for grade assignment flexibility based on student enrollment. Every effort is made to locate similar grade level teachers together in each cluster for planning purposes. By contract, teachers work a total of 6 hours and 30 minutes daily and are provided a duty-free lunch block, as well as a 40-minute daily preparation block, during which me students take part in Allied Arts instruction.

In addition to the daily preparation block, teachers also utilize Professional Learning Community (PLC) planning blocks. As mentioned previously, this weekly, before-school meeting routine enables teachers to work together on collaboratively developed student learning and professional practice goals. Furthermore, teachers are provided with elective extended, duty-free block that allows for instructional coaching and curriculum collaboration. Presently, most PLC and grade-level meetings occur in a classroom or in the staff lunchroom due to lack of meeting space within the school. In the new building, meeting space has been allocated within the "knuckles" in the shared spaces within each cluster or wing as well as in the Media Center. This means that faculty collaboration can be comfortably accommodated in an adult and learning-friendly space.

In addition to meeting space, there is a need for a common workroom for teachers. Educators that use the space routinely will need space to make photocopies, to house shared supplies and to prepare shared instructional materials. Teachers and paraprofessionals that travel between buildings will need this "home base" to store personal belongings and/or instructional materials as well.

Finally, the two Instructional Coaches / Curriculum Coordinators that will be assigned to the new Beal building will require an office big enough to hold two desks with a combined conference room and storage area for curriculum materials nearby.

F. KINDERGARTEN PROGRAM

Currently Beal School houses two Kindergarten programs. There are six sections of tuition-based Full Day Kindergarten, and eight sessions of Half Day Kindergarten. Both the full-day and half-day Kindergarten classrooms operate five days each week and utilize the same curriculum. Overall, Kindergarten programming in Shrewsbury emphasizes the development of academic and self-regulation skills designed to promote greater self-awareness and independence through peer-assisted learning. More importantly, the Kindergarten enrollment needs are such that Kindergarten has outgrown the space available at Beal.

Presently, an additional five sections of Full Day Kindergarten are housed in the other Elementary schools. It's the hope of the district that in the new building all students will attend a tuition-free, full day program for Kindergarten. In addition, an integrated learning center will accommodate the needs of students with special needs. This program provides an instructional model for students on IEPs who benefit from a combination of Applied Behavior Analysis (ABA) programming as well as from peer models as they navigate the program.

Instruction occurs through literacy and mathematics-based themes which develop student background knowledge and expand learning and understanding through role play and prop building; the dynamic curriculum is highly interactive and emphasizes the development of student choice and voice in learning as students work collaboratively, with teacher guidance, to frame their understanding and build concept development.

In order for our youngest learners to maximize opportunities to access the curriculum, we need large, bright classrooms that are conducive to movement. Imaginative role-playing is a key element of literacy development. Play fosters deep levels of comprehension; it allows students to construct their own props and manipulatives and act out the roles of key characters during Reading or when solving problems in Math class. For example, in a unit on counting, students construct number lines- both table-top style and child-size, in which to check their thinking and reinforce understanding as they are learning spontaneously and interactively. At other times, students change their pace as they walk around the room to reflect the character of the hero in the story. Therefore, it is important to have ample classroom space. For further flexibility and collaboration, classroom spaces in the Early Learning / Kindergarten Community area should have adjoining doors in the classroom walls so that several sections of students can gather together in larger group learning.

The proposed use of space within the Early Learning community in the new school is designed to complement classroom instruction and flexible grouping. Unlike the other grade levels,

these classrooms are clustered together in order to better address the needs of our youngest students. For example, the location of classrooms in this level will facilitate easy access to the outdoors, a feature that is convenient for outdoor education and critical to effective crisis response. Indoors, the space in their wing will be configured to accommodate early learners in the bathroom and neighborhood areas. Finally, space in this cluster will be used to provide supplementary general education services for our youngest learners in academic and social experiences within a small group setting. In addition to using other programmatic spaces within the building (Cafetorium, the Gym, existing classrooms, or the Maker Space) the use of a designated Extended Day classroom space will be possible in this model.

In the kindergarten community, cubbies are located in the corridor to maximize flexibility and available space within the classrooms. Bathrooms are located within each classroom in order to minimize transitions and maximize time on learning.

Extended School Care

The Extended School Care (ESC) program is designed to better serve the needs of our students and families after hours. Accordingly, there are dedicated staff for this program that work separately but in concert with school staff. However, although students are enrolled in the program after the end of the school day staff arrive earlier, so a dedicated space is needed to accommodate ESC staff.

The chart below depicts well the existing numbers of students supported by the ESC, as well as the demand for spots in the program both before and after school:

After School- By Grade

Grade	Enrolled	Waitlist
K	49	30
1	83	42
2	74	33
3	75	32
4	79	32
total	360	169

After School- By School

School	Enrolled	Waitlist
Beal	47	30
Coolidge	69	42
Floral	113	33
Paton	66	32
Spring	65	32
total	360	169

Before School- By Grade

Grade	Enrolled
K	35
1	48
2	47
3	49
4	50
total	229

Before School- By School

School	Enrolled
Beal	25
Coolidge	54
Floral	61
Paton	50
Spring	39
total	229

ESC enrollment

As % of total SPS enrollment

After School	15%
Before School	10%
After School + Waitlist	25%

Community groups also regularly rent school space, and this can be anticipated in the new building as well. The "Cafetorium" configuration (combined cafeteria and stage) provides the best option for integrating community use of school space without risking the security of its classrooms (which are less frequently used by outside groups) Specifically, an outside door into the Cafetorium allows parents and families (in Extended School Care and/or community groups like the Scouts) to access the school after hours while limiting this access, thus maximizing both safety and efficiency.

Most importantly, we anticipate that the new Beal will be used for summer school programming. Specifically, the expectation is that the entire school will be used to support small group instruction of up to ten students in each classroom. In a building with 40 classrooms, this means that we'll need to accommodate approximately 400 students and staff in July and August. The needs of the students and the extent of this program make air conditioning a strong recommendation – if not a requirement. Additionally, the parking and extensive pick up needs for students supported by this type of programming model should also be reflected in the new building design.

G. LUNCH PROGRAMS

The cafeteria at the current Beal School is located in the basement corridor. The hope with the new school construction plan is to allow for adequate space for two grade levels per seating while maintaining a "family" atmosphere as students eat and engage with one another. Moreover, given the proximity of the stage to the proposed Cafetorium, the allotted space should be sufficient to allow up to 700 students and staff to assemble for bi-monthly meetings. Similarly, in a space of this size, families will be able to comfortably gather for school events. Currently, students at most Elementary Schools are limited bringing only to 1-2 guests. Even so, due to existing space constraints, popular events are oftentimes held at the larger schools, which creates scheduling conflicts.

Lunches are slated to begin at 11:00 am and conclude at approximately1:00 pm. With the exception of Kindergarten, each grade will enter the Cafetorium on a continuous, staggered schedule with groups of 100 students arriving every 12 minutes. Additionally, students will participate in a 15-minute recess block prior to their scheduled Lunch block.

Staff eat lunch at the same time as students do. Accordingly, a small lunchroom for educators will be located in proximity to the main Cafetorium with room for 15-20 staff.

In order to accommodate a high volume of students and this staggered schedule, the Cafetorium will be configured to allow for two serving lines, with the flexibility of adding a third in inverted U-shape formation. Further, the kitchen space will contain both ovens and warmers. Because the Cafetorium does not contain a designated dishwasher, meals are served on disposable trays, and cooking implements are washed by hand in the sink area.

Given the district's use of government resources, access to fresh but not necessarily local food is important. As a result, having ample storage space for the kitchen is critical. For this reason, the existing layout (configuration of shelving and closets) of Floral Street School, a similarly sized building in another area of the district, has guided staff plans for dry goods storage needs

for the new Beal School.

Finally, the district wide emphasis on project-based learning makes it likely that in five years' time Beal School's gardening efforts will extend to the Cafetorium. Ideally, the design of the kitchen should allow for student gardening and composting initiatives and perhaps the addition of an extractor and/or dehydrator.

H. TECHNOLOGY POLICIES/PROGRAM REQUIREMENTS

Shrewsbury Public School's forward-thinking philosophy in providing our students with the use of technology across disciplines to promote critical thinking, problem solving, and personalized learning experiences as part of their ongoing education has made a positive impact on students in Grades 4-12.

The district supports an existing 1:1 iPad program in Grades 5-12, with a 1:2 model (one device shared between two students) in place for Grade 4 during the school day. More to the point, plans are underway to develop an Elementary model for meaningful, sustained technology integration. In 2018-2019 for example, Grade 3 is expected to move to a 1:2 model in response to mandated state testing requirements. To date the aging facility at Beal has constrained technology integration plans. Going forward it will be important to develop a plan for the new building that will match technology integration configurations at the other schools.

Currently, there is no dedicated space for the use of instructional technology at Beal. For planning purposes, a dual approach is recommended. Students will use devices in their classrooms and gain use of additional technology in the Media Center.

The new Instructional Technology space in the Media Center will be wired and configured to provide a dynamic, flexible, multi-functioning space for both instruction and project design. Computers, tablets and application software purchased for the technology space will run the latest Apple iOS operating system. The school will house computers that are used for both direct instruction in the use of application programs as well as for web-based assessments used formatively in Reading and Mathematics, to be distributed on carts throughout the building. All applications intended for computer-based use will run natively on macOS or function fully via macOS-native HTML browsers without requiring the use of plugins (including Java, Flash and Silverlight) All applications intended for tablet-based use will run natively on iOS or function fully via the built-in Safari browser.

In addition to the direct instruction provided by the Media Specialists and/or Instructional Coach, classroom teachers also utilize this space as a place to conduct some elements of project-based learning connected to content. In these instances, classroom teachers co-teach lessons with the Instructional Coach and explore research skills, collaboration, data analysis and refining of hypotheses as they learn from one another through technology. A technology model that utilizes a more interwoven use of devices and learning resources will allow more students to access technology for learning, more of the time during the course of the school day - structuring multiple spaces for technology use, rather than one designated technology classroom, would provide this opportunity for students to maximize their learning more flexibly.

Wireless hubs, located in each of classroom wings throughout the building, provide access for portable devices that are used in daily instruction. Wi-Fi access points purchased will be Aerohive access points running the Aerohive HiveOS and configurable via Aerohive HiveManager Online.

Students use iPad devices stored on one of four mobile iPad carts. Inherited from the high school's 1:1 device replacement program, the iPads are rotated between classrooms at each grade level. As mentioned previously, Grade 4 classrooms have a 1:2 iPad program, and Grade 3 will need to move to this model in 2018-2019 to meet state testing requirements. At all grade levels, teachers actively plan technology-driven lessons for their scheduled time with the iPad carts. Additionally, students benefit from the use of two mobile laptop carts as part of instruction; again, the mobile laptop carts are shared in a rotation schedule, and teachers plan accordingly for the inclusion of the devices in their instruction on their scheduled days with the devices. Finally, teachers and educator teams use technology to facilitate collaboration as well.

All systems that utilize student information will interface with the district's PowerSchool student information system (SIS) preferably via API connectivity. All systems that require staff or student login will support LDAP or Google-based Single Sign-On (SSO) logins. All systems that require parent login will support PowerSchool Parent Portal-based SSO login. All systems that process staff or student information will utilize encrypted/SSL-based network transport. Network switches purchased will run the latest Cisco IOS or Cisco NX-OS operating system.

All classrooms at the Beal School are equipped with overhead-mounted LCD projectors and Epson Boards with Ethernet, VGA and HDMI connectivity and capable of finger-based control (without the use of specialized pens) ; teachers use district-assigned laptop computers to access SMART Notebook programs used instructionally as a complement to the whiteboard software.

Ethernet wiring supports connectivity. Network patch panels and wall jacks will utilize

standard, removable, non-proprietary keystone RJ-45 jacks. All components must be TIA Category 6A Compliant and tested to pass Category 6A standards after installation.

Similarly, classrooms in the new Beal School will be connected by telephone. All equipment purchased will be NEC Digital or IP phones, compatible with the district's NEC SV8300 switches. Each building will have a NEC SV8300 or SV9300 phone switch that is a member of the High School SV8300 cluster to allow functionality in case of loss of connectivity with the district's main network.

As part of technology learning, students are instructed in creating presentations that use video to relate learning to a broader audience. Printers purchased will be PostScript-compatible HP laser printers, connected via Ethernet. The use of software to edit video using iPads is an essential part of this learning process, particularly for students in Grade 4. The use of a "green wall" in video production of presentations is an integral part of the skill set necessary to produce quality work at the upper elementary level. Another aspect of instructional technology doesn't require devices at all.

STEAM Programming (Science Technology, Engineering, Arts and Mathematics)

STEAM learning is a relatively new to Beal students, in large part because of existing space limitations. When teachers try lessons, they do so individually in their own classrooms or in hallways nearby. In contrast, the new Beal School will afford students and teachers an opportunity to pilot a consistent new approach to integrated learning.

Elementary School curriculum is taught in each grade level within the context of integrated curriculum themes. Currently, classroom teachers develop thematic instructional units using the standards in the Massachusetts Common Core Curriculum documents as a guide. A dedicated STEAM space will enable teachers to pursue a more integrated approach to "hands on" lessons that incorporate Science, Technology, Engineering, the Arts, and Mathematics.

Some schools encourage students to identify a "passion project" that is deeply researched, analyzed, and communicated out to a larger audience, with the presenter serving as a topic "expert". Others take a "genius hour" approach, giving students dedicated time each week to explore materials. For these purposes, technology use looks like conducting personal research, gathering and quantifying information, organizing findings using a variety of apps, and creating a final presentation. Many students use some aspects of technology (like Explain Everything or iMovie) to do this, using technology to communicate information and software to edit their videos for a polished product.

Because the Arts are interwoven within STEAM learning, classroom teachers collaborate with

the Art teacher in integrating visual arts within a more Science and Engineering-driven context. As part of a Social Studies unit on famous people, students in Grade 1 study and learn about portraiture, and then work to replicate these techniques visually into self-portraits. Kindergarten students, as part of their Music class, learn about how muscle groups work together to move the bodies of animals as they observe video clips of animals stalking prey, and then use their own bodies as learning tools as they replicate the movement of these animals while listening to African tribal music – this Arts- based approach to Science learning greatly enhances the students' emerging sense of self-regulation as they access multiple learning modes.

The proposed space template includes a STEAM space in the Media Center that's accessible to all. The goal is to integrate technology into the classroom through the use of mobile devices while at the same time increasing the focus of the curriculum towards STEAM education via the use of a Maker Space. This project based classroom would also be located near the Art room. This new approach represents a change in the schools' approach to technology instruction that better aligns with the district's new strategic plan.

The STEAM space will provide our older students with a designated area to explore problem solving and the design process in greater collaborative depth and more intermittently throughout the school day; materials can be left intact while under construction, or quickly moved to one of the storage spaces for easy access. Equipment necessary to promote learning in the STEAM would include multiple storage cabinets along the walls (for materials and storage of student projects in progress) and 3 or 4 sinks (for water access during STEAM project time). In order to expand opportunities for STEAM learning, teachers will use designated, district-provided professional development time within the school year to create lessons and engaging learning units that further promote the use of the STEAM classroom as new curriculum units are designed.

Scheduling for the STEAM classroom will take place, for each classroom at each grade level, on a rotating basis. Within a 5-day cycle, each classroom will have an assigned block (useful for more long-term planning); unfilled blocks will be available for use through a "sign-out" system (useful for longer instructional blocks that demand greater me constraints and allow students to continue working on projects in a more ongoing capacity).

I. MEDIA CENTER / LIBRARY

In the complex, technology-infused world of today, simply acquiring information no longer suffices. Students must access and effectively evaluate resources in order to communicate

well, and even young children are increasingly likely to learn in and out of school. Information literacy equips individuals with the knowledge and skills they need to access the opportunities inherent in our global society, and the use of these competencies is practiced most often in our Media Centers.

Beal's current Media Center space is limited by space constraints and by design to serve a small grade span. The Media Center at the new school will need to reflect an Elementary perspective as well as to meet the needs of many more students and staff.

In the Media Center students are introduced to fine literature and quality authors and illustrators. Students are encouraged to develop a lifelong love of reading through read-aloud programming designed to spark student interest in specific content themes or authors. For example, prior to a school visit from local children's author April Jones Prince, the library paraprofessional read excerpts from her books, thereby providing all of our younger students with a common frame of reference to inspire their own work. Most importantly, students are encouraged to use these resources independently.

Media instruction also seeks to promote sound library habits and care for media materials while empowering students to independently use print and media resources. Accordingly, Media lessons also provide students with a variety of curriculum related experiences. Literature-based lessons are connected to the English Language Arts, Social Studies and Science Massachusetts State Frameworks. In the future, lessons may also include opportunities for "hands on" activities that integrate content areas.

The Media Specialist rotates among the five elementary media centers, one day per week at each and oversees the functioning of each Media Center. Day to day operations of the elementary Media Center is the responsibility of the full-time paraprofessional. The Media Specialist develops the lessons for the assistants to deliver to the various grade levels, supervises Media paraprofessionals and in so doing models "best practices" for that paraprofessional as well as for the school staff. In each building, the same paraprofessional oversees the library's automated circulation system, selecting resources for the collection and maintaining a current wish list of books for each school.

Students learn a variety of skills supported by hands-on experiences, learning applications and web-based products. For example, students in Grade 2 complement a literacy unit on "Biographies" by conducting research from bookmarked websites as they synthesize their learning through skills learned in Powerpoint, while Grade 4 students conduct research and quantify their measurable outcomes through creation of databases using Excel that are then displayed in a variety of graphs – this learning nicely dovetails with skills and concepts from the

Grade 4 Mathematics curriculum. Learning how to apply these technology skills through classroom learning assists students in a personalized context as they become better able to capture and communicate what they have learned.

Our library media services are accessible to all members of our school community including students, teachers, administrators, and parents. District librarians promote the joy of reading, plan for meaningful interdisciplinary experiences, and help staff to expand students' horizons. In addition, they empower students to independently use resources and collaborate with classroom teachers, peers, and public librarians. Our media paraprofessionals introduce students to literature and, as members of school and district teams, help students to develop a lifelong love of reading. They also manage our print and digital collections to ensure curricular relevance. Finally, classroom teachers provide direct instruction to students in the use of technology in learning, and to support students as they integrate technology and research skills into daily teaching and learning.

Classes are currently scheduled once per week for students in Kindergarten through Grade 2; students in Grades 3 and 4 are afforded a 15-minute visit to the Library once per week to return books and select new reading material. Teachers in Grades 3 and 4 regularly visit the Shrewsbury Public Library for student self-selected reading materials, as the Public Library collaborates with staff in the school building.

Increasingly, our Media Centers support project-based learning experiences launched in classrooms. For this reason, having a STEAM / Maker Space and exhibition area contained within the Beal Media Center is also important. Going forward, teachers will plan for a second block in the STEAM / Maker Space classroom in which they either use for their own whole-class instructional projects, or choose to co-teach a specific topic with in a collaborative way. Additionally, classroom teachers in Kindergarten, Grades 1 and 2 may request a block in this area in order to integrate technology within the scope of their own curriculum. The use of web-based programs like Class Dojo or Seesaw promote reflection, communicate student progress and support ongoing learning. Finally, the vision for the new Media space includes ample display capability by design: the STEAM space should be an innovation hub, celebrating and inspiring students and staff alike to create high quality work.

Typically, students access the Media Center space several times during the day – for self-selection of reading materials, for small-group research, for individualized information gathering, for instructional support and for personalized learning task work. This STEAM / Maker Space model would greatly increase student access to resource materials while providing the impetus for a more personalized and independent approach to learning overall.

After hours, these larger spaces accommodate gatherings for Extended School Care, faculty meetings, parent evenings and district leadership groups. In this way, both student and adult learning needs are supported within and beyond regular school hours. The central location of the proposed Media Center will allow access and flexibility. In this model groups can use the space and classrooms can remain secure.

Technology access, too, would operate in a distributed model: rather than have an identified "technology classroom", mobile devices like laptops and tablets will be distributed throughout the building and reside in mobile charging carts located within each neighborhood, thereby allowing students to access information flexibly and spontaneously. Making technology more mobile will allow for wider distribution, fostering a school community where access to information is available to all students and both collaboration and independent work are equally supported.

J. ART PROGRAMS

The Visual Arts program in Shrewsbury is second to none, and student experiences with this discipline begin at the Elementary level. Two full sized classrooms will be needed to support programming in a school of this size. These classrooms should be connected to allow for flexible use of the space as well as collaboration during Art.

Making art helps even our youngest learners to explore and to express their creativity while developing understanding of key concepts within the core curriculum, as well as in the development of executive functioning skills necessary for project planning and design execution. All students in Kindergarten through Grade 4 participate in an Art class each week; classes are designed to be project based with a finished product realized at the end of each instructional unit. Units vary widely, and for this reason the Art studios must be designed to accommodate a lot of different types of media and activity.

In all our schools, the Art program utilizes mixed media in programming: drawing, papier mache, watercolor and tempera painting, 3-D design, printmaking, assemblage and ceramics are all presented with a collaborative eye towards expanding content learning. For example, students studying the biographies in Social Studies have learning extended in Art class as they study portraiture by creating pastel-based drawings. Students work with cardboard and learn about sculpture techniques as their projects take shape. Because of the potential danger and safety concerns that can occur when a kiln's ring is cooling, the use of a kiln has been limited to newer buildings. Adding this equipment to the new Art space at Beal will make available a wider variety of programming options going forward for more students at this school and across the district. In Shrewsbury, the Art Department has led a number of high profile project

based learning initiatives. Importantly, the flexible use of Art space in these ways will support STEAM initiative in Art and serve as a model of what's possible when Art is integrated into other content areas.

For younger students, clay is used as a medium for learning about the earth (clay as a natural resource), and for the development of fine motor skill practice as well as in demonstrating techniques used in the past (rolling coils of clay to produce both coil and pinch pots). For older students, these skills are carefully connected to content as students build upon these themes in Mathematics (patterning, tessellations), in Science (elements of the earth that create clay, states of changing matter – ring ceramics in a kiln), and in collaborative design process (balance and design as students create independent projects). While there are commercially prepared products that could be substituted for clay, these products would alter the curriculum in ways that would not allow for the direct connections of clay as a naturally occurring medium.

Shrewsbury has implemented project-based learning (PBL) initiatives in all our schools, and the district anticipated that PBL projects will continue to be implemented in the new building, especially in Art. In order to flexibly accommodate students as they work with these materials, the Art room itself will contain tables for project-based work, multiple storage cabinets and two sinks. Technology is integrated through the use of a document camera and interactive projector that display modeling of Art techniques for students onto a large at screen monitor. Art teachers also access the Internet for in- the-moment research, videos and interactive digital skills that enhance classroom learning.

Ideally, the Art rooms will support a whole-group learning area for instruction that includes a SMART Board and document camera for demonstration and modeling, and a large-screen display; a project-based area that contains storage for ongoing projects; and a ceramics area, with multiple sinks, for use of mixed media materials. The kiln is housed in a separate accessible area to the instructional space, and is able to be secured to avoid potential danger. There are portable display areas that can be used for storing and/or displaying student work in process, as well as movable display cases that the teacher can use for exhibitions of student projects within and outside the Art room. A large materials storage area provides adequate storage for materials. The scope of curriculum offered in Art programming requires the use of a kiln to fire ceramics created in both Art content lessons as well as for integrated learning or project based learning lessons. We anticipate that, with a change in building design and the addition of a kiln room, programming in Art will not only continue at the same level of service but will expand opportunities for PBL. When Art instruction takes place outside the Art room (for example, when students sketch outdoors) teachers can access the space as a design center. In addition, the Art room will play a big part in supporting after school enrichment programming. All of these features will help to support overflow from the nearby Maker Space

area in the Media Center.

Exhibition, feedback and critique are also important components of learning in the Arts. Accordingly, plan reflect a commitment to displaying student work in a variety of ways. There are portable display screens that can be used for displaying student work throughout the building, as well as movable display cases that the teacher can use for exhibitions of student projects. Finished work will be celebrated in displays outside the Art room, and in display cases located within the school building and in local exhibitions across the district.

K. MUSIC AND PERFORMING ARTS PROGRAMS

In Shrewsbury, Music classes are led by licensed Music teachers that share teaching responsibilities between all schools. All students in Kindergarten through Grade 4 receive instruction in Music once per week. Students take part in General Music classes, which combine elements of Music instruction with Kodaly (movement-based dance) techniques. This programming reinforces self-regulation skills and themes contained in the general curriculum. For example, students in Kindergarten, as part of a unit of study about animals, listen to native African music as they take on the roles of lions, antelope and other animals, acting out through movement how the animals move and interact in their native environment. This model reflects an ongoing collaboration with the Physical Education Department that supports early learning skill growth in self-regulation in a kinesthetic context.

Students in Grades 2, 3, and 4 have more formal choral music instruction as well as an introduction to reading music, where all students in Grade 4 learn to play the recorder. Beginning in Grade 4, students are required to participate in the Chorus program, which meets during an additional block once a week. At a school of this size, space for 200 students must be allotted in order to support the performances that occur twice each year - in winter and in spring. These shows serve as a showcase for emerging student competency and as an opportunity to celebrate with the school community.

Currently, movement in the Music room is constrained by space demands. Materials placed there and the need to share the space with other specialist colleagues limits functionality. In order to accommodate the variety of uses outlined above, Beal's new Music rooms will be large, flexible spaces. Due to Grade 4 Chorus, each room will need to accommodate two classes simultaneously. In addition, ample storage will abut the space to minimize transition time. Ideally, the flexible design of the Music classroom will allow for movement of walls to create one large classroom area for choral music and instrumental instruction. A functional Music space needs to be carpeted, with adequate storage space for instruments, props, and

music equipment, including a wired shelf to power keyboards. Finally, a sink in the Music classrooms will also help keep recorders and other instruments clean and ready for reuse.

It should also be noted that the stage area of the Cafetorium will facilitate performances both during concert evenings and for informal school assemblies. An operable partition will allow for use of this space during lunch times. Beginning in Grade 5, students in Shrewsbury can elect to take Instrumental Music lessons, and presently 415 students are enrolled, which means the program is at capacity. Going forward it's likely that space in the new building will be needed support this program. For that reason, space for instrument storage should be allocated in the Music room and/or on the stage area located nearby.

The proposed new building design, with the addition of a flexible Music classroom that supports programming in both vocal and instrumental music instruction as well as space in which to conduct Music and movement programming, will provide continuity in ongoing programming and will expand opportunities for scheduled PBL blocks and for after school enrichment programming. Moreover, locating the Allied Arts programs adjacent to one another and centrally within the building will serve the school community as an Arts "hub", and will encourage greater collaboration and integration of academic curriculum.

L. PHYSICAL EDUCATION PROGRAMS

The ultimate goal of Physical Education programming is to teach students about the important health benefits of an active, healthy lifestyle. Using the Massachusetts Comprehensive Health and Curriculum Frameworks and the National Standards in Physical Education, "P.E." programming in Shrewsbury encompasses a skills-based learning approach through a spiraling curriculum. Over time, Physical Education staff guide students as they develop proficiency in a variety of domains.

Currently, all Beal students benefit from Physical Education class once a week. However, instruction takes place in a gymnasium originally designed for high school students. It's hoped that the new building (and proposed grade configuration) will allow for expanded programming, including classes in yoga and in Music/Movement on a periodic, rotating basis. This model will support early learning skill growth as well as the integration of Social Emotional Learning skills.

Importantly, there is consensus that the gymnasium should be part of the shared "core" spaces in the new Beal building. The fact that these spaces can be reached after hours while prohibiting visitors from accessing the academic wings will allow the community to benefit

from the use of the gymnasium as well.

Two levels of skills instruction are addressed within the K-4 Physical Education curriculum. *Locomotor skills*, like skipping, galloping, hopping and jumping, assist students in moving purposefully from place to place with balance and agility, while *manipulative skills*, like throwing, catching, striking with a racquet, and dribbling, enable students to move objects from place to place. Both skill sets work in conjunction to instructively provide students with the foundation for both organized sports and individually-based sports that assist in fulfilling the program goal of espousing physical activity as part of an active and healthy lifestyle. An ideal space configuration should allow for multiple teaching stations to foster skills in both strands. It should be noted that the larger space will be beneficial after school hours as well given the community use of local gyms for organized sports.

The PE experience also includes Health and Wellness curriculum designed with instructional themes that focus on social/emotional support - these themes are intertwined within the curriculum in Grades K-3, with an emphasis on prosocial behaviors and self-regulation strategies.

Beginning in Grade 4 students experience an additional weekly Health class taught by a licensed professional. Ideally the traveling educator who teaches Health should have access to a classroom space near the gym. Given the needs of students receiving Adaptive Physical Education, the design for this new building is likely to accommodate educators in both specialty areas.

Currently, only one Physical Education class is taught in the Gym each morning. This accommodates the smaller-sized students in Grades K and 1. In the new building, the plan is to allow for up to two classes to be taught simultaneously. A movable wall or net can be used to divide the larger space, thereby creating two instructional areas for younger learners in Grades K, 1 and 2 who need less physical space. Older students in Grades 3 and 4 are accommodated in the full Gym in the afternoon; the full Gym is necessary due to the larger physical size of these students, where a split-Gym option is not feasible. Accommodating student needs is critical, but attention to staff needs is also important.

Presently, offices for the Physical Education staff are located in the equipment storage area, which is a small and airless space. There are no provisions for a designated office space for traveling staff members, or for a handicap accessible restroom for students.

Planning for the needs of the gym in the new school should include the following components:

● A handicapped-accessible restroom should be part of the Gym space to allow all students equal access to programming without differentiation based upon physical needs

● All of the schools in the district have a rock wall as a key component of the program as well as space for bleachers.

● The gym should feature six adjustable hoops to allot for two half court configurations to run simultaneously. The court should have the capability to receive volleyball standards and lined accordingly.

● Audiovisual requirements should include a portable projection system with a mounted screen and sound system with a microphone compatibility. All controls should be secured to limit damage caused by improper operation.

● The capacity to divide the Gym into 2 distinct instructional spaces. Many schools use a curtain or "sports net" for this purpose, but a folding wall should also be considered given the regular use of "wall space" for practice. Further, some curriculum themes, like the dance unit, involve different music selections being played simultaneously for 2 different classes. Incorporating a folding wall, rather than a "sports curtain", allows for greater flexibility in programming, more developmental instructional options, and greater variety in possible space use by the community after hours.

● Given the multipurpose use of this space, acoustics are paramount. It's critical that acoustic tiles are used to minimize the echo qualities sound makes in large spaces.

● Outdoor spaces for Physical Education in nice weather should be identified. A large play field similar to the one at Floral Street School (120' by 180') would support the curriculum and the needs of a school this size. These spaces should be located well away from parking/traffic areas and preferably some distance away from classrooms so as to minimize distractions. An outdoor blacktop area will also be utilized. This space can be the same one used for recess and should be sized accordingly.

M. SPECIAL EDUCATION PROGRAMS

The Beal School was constructed in 1922, prior to the passage of laws and regulations that required the education of students with special needs in the least restrictive setting, prior to the surge in population of students on the Autism spectrum, and prior to the influx of disabled students with English language learning needs into the Shrewsbury community. All of these factors require additional instructional spaces, often with specialized equipment. Further, the

building was constructed as a traditional junior high school, and as such it does not provide adequate space for the dynamic instructional approaches that teachers are expected to use within classrooms, particularly with young children (multiple teaching stations for small group instruction, space for computer use within the classroom, etc.).

In Shrewsbury, Special Education programming is overseen by the Special Education and Pupil Personnel Services Department, which provides services for students who have Individualized Education Programs (IEPs). Special Education services include: Speech and Language services, Occupational Therapy, Physical Therapy, Adaptive Physical Education, Counseling, Social Skills instruction, and academic support and instruction, as well as Applied Behavioral Analysis (ABA) services.

By law, Special Education services are provided in the least restrictive environment, meaning that specialists provide services within the general classroom setting wherever possible, in keeping with an inclusive philosophy of service delivery. In cases where student needs demand that services be provided in a setting other than the general classroom, students may receive these services in an adjacent academic classroom or, as dictated by students' IEPs, within a substantially separate classroom setting. However, most students who receive some services are included in the general classroom for all academic elements that are not directly prescribed by their IEPs.

DESE guidance suggests that for specialized instruction, instructional group sizes are best kept to 10-12 students. The required space to support a classroom of this size would be approximately half the size of the normal classroom. Based on the proposed scale of the school the district anticipates needing approximately one inclusion classroom per cluster. The overall design shows eight clusters, resulting in 6-8 inclusion classrooms. This ratio of space is consistent with the current demographics across the district.

In determining programmatic needs, the allocation of space for resource rooms and separate classrooms for students with disabilities are given equal consideration and priority as general education programs. Every effort is made to ensure that the facilities and classrooms serving only students with disabilities are at least as equal in physical respects to the average standards of general educational facilities and classrooms, despite the challenges faced by space constraints within the current Beal School. In the proposed plan, common spaces in every neighborhood will be used to support both impromptu small group instruction as well as planned "pull out" instruction provided by special educators, reading tutors, classroom teachers and ELE staff that cannot be accommodated in the classrooms mentioned in the previous paragraph.

Currently, spaces for instruction, therapeutic services and identified classrooms for students with disabilities are housed adjacent to general education classrooms to the greatest extent possible, so that students with disabilities receive services within the same areas of the building as their same-age peers. However, space constraints and the changing needs of students can impact this space assignment. For example, the Kindergarten section of the building houses a substantially separate classroom as well as a resource room space for primary and upper elementary students; locating these services together keeps student programming aligned with their age-appropriate peers.

Presently, programming at Beal occurs within an inclusive model where possible. Elements of ABA programming that require specialized instruction take place in a substantially separate classroom setting. Elements of Social Emotional programming for all students that require specialized instruction take place within the offices of the School Psychologist who works together with the Team (Parent, Teachers, Team Chair, School Psychologist, Counselors, Specialists and/or outside providers) and perhaps district Clinical Coordinators to tailor individualized services according to stated goals within a student's IEP.

At other levels, students returning from hospitalizations or experiencing other challenges are demonstrating behaviors incompatible with being successful in a general classroom. These students would benefit from a separate setting for the provision of evaluation and support to continue to be in their neighborhood school in their own community. In the proposed new school, small group spaces within each learning community wing will serve as spaces for the discrete programming needs of these students.

As previously mentioned, the need for several settings for small group and individualized instruction, therapies and support, located in proximity to general classrooms will allow for greater inclusion of students with and without disabilities. These spaces should be flexible and include groups rising from the tiered intervention system- further removing the possibility of stigmatization of students on IEPs.

Academic Support

Educators serving at the Beal School believe in fully including all students in general classroom settings for academic instruction whenever possible, and in providing students with direct special education services within this general classroom setting to maximize the education of all students. When student academic needs dictate that students require additional academic skill support in a separate small group setting in Reading and Mathematics, instruction takes place within a smaller proximal space. Licensed, credentialed Special Educators work in a flexible, small group service delivery model to meet students' needs as outlined in their IEPs. In

most schools, specialists instruct small group classrooms in areas that serves double duty as office space. Ideally, small group instructional support should take place as close to a student's classroom as possible.

Regular education Reading support requires four small spaces that can hold book storage and ample space for 4-6 students and an instructor. As part of our tiered system of support, all Elementary schools in Shrewsbury employ part-time tutors that assist children reading below grade level benchmarks with literacy skills. This model varies by school, and buildings that qualify for Title 1 funds benefit from additional tutor support. It's quite possible that the new Beal will qualify as a Title 1 school and so spaces should be apportioned accordingly. Regardless of the staffing numbers, all district tutors are overseen by the Title 1 Director. Consequently, collaboration between buildings is commonplace; shared resources and lessons strengthen job-embedded professional development efforts inherent in the model.

Behavior Support and Applied Behavioral Analysis (ABA) Services

The Shrewsbury Public School district employ full-time licensed Educational Learning Center (ELC) coordinators who also serve as building-based consultants for the social/emotional/behavioral and ABA needs of students.

As noted, providing three self-contained classrooms addresses the needs of each of the learning communities anticipated in the proposed facility while increasing small group rooms accommodates multiple learning situations for small groups and individuals. Special Education will continue to be delivered in a manner consistent with the current program but with improved facilities and better accommodation of all students.

Shrewsbury currently serves many students on the Autism spectrum with a range of physical and cognitive needs. The district has made a commitment to keeping students in their neighborhood schools. Thus, space must be allocated to support ABA programming these students require. These smaller, quieter spaces and/or padded cubicles support students as they receive in a 2:1 or 1:1 setting. It's estimated that a school of this size will need four classrooms configured in this way in order to address the needs of students in both the Early Learning Center (ELC) and Intensive Learning Center (ILC) programs currently housed at Beal.

Occupational Therapy/Physical Therapy

In the new Beal, Occupational Therapy and Physical Therapy services that are not delivered in the general classroom setting, by IEP designation, will be provided in a classroom space located near the Gym. The space for these activities needs to be flexible, with the idea that most student needs should be accommodated as close as possible to nearby classroom spaces

to avoid unnecessary disruption caused by lengthy travel time to service delivery areas. In contrast, ongoing space constraints mean that OT/PT services are currently delivered in the basement at Beal. Presently, Occupational Therapy services are provided by a licensed Occupational Therapist, and Physical Therapy sessions are conducted by a licensed Physical Therapist. Ideally, OT/PT services should be conducted as close as possible to the general classroom settings so that all educators can support students. This is not often possible given the distance between service delivery areas at Beal.

Going forward it's anticipated that two OT spaces will be required in the new building, with one being large enough to accommodate a large beam and swing.

Adaptive Physical Education

Students with special needs receive APE services in addition to their general Physical Education classes. The purpose of Adaptive Physical Education (APE) at the Elementary level is to provide students that require support in strengthening motor, physical and/or social skills with specialized instruction. Accordingly, lessons are conducted in a safe and highly supported setting with the goal that students will be increasingly able to access the regular Physical Education classroom. Adaptations are made programmatically to ensure that students have maximal opportunity to reach the goals set within their IEPs. In most schools, APE services are most often delivered in a small group setting, and paraprofessionals are part of the instruction to assist students with motor tasks that may require direct support. Currently APE services at Beal are delivered in the gymnasium. There is no other space available for APE. The lack of flexibility with space and equipment limits the supports students receive. The new Beal design will enable stronger supports and smoother transitions for students and staff. For example, it's possible that educators that provide APE services can use the OT space as well, particularly if the APE space is located near the gymnasium.

Counseling / Testing

Given the scale and population that will be served by the new Beal School, there will be a need for two School Psychologists. These positions will require an office with space for 2-4 students at a table and chair setting. These offices should be accessible off a corridor. In addition, special education staff will need an office for the Team Chair and a conference room large enough for 12 people.

The need for ample office space in the new building cannot be overstated. Presently the lack of space at Beal means that up to four educators share one small room. Other staff have set up desk areas in closets. Moreover, on days when traveling and/or part-time staff are scheduled, many specialists and tutors must work in hallways, at shared desks or in larger public spaces

like the Media Center. The lack of private space impacts students, as many small-group lessons take place in hallways. It should be noted that staff are also affected. Given that Beal's Instructional Coach and Curriculum Coordinator is "tucked away" in a back corner of the basement with several other educators, it's hard for staff to schedule or sustain private consultations.

Speech and Language

Presently at Beal, Speech and Language services are provided by a licensed Speech Pathologist in the general classroom setting, or in a small classroom setting. The Speech Pathologist maintains a space for small group instruction that doubles as an office space. Speech services, when delivered in a small group, parallel setting, are comprised by anything from a 1:2 or 1:5 ratio; students whose learning needs demand a small group setting benefit from the direct instruction provided by the speech pathologist. In the new school, there should be two spaces allocated for Speech large enough for 4-8 students. One of these two rooms should be located in the early Childhood community, near the Kindergarten classrooms.

Health

The health needs of students and staff at the current Beal School are overseen by a licensed RN School Nurse. The scope of the Health office encompasses, but is not limited to administering medications; evaluating student and staff needs during visits to the Health office; triaging immediate illnesses, injuries and health concerns; communicating with families and other health care providers around specific student health needs; maintaining health records; screening students for height, weight, hearing and vision; collaborating with other staff about students' emotional needs; and overseeing the completion of injury incident reports and other logs. Additionally, the school nurse collaborates with other district nursing staff, whose work includes collaborating on the delivery of Health curriculum, writing grants and collaborating with administrators on the development of 504 plans, and providing emergency response training to staff. The role of the School Nurse is a vibrant, far-reaching position that far exceeds the space allotted for all this work. In the new design, we are seeking ample room to address all areas of health and wellness students and staff at Beal.

Currently, the Health office is one small space where all students and staff that are unwell must await consultation. One couch provides space for a single student to rest. The existing space does not allow for a treatment waiting area. Additionally, there is no capacity to separate contagious students as they wait to be taken home. The facilities in the office are also inadequate. One lavatory serves as a changing area for young students who are toilet training, for students who are ill, and for students whose health issues require a supervised area for

toileting. This lavatory also serves as a staff restroom. There is no separate sink for handwashing in the health office; the one sink in the area is in the lavatory and is therefore often inaccessible. Storage areas are also constrained. Student medications/ EpiPens, etc., are kept in a locked cabinet, but there are more equipment storage needs than can be addressed in the current plan. Moreover, the current space does not provide a private area for the nurse to make sensitive phone calls, consult with staff or assist parents in need of support.

Clearly the new Beal School will need to better reflect the needs of students and staff in Shrewsbury. In addition to addressing the issues described above, the plan for the new Health office should be designed with year-round usage in mind. In order to maintain a healthy environment for students and staff during the school day and throughout extended programming, it's likely that the new Beal will be air conditioned. An air-conditioned Health office is also a benefit to students whose health conditions are exacerbated by excessive heat during the summer months.

N. TRANSPORTATION POLICIES

Students who attend Beal School can ride a bus to school or be driven to school. The Shrewsbury Public School district maintains free bus transportation for students in Grades K-6 who live more than two miles away from the school; families that live within this distance may opt to sign up for bus transportation in a fee-for-service model.

All students are required to sign up for busing each year during an open enrollment period starting in April and running through June for the coming year. The portal for signing up is able to identify if students qualify for free busing or are required to pay a fee and this child's information is relayed to AA transportation where busing routes are generated.

By law, the district offers no cost transportation for all families that qualify for the free or reduced federal lunch program. Moreover, families of students with special needs work with the Department of Special Education and Pupil Personnel Services to arrange for specific transportation based upon their individual requirements. Overall the district estimates that approximately 50% of families who qualify for free busing opt out. Further, 50% of those who do not qualify opt in. It is not anticipated that the policy to adhere to minimum state requirements for busing will change in the near future. For that reason, information about our existing system is helpful.

The current system is categorized as a three-tier system where each bus is utilized for transportation to each of the major grade levels High School, Middle School, and Elementary

School. This is accomplished by staggered start/end times for the different grade levels with the high school starting/ending first followed by the middles schools, then the elementary schools.

On average, nine school buses are currently required to transport the students of Beal School to and from school each day with two additional buses serving students with special needs.

The charts and tables below depict well the current pick up schedule:

Route Set Report for BEAL + W KA IN

Student File: **2017-2018 STUDENTS** Routing Scheme: **2017-2018 ROUTES** Days: **MTWHF**

Delay Times (sec)		Route Load Parameters		Route Time Parameters (min)	
Stop Delay:	15	Desired:	1	Desired:	40
Student Delay:	5	Maximum:	1	Maximum:	40
Routed Students:	178	Waiting Requests:	0	Route Count:	9

CRITERIA

INFO Field: BUS PRIV

School	Program	Grades	Direction	Time	INFO Value	Boundary	Exclude
2710005 - BEAL SCHOO	0 - PUBLIC	PFD-PFE	Inbound	9:00 AM	Y		
2710005 - BEAL SCHOO	0 - PUBLIC	KF-KF	Inbound	9:00 AM	Y		
2710005 - BEAL SCHOO	0 - PUBLIC	KA-KA	Inbound	9:00 AM	Y		
2710005 - BEAL SCHOO	0 - PUBLIC	01-01	Inbound	9:00 AM	Y		

ROUTES

Route #	Description	Bus #	Load	Anchor Location	Anchor Time	Total Distance (mi)	Total Time	Days
9BA		9	17	BLS	8:57 AM	8.90	36:05	MTWHF
10BA		10	25	BLS	8:55 AM	8.38	35:02	MTWHF
17BA		17	32	BLS	8:56 AM	6.51	21:30	MTWHF
20BA		20	23	BLS	8:58 AM	10.18	32:26	MTWHF
31BA		31	13	BLS	8:58 AM	9.37	30:35	MTWHF
33BA		33	22	BLS	8:55 AM	9.08	32:58	MTWHF
39BA		39	30	BLS	8:57 AM	7.72	28:48	MTWHF
40BA		40	6	BLS	8:53 AM	4.51	16:15	MTWHF
#41		41	10	BLS	8:42 AM	6.43	20:35	MTWHF

Route Set Report for BEAL + W KA IN

Student File: **2017-2018 STUDENTS** Routing Scheme: **2017-2018 ROUTES** Days: **MTWHF**

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2710005 - BEAL SCHOO	0 - PUBLIC	01-01	Inbound	9:00 AM	Y		

ROUTES

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33BA		33	22	BLS	8:55 AM	9.08	32:58	MTWHF
39BA		39	30	BLS	8:57 AM	7.72	28:48	MTWHF
40BA		40	6	BLS	8:53 AM	4.51	16:15	MTWHF
#41		41	10	BLS	8:42 AM	6.43	20:35	MTWHF

Additionally, statistics about Shrewsbury's current transportation needs can be seen in the recent presentation Assistant Superintendent Patrick Collins made to the School Committee here: http://schools.shrewsburyma.gov/sc/documents/ScComOct-2017-Transpslides.pdf

Anticipating the load for each mode of transportation for a school of the proposed scale for the new Beal is also important. In consultation with the architect, the district came to consensus on the following figures:

- Buses: 12-15 (including 2-3 special education buses)

- Cars: ±15% of the students is the average among the other elementary schools (This anticipates 120 total cars for 790 students)
- Walkers: ±7% is the average among the other elementary schools (This estimates 55 walkers for 790 students).

Once a final site is selected, some of these percentages may need to be weighted differently based on the school's location and/or site features.

To provide the safest possible disembarking and boarding of school buses in a larger building, separating bus lanes from pick up/ drop off car lines will be key. Town and representatives agreed that it would be desirable to the vehicular transportation on separate loops; one for full size buses [10-12], one for 2/3 sized special education buses [2-3], and one for parent pick-up/drop-off [±120]. The town provided information on Floral Elementary in regards to visitor parking and reported that the school sees ±50 visitors a day with the average at one time being around ±10. Also at Floral there are several students who are considered "walkers" whose children are ultimately picked up by their parents a street over from their respective schools. This will need to be taken into consideration when calculating the amount of parent vehicular traffic to the site.

Families of Kindergarten students, as well as families who access the Extended Day Program, will likely drop off and pick up students in a small parking lot located behind the school. Staff who work in the Extended Day Program, and those educators serving Kindergarten students must be able to park in designated spaces within this lot. Lastly, families and invited guests will need to access the remaining spaces when attending classroom exhibitions or Kindergarten events in this area of the school.

Families who choose to drive their students in Grades Kindergarten through Grade 4 to school access a different parking lot, located adjacent to the school building. This parking lot provides adequate space for both Beal staff as well as looping line space for families who are dropping off or picking up students. At the start of school and at dismissal time, the lot will be congested, creating safety concerns for pedestrians walking to and from the building as they access the parking lot. Predictably this congestion will be exacerbated in winter months when snow further limits available parking spaces. The town of Shrewsbury has responded to safety concerns by assigning a crossing guard to assist students and families. The addition of more parking spaces as well as consideration of innovative materials will unequivocally relieve safety concerns and congestion in the parking lot as families and students seek access to the school.

Floral Street School, the Elementary school with the closest scale to the proposed new Beal building, has a staff of approximately 100 on any given day. School events, i.e. celebrations, Curriculum Nights, Parent Conference Day, etc., are typically kept to no more than two grades

at a time. With this in mind, the potential parking needed to accommodate two grades at the new school would be in the range of ±316 cars. As plans for the new school develop, so too should more specific staffing numbers.

Most importantly, given the size of the new school careful attention must be paid to the separation of bus arrival and parent pick-up lines and the apportioning of outdoor space overall. Parents are not allowed to drop off students early, so queuing of cars occurs at both pick-up and drop-off times. However, drop-off does not take as long as pick- up since parents do not need to be identified prior to releasing the children to them. Where pick-up and drop offs occur in relationship to the building layout will be look at more carefully as the program is developed. Ample parking for staff and for visitors, safe playground access and security concerns must all be considered in the design of the site.

O. FUNCTIONAL AND SPATIAL RELATIONSHIPS

The hub of the school building should be the Allied Arts spaces, which are shared by all academic wings and remain central to the interactive, inquiry-based instructional approach espoused by the faculty. Locating the Gym, the Art room, the Music Room and the STEAM area centrally allows for equal access to these spaces by students at all grade levels, and keeps these more interactive spaces central for larger groups of students to access in a project-based learning capacity.

Special Education spaces are to be located within each learning community to promote greatest accessibility to learning resources for students who require these services while honoring the least restrictive philosophy and environment for learning.

Large group interactive common spaces or "neighborhoods" are to be located within each learning community. Given the successful use of similar spaces at the Sherwood Middle School in Shrewsbury, there is strong support for the continued use of these common areas to support differentiated instruction, parent volunteer efforts and student-led groups and projects. A STEAM classroom and maker space is to be located within the Media Center to promote broader inquiry based, project-based learning for the oldest students at the new Beal Elementary School. However, a common "neighborhood" can support more spontaneous, child-centered tasks.

Programmatic adjacencies that would further support collaboration, flexibility of space and increased opportunities for interactive learning would include:

Office Spaces

Administration located centrally to the building entrance ensures adequate safety monitoring; the Administrative area includes the general office/waiting room, the records room, the principal's office, the assistant principal's office and the supervisory office. Ideally the office spaces designated for the principals should be connected.

● **Medical suite** to be located near the Administrative office area and Guidance office - this adjacency offers the school nurse additional support at short notice when necessary

● **School Psychologists' offices** to be located near the Administrative area - the school psychologists and school principals frequently consult and the scope of their work requires close proximity

Shared Community Areas

● The **Cafetorium** is located centrally to promote equity of access for student programming as well as greater community involvement during after school hours through community-based meetings and performing arts events; accordingly, the Cafetorium contains a stage and instrument storage

● The **Gym and Cafetorium** are located within the shared community area to encourage greater student access from all academic wings of the building; additionally, the Gym space is used as a place to gather the whole school as needed. After school hours the community uses the Gym for sports events and gatherings; boys' and girls' rooms are located in proximity to support flexible use of both spaces. The Cafetorium space will serve an important role for assemblies for up to two grade levels during school hours and as a gathering space for school and/or community events after hours.

● The **Staff Lunch Room** is connected to the Cafetorium.

● The **Conference Room** offers an equidistant neutral space for meetings that do not require access to the academic wings of the building. As this space will also serve as additional space for the faculty and parents to gather for meetings and consultations, the space should be large enough to accommodate 20 – 25 people. The Conference Room is available for use after school hours for smaller community-based events and PTO needs.

● The **Art Classrooms** and **Music Rooms** are located centrally for equity of student access from all academic wings

● The **Music Rooms** should be located adjacent to the **Cafetorium** to facilitate easy access to the stage area and to utilize the area as a green/dressing room for performances and events.

● The **Media Center/Library** space is located centrally thereby allowing all students to more efficiently access resources essential to learning throughout the school day.

Academic Learning Neighborhoods

The academic wings are located around the commonly shared community areas. There are three main academic areas: the Early Learning Community (Kindergarten) and two mixed-grade wings on each side of the building.

Special Education classrooms and **small group learning spaces** are interspersed throughout each of the learning neighborhoods, rather than being located apart from instruction areas, in keeping with the spirit of inclusion within the Shrewsbury Public Schools.

● **The Early Learning Community** contains classrooms for Kindergarten students, as well as small group learning spaces designed for Special Education instruction, small group support of all students, and a self-contained classroom designed to serve younger students with substantially separate (ABA) programming needs.

● The wings contain classrooms for students in Grades 1-4, as well as small group **Special Education learning spaces**, including four self-contained classrooms designed to serve students with substantially separate (ABA) programming needs.

Outdoor Learning Spaces

Outdoor learning spaces, like a community garden and/or outdoor classroom spaces, are to be located near the Early Learning community to allow for easy access to this inviting space. Outdoor learning spaces and trails afford students and staff the opportunity to incorporate the seasonal aspects of nature within the core curriculum.

Additionally, outdoor play spaces are to be located in a more centrally-based context. The Early Learning Community play space should contain equipment for climbing to develop large motor skills, as well as equipment for imaginary role playing. Small house-like spaces, equipment shaped like vehicles, and low-lying climbing equipment allow for young learners to develop their self-regulation skills, their imaginations, and their gross motor skills in a developmentally appropriate context. The Elementary Community play spaces are also to be located near these academic wings; equipment in these spaces is to be designed to promote

balance, locomotion, and evolving collaboration skills. Swings, basketball half courts, and soccer and little league-style fields allow for older students to practice team-based collaboration which is so developmentally necessary for young children. Additionally, benches and outdoor tables in the play area allow for small groups of students to engage in quiet conversation with one another, or as areas for students to visit when they might need the opportunity to calm themselves. A variety of engaging choices of activities is important to creating developmentally appropriate, inclusive play spaces that serve the needs of students at this level.

P. SECURITY AND VISUAL ACCESS REQUIREMENTS

The Beal Elementary School can best continue its legacy as a vibrant, welcoming, community-based school by keeping safety in mind for its students, faculty and visitors. The design for the new building will reflect this commitment.

The Main Entrance will contain a camera/monitor and buzzer access to enter the building; visitors will enter a vestibule where they will be greeted through a window where identification can be checked before gaining access into the building near the main office. It is anticipated that the school will be fully equipped with CTV monitoring as well as locking exterior doors with electronic access by key cards. Physical / building access control components will interface with the district's Brivo access control system and HID 26-bit cards and fobs.

Administration reception will be designed with transparency into the building lobby and to the exterior so that there are good sight lines to monitor activity outside and within the school.

Inside the general office, display monitors will provide visual access to all doorways into the building. Inside the building, strategically placed cameras monitor movement and activities in hallways that connect to outside doors, further providing monitoring of building safety. Digital cameras provide 24:7 safety monitoring. Public address systems purchased will be Rauland Telecenter U-based systems that fully integrate with the district's existing Telecenter U system.

Security cameras purchased will be IP-based, connected via Cat5e, Cat6, or Cat6A Ethernet cabling, powered by Power over Ethernet (compliant with IEEE802.3at) and the specific model purchased must be listed as "passed" or "supported" for video and motion on the ExacqVision IP Camera Integration compatibility website at https://exacq.com/integration/ipcams/. All

cameras must be connected to and integrated with the district's existing ExacqVision servers.

Play areas adjacent to the Early Learning Community are fenced in to keep young children safe and to discourage wandering. The play areas adjacent to the Elementary Learning neighborhoods are to be monitored by digital cameras that record activities within the general office.

For transportation concerns, separate Bus and Car Drop-Off areas will be provided to maximize student safety. Cross walks will be strategically located to promote safe pedestrian crossing. An emergency access road will circle the perimeter of the building to provide emergency vehicle access to all parts of the building.

Parking lots are monitored by digital cameras for safety; the parking areas are well lit and have well-lit pathways from the lots to the main building to provide staff and visitors safe access while on school grounds.

The Design team anticipates organizing regulatory review meetings during the Schematic Design phase of the project with all Shrewsbury Town Agencies having jurisdiction. This typically includes at a minimum Police, Fire, DPW, Planning, and the Town Building department. During this meeting(s) security for both the exterior site layout and interior building layout will be reviewed and agency requirements integrated into the final design.

In fact, subsequent to a meeting with Town officials from the Parks and Recreation Department it was determined that the inclusion of designated space in the vestibule for a greeting station in the vestibule is also recommended. Such a spot will orient parents picking up students from Extended School Care (ESC) as well as community members using the school building after regular school hours.

III. CONCLUSION

The privilege of building a new school is an opportunity. Crafting this educational plan has helped capture the best qualities of existing programming. Developing the vision has also helped to suggest ways that smart design can further the aspirations we hold for students, staff and families.

Finnish architect Juhani Pallasmaa once said, "A profound design process eventually makes the patron, the architect and every occasional visitor in the building a slightly better human being." We certainly hope that holds true for the new Beal School.

Thank you for your consideration of the details that matter to the Shrewsbury Public Schools as we contemplate how to best meet the needs of our growing community.

3.1.2 EDUCATIONAL PROGRAM

C. Supporting Documents

1. Program Meeting Minutes
2. Tours of Similar School Facilities
3. Grade Configuration
4. Program Adjacency Diagram

1.	Agenda: Programming Strategy	9/7/17
2.	Memo: Executive Committee	9/7/17
3.	Supplement: Feasibility Study Work Plan	
4.	Supplement: Proposed Space Summary	
5.	Memo: Enrollment & Space Summary	9/13/17
6.	Supplement: PreK-4 Educational Space Planning Document	9/2016
7.	Supplement: School Size & Capacity	
8.	Agenda: Extended Day Program	9/19/17
9.	Memo: Extended Day & Year Programs	9/19/17
10.	Supplement: Email from Shrewsbury Public Schools	9/21/17
11.	Supplement: Extended School Care Enrollment 2017-2018	
12.	Agenda: Transportation Program	9/26/17
13.	Memo: Transportation	9/26/17
14.	Supplement: Current Elementary School Transportation 2017-2017	
15.	Supplement: Transportation Figures	
16.	Supplement: Transportation Update	9/21/16
17.	Agenda: Community Use Program	10/2/17
18.	Memo: Community Use	10/2/17
19.	Supplement: Application for Use	
20.	Supplement: Beal Calendar	5/2017
21.	Supplement: Floral Aerial	
22.	Supplement: Floral Calendar	
23.	Supplement: Organizations	
24.	Supplement: Play Structure	
25.	Supplement: SPS Policies	7/10/13
26.	Agenda: Building Systems Program	10/10/17
27.	Memo: Building Systems	10/10/17
28.	Agenda: Arts Program	10/27/17
29.	Memo: Arts Program	10/27/17
30.	Agenda: K-4 Organization	11/2/17
31.	Memo: K-4 Organization	11/2/17
32.	Agenda: Physical Education	11/7/17
33.	Memo: Physical Education & Health	11/11/17
34.	Agenda: Student Support Services	11/13/17
35.	Memo: Student Support Services	11/13/17
36.	Agenda: Food Services	11/14/17
37.	Memo: Food Services	11/14/17
38.	Supplement: Floral Plan	
39.	Supplement: Preferences	
40.	Supplement: Sherwood Plan	
41.	Agenda: Instructional Coaches	11/16/17
42.	Memo: Instructional Coaches & Title-I	11/16/17
43.	Agenda: Media Center Technology Program	12/1/17
44.	Agenda: Review Meeting Open Items	12/1/17
45.	Memo: Media Center & Instructional IT	12/1/17
46.	Memo: Executive Committee Programming Review	12/1/17
47.	Supplement: IT Standards	12/8/17
48.	Memo: Programming Review Follow-Up	12/20/17
49.	Supplement: Proposed Space Summary	

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

PROGRAMMING STRATEGY MEETING AGENDA

7 September 2017

I. INTRODUCTION

- Objective: Define program from overall mission to detailed space requirements
- Review responsibilities of each party
- Proposed schedule

II. PROCESS

MSBA process

- Enrollment agreement/Initial Space Summary
- Preliminary Design Program/Preferred Solution
- Space Summary Template/MSBA negotiation
- Schematic Design Final Program/Room Data Sheets
- Owner deliverables: Educational Philosophy/Defense of Space Summary Template Deviations

- **Input gathering**

District Wide Issues (Superintendent/School Committee/Community)
Long term goals for grade configuration
Distribution of elementary schools vs. centralized ECC
Role of Pre-K
Site acquisition/demographics
Surveys of Staff/Public
Public Hearing
School Committee Authorization or K-1 or K-4
Strategy: Address grade configuration then specifics of selected

Staff/Faculty/Administration (Superintendent/Asst. Superintendents Curriculum and Finance /Town Dept. Representatives/ Facility Personnel)
Academic
-Special Education
-Music/Art
-Physical education/Athletics
-Kindergarten/General classrooms

Facilities personnel
Food Service
Transportation
IT/Telecommunications
Security/Emergency
Recreational (school/community)
Extended Day programs
Sustainable design goals

PTO/Community organizations
Neighborhood representatives
Local Authorities review

- **Technique Options**
  Questionnaire
  -Staff/Faculty
  -Community
  Focus Group Meetings
  Tours of other facilities
    Nelson Place Elementary School, Worcester (New Con.600 students + autism)
    John R. Briggs Elementary School, Ashburnham (New Con. 520 incl. Pre-K)

    Shrewsbury recommendations, particularly for ECC

    Model Schools – MSBA
    -Joseph Estabrook Elementary School, Lexington (540 K-5)
    -Bancroft Elementary School, Andover (680 K-5 students)
    -Lincoln Elementary School, New Bedford (600 preK-5)
    -Freeman-Kennedy Elementary School, Norfolk (585 3-6 + preK)
    -Burlington Memorial Elementary School, Burlington(480 pre-K-5)
  Public Hearing
  Visioning Session

- **Decision Makers:** Executive committee to distill input/finalize program

- **Approval Process:** City of Marlborough entities (Building Comm., School Comm., etc.)

III. STRATEGY FOR BEAL

- Outline process/schedule
- Regular meeting time
- Point of contact – scheduling
- Coordinator – review of materials

IV. OTHER PROGRAM TOPICS

- Site Selection

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

MEMO OF PROGRAMMING MEETING
EXECUTIVE COMMITTEE

7 September 2017

ATTENDANCE: Dr. Joseph Sawyer, Superintendent
Amy Clouter, Asst. Superintendent for Curriculum and Instruction, Administration
Patrick Collins, SPS, Asst. Superintendent for Finance & Operations
Chris Girardi, Principal, Beal Early Childhood Center
Kristen Las, Assistant Town Manager/Economic Development Coordinator
Paul Queeney, PMA
Kathryn Crockett, LPA
Christina Bazelmans, LPA
Sean Brennan, LPA

ITEM:	DESCRIPTION:	RESPONSIBILITY:
09.07.17.01	Group discussed the tasks that lie ahead throughout the upcoming MSBA submissions, who is responsible for each item, completion dates for each task, and strategies for gathering information needed to satisfy MSBA's requirements.	All
09.07.17.02	Katie reviewed the MSBA process and how it is broken down into three separate submissions: Preliminary Design Program [PDP], Preferred Solution Report [PSR], and Schematic Design [SD]. She explained how the Enrollment Agreement is translated by the MSBA Space Summary Template into a set of classrooms, office, supports space, etc. This initial Space Summary Calculation is only a starting point/benchmark that MSBA has established. MSBA has a history of allowing flexibility in respect to how space is allocated, particularly in when it comes to "neighborhoods/commons room", ELL, and Special Education, as long as it supports the town's educational program. Patrick Collins requested that we take a closer look at the space summary template during our next meeting.	All
09.07.17.03	Katie stated that MSBA does not have a space summary template for K-1 [Early Childhood Centers] and that we have made some assumption as to what MSBA may accept. These assumptions would result in a base building program of approximately ±115,000 sq.ft.; this base program does not include Pre-K and/or any significant special education spaces which would ultimately increase the overall project size. LPA & PMA to check with MSBA to see if they agree with the assumptions made based on a K-1 configuration; see attached space summary.	Katie Crockett Paul Queeney
09.07.17.04	The group discussed the "Educational Philosophy Statement" at length and how MSBA views this as the document that informs all the other facets of the project from programming to final spatial configuration. The school department had received the Millis projects Educational Philosophy Statement as a sample but it was the final iteration of it that was included in the PSR phase. PMA said they would send along a sample from a project they worked on that is from the PDP phase and the PSR phase so the team can get a sense of that level of detail is expected during the PDP. LPA will also send along the Educational Philosophy Statement that the town did from the Sherwood project.	Sean Brennan Paul Queeney

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

MEMO OF PROGRAMMING MEETING
EXECUTIVE COMMITTEE

7 September 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
09.07.17.05	Katie Reviewed the overall schedule from now through schematic design and the town vote and MSBA approval. The schedule was worked backwards from the town election vote date in early November. A handout of the schedule was provided to all that attended; see attached schedule.	All
09.07.17.06	The current schedule from Schematic design through Construction would put the school opening in the Fall of 2022. This schedule could be accelerated through different construction delivery methods that will be discussed at a later date, however, this date is a good starting point as far as anticipated opening date.	LPA
09.07.17.07	School department has set a schedule for themselves with an October 25th end date where they hope to have the School Committee make a final vote on the preferred grade configuration; see attached schedule. The school department is putting together "fact sheets" for distribution about the school project. LPA stated that they will assist the school department with these items in any way they can.	School Department
09.07.17.08	School Depart has upcoming meetings that it may be beneficial to have LPA & PMA attend. The next ones are scheduled for the 27th of September and the 11th of October. The group to discuss further at their next meeting.	All
09.07.17.09	The discussed the grade configurations at length. The school dept. reported that they currently have 368 kindergarteners in 19 sections and 460 first-graders in 22 sections. This made it apparent that further discussion on the space summary template is needed, particularly for a K-1 configuration. LPA stated that MSBA does respect student to teacher ratios if they are already a matter of school dept. policy which in this case they are part of the School's dept. policy.	All
09.07.17.10	The town also had questions as far as the level of detail required on the redistricting plan. LPA will provided sample from another project that met the requirements of the MSBA	Sean Brennan
09.07.17.11	MSBA is very interested in staff/public involvement in the process and requires that all meeting minutes, presentation, etc. be compiled and accompanied by a letter that confirms the involvement of both staff/public in the process. PMA will compile these documents and help the town draft the letter when the time comes	Paul Queeney
09.07.17.12	The topic of a project website was discussed. Town to decide whether documents/updates will be posted on the School Building Committee or the School Departments website. Links to each other's meeting minutes school be provide on both pages.	School Department

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

MEMO OF PROGRAMMING MEETING
EXECUTIVE COMMITTEE

7 September 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
09.07.17.13	The group discussed alternative sites and at this time the owner does not see geographic location as significant of a factor as site acquisition and development costs. (MSBA requires full control of a school site prior to signing a Project Funding Agreement at the conclusion of the Schematic Design phase.) The reasoning behind this is the tight schedule for acquisition and that current busing times are reasonable with the exception of a few students. LPA will proceed with the evaluation of site based on this information and will reassess as the educational program and grade configurations are developed	LPA
09.07.17.14	The school department's initial thought is to hold specific programming meetings/similar school tours, specific staff surveys until after a grade configuration decision is made. LPA requested that the group take some time to think about the timing of these meetings, since some may be able to occur before the grade configuration decision if not all. Group to discuss further at next meeting. Will need to adjust schedule accordingly.	All
09.07.17.15	School department is planning on sending out surveys and will reach out to LPA if they need any assistance. The initial surveys will focus on coming to a decision on the grade configuration. A second round of surveys will be done after the grade configuration decision is made to gather more specific information. School Dept. is planning to send out "fact sheets" regarding project and related grade configuration issues prior to the first survey.	School Department
09.07.17.16	School Dept. would like to do tour of other similar facilities after the grade configuration decision is made. LPA & PMA to organize visits.	Katie Crockett Paul Queeney
09.07.17.17	LPA requested that the School Department assemble an "Executive Committee" to render final decisions in respect to educational delivery. The group that met today could very well be that committee, however, School department should consider if any other staff members should be included	School Department
09.07.17.18	The group agreed to meet next Wednesday the 13th @ 1:30 p.m. at the town hall	All

Memo by: Sean Brennan, LPA

cc: Attendees

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

FEASIBILITY STUDY WORK PLAN

PHASE	DURATION	LPA
Preliminary Design Program (PDP)	**6 months**	**8/1/17 – 2/15/18**
PDP Core	4 ½ months	**8/1/17 – 1/23/18**
Program	2 ½ months	**9/15 – 11/30**
Executive Comm. Meeting		Week of 9/5 – 9/8/17
Kick Off meeting Admin.		Week of 9/15 – 9/22/17
Staff Questionnaire		9/24 – 9/29
Public Questionnaire		9/24 – 9/29
Grade Configuration School Comm. Vote		10/25/17
Program Meetings K-1/K-4 Academic Org. (classrooms/SPED/Admin.) Art/Music/Gym/Library Site: circulation, parking, play, service Building Systems: IT, MEP, security Sustainable Design Follow Up		10/2 – 10/31
Tour Similar Facilities Nelson Place, Worcester John R. Briggs, Ashburnham Other (TBD)		10/10 – 10/13/17
Teaching Philosophy/Ed. Program (Owner)		9/15 – 11/30
Initial Space Summary (K1 and K-4)		11/1 – 11/8
Public Presentation (Grade Configuration)		Week of 11/9 – 11/16
Organizational (Bubble) Diagrams		11/9 – 11/30
Existing Conditions	2 months	**8/1 – 10/1/17**
Geotechnical (Beal) Phase 1 site assessment (Beal)		8/15 – 10/1/17 8/15 – 9/5/17
Floor Plans showing existing uses Consultant narratives Architectural narr. incl. code/AAB compliance		8/1 – 8/31 8/8 – 9/12 8/8 – 9/12
Hazardous Material report (Beal)		8/8 – 9/5
Finalize Narratives		9/13 – 9/30
Site Evaluation	4 months	**8/1 – 11/30/17**
Analyze available sites for suitability to support program		8/1 – 10/30
Site Survey (Alternate sites)		10/31 – 11/30/17
Geotechnical (Alt. sites)		10/31 – 11/15/17
Phase 1 site assessment (Alt. sites)		10/31 – 11/30/17
Meeting with local authorities/admin.		Week of 9/25 – 9/29
Site Program Narrative		10/2 – 10/31

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

FEASIBILITY STUDY WORK PLAN

Options Development		**10/1/17 – 1/12/18**
Base Repair		**10/1 – 10/30**
Beal Site/Building		**10/30 – 11/30/17**
Alternate Sites Development		**11/1/17– 12/15/17**
Executive Committee review		Week of 12/15 – 12/22/17
Building Committee Meeting		1/9/18
Estimates/Project Budget	2 weeks	**1/10/18 – 1/24/18**
Building Committee Approval	1 week	**1/30/18**
Prepare Document	1 week	1/31- 2/7/18
MSBA Review	3 weeks min.	2/8/18 - 3/1/18
Preferred Schematic Report (PSR)	**3 months**	**2/8/18 – 5/2/18**
PSR Core	1 ½ months	2/8/18 – 3/22/18
Estimates	2 ½ weeks	3/23/28 – 4/10/18
Project Budget	1 week	4/11/18 – 4/17/18
Owner Approval	1 week	4/18/18 – 4/24/18
Prepare Document	1 week	4/25/18 – 5/1/18
MSBA Review **Facilities Assessment Review** **MSBA Board Meeting**	6 weeks	5/2/18 – 6/12/18 * 6/6/18 6/27/18
Schematic Design (SD)	**6 months**	**5/2/18 – 10/31/18**
SD Core	3 months	5/2/18 – 8/1/18
Estimates	3 weeks	8/2/18 – 8/2318
Reconciliation/Project Budget	1 week	8/24/18 – 8/31/18
Owner Approval Building Committee	1 week	9/3/18 – 9/10/18
Prepare Document	1 week	9/11/18 – 9/18/18
MSBA Review **MSBA Board Meeting**	**6 weeks**	**9/19/18 – 10/30/18** **10/31/18**
Local Funding Approval **Town Meeting**	**7 weeks**	**10/31/18 – 12/19/18** **November, 2018**
Design Development/ **Construction Documents (DD/CD)**	9 – 10 months	Jan. – Oct. 2019
Bid Period	2-3 months	Nov. – Jan. 2020
Construction	18 – 30 months	

*Note early delivery to MSBA

Proposed Space Summary- Elementary Schools

FILL IN SCHOOL NAME HERE	Existing Conditions			PROPOSED: Existing to Remain/Renovated			PROPOSED: New			PROPOSED: Total			MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
CORE ACADEMIC SPACES		**13**	**9,272**			**0**			**0**			**36,550**		**34**	**33,800**	
(List classrooms of different sizes separately)																
Pre-Kindergarten w/ toilet													1,200		-	1,100 SF min - 1,300 SF max
Kindergarten w/ toilet										1,200	17	20,400	1,200	6	7,200	1,100 SF min - 1,300 SF max
Kindergarten without toilet		**10**	7,185													
General Classrooms - Grade 1-6		**3**	2,087							950	17	16,150	950	28	26,600	900 SF min - 1,000 SF max
SPECIAL EDUCATION		**14**	**2,753**			**0**			**0**			**0**			**9,060**	
(List rooms of different sizes separately)																
Self-Contained SPED													950	6	5,700	8% of pop. in self-contained SPED
Self-Contained SPED - toilet													60	6	360	
Resource Room		**7**											500	4	2,000	1/2 size Genl. Clrm.
Speech	285	1	285													
OT/PT	220	1	220													
Special Education		5	2,248													
Small Group Room / Reading													500	2	1,000	1/2 size Genl. Clrm.
ART & MUSIC		**1**	**332**			**0**			**0**			**0**			**5,075**	
Art Classroom - 25 seats		1	332										1,000	2	2,000	assumed schedule 2 times / week / student
Art Workroom w/ Storage & kiln													150	2	300	
Music Classroom / Large Group - 25-50 seats													1,200	2	2,400	assumed schedule 2 times / week / student
Music Practice / Ensemble													75	5	375	
HEALTH & PHYSICAL EDUCATION		**4**	**3,269**			**0**			**0**			**0**			**6,300**	
Gymnasium	3,126	1	3,126										6,000	1	6,000	6000 SF Min. Size
Gym Storeroom		**3**	143										150	1	150	
Health Instructor's Office w/ Shower & Toilet													150	1	150	
MEDIA CENTER		**1**	**691**			**0**			**0**			**0**			**4,225**	
Media Center / Reading Room	691	1	691										4,225	1	4,225	
DINING & FOOD SERVICE		**3**	**2,175**			**0**			**0**			**0**			**9,776**	
Cafeteria / Dining	954	1	954										5,925	1	5,925	2 seatings - 15SF per seat
Stage													1,000	1	1,000	
Chair / Table / Equipment Storage													463	1	463	
Kitchen	650	1	650										2,090	1	2,090	1600 SF for first 300 + 1 SF/student Add'l
Staff Lunch Room	571	1	571										298	1	298	20 SF/Occupant
MEDICAL		**2**	**172**			**0**			**0**			**0**			**710**	
Medical Suite Toilet	54	1	54										60	1	60	
Nurses' Office / Waiting Room													250	1	250	
Examination Room / Resting	118	1	118										100	4	400	
ADMINISTRATION & GUIDANCE		**6**	**1,057**			**0**			**0**			**0**			**2,925**	
General Office / Waiting Room / Toilet	192	**2**	384										545	1	545	
Teachers' Mail and Time Room													100	1	100	
Duplicating Room													150	1	150	
Records Room													110	1	110	
Principal's Office w/ Conference Area	168	1	168										375	1	375	
Principal's Secretary / Waiting													125	1	125	
Assistant Principal's Office													120	1	120	
Supervisory / Spare Office													120	1	120	
Conference Room													250	1	250	
Guidance Office													150	3	450	
Guidance Storeroom													35	1	35	
Teachers' Work Room	208	1	208										545	1	545	
Curriculum Coordinator	133	1	133													
Psychologist Office	164	1	164													
CUSTODIAL & MAINTENANCE		**4**	**531**			**0**			**0**			**0**			**2,390**	
Custodian's Office	445	1	445										150	1	150	
Custodian's Workshop													375	1	375	
Custodian's Storage		**2**	38										375	1	375	
Recycling Room / Trash													400	1	400	
Receiving and General Supply													363	1	363	
Storeroom													527	1	527	
Network / Telecom Room	48	1	48										200	1	200	
OTHER			**0**			**0**			**0**			**0**			**0**	
Other *(specify)*																
Total Building Net Floor Area (NFA)			**20,252**			**0**			**0**			**36,550**			**74,261**	
Proposed Student Capacity / Enrollment															**790**	
Total Building Gross Floor Area (GFA)[2]			33,779												**114,550**	
Grossing factor (GFA/NFA)			**1.67**									**1.52**			**1.54**	

[1] **Individual Room Net Floor Area (NFA)** Includes the net square footage measured from the inside face of the perimeter walls and includes all specific spaces assigned to a particular program area including such spaces as non-communal toilets and storage rooms.

[2] **Total Building Gross Floor Area (GFA)** Includes the entire building gross square footage measured from the outside face of exterior walls

Architect Certification

I hereby certify that all of the information provided in this "Proposed Space Summary" is true, complete and accurate and, except as agreed to in writing by the Massachusetts School Building Authority, in accordance with the guidelines, rules, regulations and policies of the Massachusetts School Building Authority to the best of my knowledge and belief. A true statement, made under the penalties of perjury.

Name of Architect Firm: _____

Name of Principal Architect: _____

Signature of Principal Architect: _____

Date: _____

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

MEMO OF PROGRAMMING MEETING
ENROLLMENT & SPACE SUMMARY

13 September 2017

ATTENDANCE: Dr. Joseph Sawyer, Superintendent
Amy Clouter, Asst. Superintendent for Curriculum and Instruction, Administration
Patrick Collins, SPS, Asst. Superintendent for Finance & Operations
Chris Girardi, Principal, Beal Early Childhood Center
Kathryn Crockett, LPA
Christina Bazelmans, LPA
Sean Brennan, LPA

ITEM:	DESCRIPTION:	RESPONSIBILITY:
09.13.17.01	The group met to review/discuss the implications of the MSBA agreed upon enrollments for both the K-1 and the K-4 grade configurations.	
09.13.17.02	The School Department stated that they would be holding a meeting on the 27th of September that they would like PMA & LPA to give a similar presentation on Modules 3&4 as the one given last night at the School Building Committee Meeting. LPA to reach out to PMA and coordinate this presentation.	Katie Crockett Sean Brennan Paul Queeney
09.13.17.03	The school department provided the group with the figures they used for their own enrollment projects versus the ones that MSBA used to get to the final enrollments of 750 for K-1 and 790 for K-4. The projected numbers differed from each other however the town feels as though they will need more classrooms than the base space summary template allows. They anticipate needing 40+ classrooms to meet their current and future needs. The school department's student to teacher ratios based on their departments policy are as the follows: • Kindergarten 17-19 students per classroom • 1st & 2nd Grades 20-22 students per classroom • 3rd & 4th Grades 22-24 students per classroom Based on this information the Town has a strong argument to achieve the number of classrooms they anticipate needing since their ratios vary slightly from MSBA resulting in a greater number of sections per grade then the base space summary template. LPA to work with the space summary template to reflect these ratios for both K-1 and K-4 grade configurations	Katie Crockett Sean Brennan
09.13.17.04	The town's ultimate hope is to return music, art, and other education spaces that have been lost at all of the other elementary schools due to overcrowding. Town <u>may</u> need to reflect all of these moves in a "redistricting" plan, a.k.a. room allocation plan based on the spaces that would be freed up from the construction of Beal. LPA to check with PMA to see if such plan is being required of the town by MSBA.	Katie Crockett Paul Queeney

MEMO OF PROGRAMMING MEETING
ENROLLMENT & SPACE SUMMARY

13 September 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
09.13.17.05	After crunching some numbers, it became apparent that if the K-1 grade configuration is pursued, the town will likely not be able to accommodate all K and 1 grade classrooms in the new building the year it opens as the town would like to offer full day kindergarten to all residents. Based on MSBA's projections the town would have ±868 K-1 students in the year 2025. This would not allow the town to utilize this school as the only K-1 school [Early Childhood Center] and some sections would need to be returned to the other existing elementary schools. The group discussed including a design for a future addition to expand capacity to handle the additional students and possibly carrying that addition as an alternate that could be accepted after bids have been received. Group will revisit options at a later date if this grade configuration is selected as the preferred option. The town feels as that due to the fact they cannot currently offer full day kindergarten to all of its residents currently that the projection numbers are skewed and the actual number could greatly exceed the MSBA projected 868 K-1 students.	All
09.13.17.06	LPA reported that at this time they anticipate needing 8-12 "buildable" acres to support a school of this scale. The floor plate of the school is expected to be in the range of 75,000 to 85,000 square feet if the building were to stay under two stories which is highly desirable for this age group. LPA will be working on a preliminary foot print for all the required site features including a building footprint based on project of a similar scale to be able to effectively assess a site's suitably.	Sean Brennan
09.13.17.07	The group agreed to schedule following programming meetings prior to the grade configuration decision (other programming meetings to be delayed until after), Amy Clouter will send out a doodle to coordinate scheduling: **Extended Day & Year Programs:** • Karen Isaacson • Amy Clouter • Chris Girardi • Patrick Collins • LPA & PMA **Transportation:** • Steve Rocco, SPS • Sean Lyonnais [AA transport] • Chris Girardi • Patrick Collins • LPA & PMA	Amy Clouter

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

MEMO OF PROGRAMMING MEETING
ENROLLMENT & SPACE SUMMARY

13 September 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	Security & Technology • Michael Hale [Selco] • Shawna Powers, SPS IT • Brian L'Heureux, SPS IT • Amy Clouter • Chris Girardi • Patrick Collins • LPA & PMA **Building Facilities** • Bob Cox, Facilities • Jim Vuona, Fire • Jay Hester, Police • Patrick Collins • Steve Rocco, SPS • LPA & PMA	
09.13.17.08	The group discussed having a sustainable design meeting but the owner would like to reach out to Kevin Mizikar and Bob Cox first to see who should be included in this meeting. There is sustainable design advocacy group in town that will take a keen interest in what strategies will be implemented in this project. It was previously stated that the town is interested in exploring all possible sustainable strategies and would like to present a "green" option and Alternate "green" option that would include additional sustainable strategies above and beyond the base option and the associated cost to achieve this goal. Once LPA hears back from the Town on who they wish to have attend this meeting, LPA will coordinate with their consultants and setup a meeting date	Patrick Collins
09.13.17.09	The group agreed to meet on Tuesday the 19th at the town hall for the first programming meeting addressed in Item 7 above. Agenda and time to be determined by the Doodle, Time and Agenda will be sent via email.	All

Memo by: Sean Brennan, LPA

cc: Attendees

Kindergarten: 17-19 students per class
Grades 1-2: 20-22 students per class
Grades 3-4: 22-24 students per class

pcc add this col

area shaded yellow is daat provided by MSBA to calc size of new school needed

Grade	K	1	2	3	4						
Students per Classroom	17	20	20	22	22						
						w/ New Beal	w/ New Beal	current CR	Current Enroll	Diff CR	Diff Enroll
Coolige Classrooms	4	3	3	3	3						
Capacity	68	60	60	66	66	**320**	16	19	409	-3	-89
Spring St Classrooms	3	3	3	3	3						
Capacity	51	60	60	66	66	**303**	15	17	372	-2	-69
Paton Classrooms	3	3	3	3	3						
Capacity	51	60	60	66	66	**303**	15	17	366	-2	-63
Floral St Classrooms	6	6	6	6	6						
Capacity	102	120	120	132	132	**606**	30	32	722	-2	-116
						1,532	76	85	1869	-9	-337
	16	15	15	15	15						

Grade	K	1	2	3	4	
Students per Classroor	17	20	20	22	22	
New School Classroor	8	8	8	8	8	
Capacity	136	160	160	176	176	**808**

K	408
1	460
	868

PCC-Pro-forma at high end class size

Grade	K	1	2	3	4	
Students per Classroom	19	22	22	24	24	
Coolige Classrooms	4	3	3	3	3	
Capacity	76	66	66	72	72	**352**
Spring St Classrooms	3	3	3	3	3	
Capacity	57	66	66	72	72	**333**
Paton Classrooms	3	3	3	3	3	
Capacity	57	66	66	72	72	**333**
Floral St Classrooms	6	6	6	6	6	
Capacity	114	132	132	144	144	**666**
						1,684

1532	1532
750	790
2282	2322

790 942

19 September 2017

AGENDA Extended Day Program

Beal Project Brief Overview

I. GENERAL
- For 750 – 790 student elementary school, # anticipated students in Extended Day program
- Hours of program: morning, afternoon, summer, vacation
- Administration/funding of program through SPS District
- Meals served
- Transportation
- Connections to other organizations (Y, PTO, etc.)

II. PROGRAMS
- Meals
- Activities
- Play areas
- Seasonal factors

III. FACILITIES REQUIRED
- Assembly space near main lobby/ parent pick up/drop off (Cafeteria, Gym, Media Center)
- Entry: confirm if separate or main entry acceptable
- Kitchen: confirm if separate storage required
- Materials Storage
- Student personal storage
- On Site Office/Check in station
- Outdoor play areas
- Communications: separate or linked to school district
- Toilet Rooms

IV. SITE FEATURES
- Parent pick up/drop off: quantity, process
- Vans/busses

V. OTHER

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

19 September 2017

AGENDA Extended Day Program

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

19 September 2017

AGENDA Extended Day Program

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

MEMO OF PROGRAMMING MEETING
EXTENDED DAY & YEAR PROGRAMS

19 September 2017

ATTENDANCE: Karen Isaacson, Director of Extended Learning
Patrick Collins, SPS, Asst. Superintendent for Finance & Operations
Chris Girardi, Principal, Beal Early Childhood Center
Kathryn Crockett, LPA
Sean Brennan, LPA

ITEM:	DESCRIPTION:	RESPONSIBILITY:
09.19.17.01	**GENERAL** School department reported on the enrollment and waitlist statistics for the extended day program. The number exact enrollment numbers were provided on a handout provided by Karen Isaacson; See attached. The activities vary from day to day and week to week with a homework period being part of every session. During the homework session they separate out the students among the available common spaces to reduce distractions/interruptions. Activities are carried out in groups of varying sizes depending on the level of supervisor required. All the staff are employees of the school department. The school department targets a student teacher ratio of 10:1 for the extended day programs. As a SPS District program, ECC licensing is not required.	
09.19.17.02	**SCHEDULE/ ENROLLMENT** The school department stated that they have not grown the size of the programs due to the fact that physical space is limited and they are focused on offering a quality extended day learning program rather than simply meet the demands for the program. The morning extended day programs run from 7:00a.m. to 8:30a.m. and the afternoon program starts a dismissal 3:15p.m. and goes until 6:00p.m. Shrewsbury allows parents to choose which days their students attend and are able to pick their child up at any time during the extended day program. Since our meeting Karen Isaacson has reviewed the sign out sheets at the two largest extended day programs locations. She reported back that no more than ten students are being signed out during a five minute period and that typically it is five or fewer students. LPA would like to visit Floral street during one of their extended day programs to observe how spaces are utilized, parent pick-up operations, and storage requirements; LPA to coordinate visit.	Katie Crockett Karen Isaacson
09.19.17.03	**FACILITIES** The program currently utilizes all of the major spaces at each school [cafeteria, gym, media center, exterior play areas]. The size of these spaces sets the number of students they are able to enroll at each school while still offering a quality program without significantly increasing staffing. The school department stated that having all these space adjacent to each other is highly desirable along with direct access to an exterior play area from the cafeteria and parent pick-up area, as well as direct (monitored) access to toilet rooms.	LPA

MEMO OF PROGRAMMING MEETING
EXTENDED DAY & YEAR PROGRAMS

19 September 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
09.19.17.04	**STORAGE** The need for storage for these programs is important along with a designated area for the extended day site coordinator. LPA asked that the Karen report back on what areas are being utilized for extended day storage at both Floral & Sherwood. Karen Isaacson has reported back the following on 09.20.17: • **Sherwood** - the storage area outside the cafeteria is ± 48′ x 9′. The space includes a desk for the site coordinator and electrical outlets, but no phone and no direct computer connection (lap top connects via wifi) • **Floral** - there is a storage/office area off of the cafeteria ± 15′ x 12′ (no phone, no computer). There are two large storage cabinets stored within the cafeteria. There is an equipment closet near the playground exit approximately 9′ x 5′.	Karen Isaacson

09.19.17.05	**SUMMER/VACATION PROGRAM**
	In addition to the extended day program the town also offers extended year program. These summer enrichment programs run for a period of four weeks, Monday-Thursday. Program offerings vary from year to year since they are based off of proposals submitted by teachers. These program offerings are available to any child who is a resident of Shrewsbury even if they do not attend Shrewsbury public schools. The following information on the location and program offering was supplied by Karen since the meeting:
	• Floral
	  o Summer Enrichment (4 weeks) - 340 students
	  o Elementary special ed (6 weeks) - 80 students
	• Sherwood -
	  o Middle School Enrichment (4 weeks) - 200 students
	  o Middle & HS special ed (6 weeks) - 80 students
	• Coolidge
	  o English Language Education and Reading programs (5 weeks) - 80 students
	  o Parks and Rec also runs a summer program on the Coolidge fields and playground. They only use the building when it rains. (enrollment unknown, not school operated)
	  o Kindergarten transition (1 week) - one classroom
	• Beal
	  o English Language Education - (3 weeks) 11 students
	  o Kindergarten transition (1 week) - one or two classrooms?
	• Spring
	  o Kindergarten transition (1 week) one classroom
		LPA

MEMO OF PROGRAMMING MEETING
EXTENDED DAY & YEAR PROGRAMS

19 September 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	• Paton ○ Kindergarten transition (1 week) one classroom Unlike the extended day programs, the summer enrichment programs utilize 100% of the schools common and academic spaces. Therefore, air conditioning is needed throughout the school. The town also offers enrichment programs during both February and April vacations. Given the popularity/demand of these programs, the town anticipates offering them on an annual basis.	
09.19.17.06	**SUMMER PROGRAM VEHICLE REQUIREMENTS** The town anticipates that the summer enrichment programs would be moved to the new school allowing them to offer the programs to more students. This would bring a significant amount of vehicular traffic to the site during the summer since almost all the students are brought to the school by their parents. The vehicular traffic due to parent pick-up/drop-off to the site during the normal school year is anticipated to high also given the design enrollment. The amount of vehicular traffic will need to be closely studied, considered, and designed for when assessing alternative sites for the Beal Early Childhood Center.	LPA
09.19.17.07	**MEALS** Food/Snack service during the extended day program is limited to a prepared snacks that a distributed via portable coolers/storage. During Summer Enrichment programs, students bring their own lunches. This allows these programs to operate without the need for food service staff.	LPA
09.19.17.08	**PROGRAM ENROLLMENT** The group talked about anticipated students and staff for the extended day program in particular since it has the highest demand and operates only in the shared common spaces. The town stated that an enrollment of 250 students with 25-60 staff [Special Education 1:1 variable] would be conservative estimate for a school of this size. Summer program would be close to current Floral enrollment.	LPA
09.19.17.09	**SPS CURRICULUM DESCRIPTION** Given how strong and highly sought after these programs are for the district it is imperative that these extended learning programs be included in the town's Educational Philosophy Statement.	Amy Clouter

Memo by: Sean Brennan, LPA

cc: Attendees

Sean Brennan

From: Karen Isaacson <kisaacson@shrewsbury.k12.ma.us>
Sent: Thursday, September 21, 2017 11:09 AM
To: Katie Crockett
Cc: pcollins@shrewsbury.k12.ma.us; Chris Girardi; Sean Brennan
Subject: Re: Extended Day Program Agenda - Beal School

I think the total amount of storage will depend on the configuration and the tolerance for having cabinets within the cafeteria vs. in a separate area.

Sherwood's current 430 sf contains two large rolling cabinets, a ping pong table, a book shelf, and a ball cart that get wheeled in and out of the cafeteria every day. It also contains the milk cooler and two huge file cabinets that don't fit in my office.

At Floral, there are the two cabinets and milk cooler stored permanently in the cafeteria so their storage area can be smaller. Floral's total combined storage space is about 250 sf (two closets, and the footprint of the two cabinets and milk cooler). This is adequate (barely) for the 120 students we serve there.

I expect the new building will need closer to 400 sf, depending on how it's configured. The grade level configuration could impact my thinking on storage. The K & 1 students at Beal require different kinds of equipment than the older students. We have more toys for younger students (dollhouses, vehicles, dramatic play etc.) and those take up a lot more space, whereas older students have more board games and craft supplies which can be stored more compactly.

We discussed separate storage in the gym for extended day equipment, and ideally that space would be large enough to contain a rolling cart that could be wheeled outside each day.

In terms of office space, there are two different things to consider.
The Site Coordinator requires a desk, file cabinet and phone, and that can be incorporated into a storage area, or faculty dining room, or other shared space.

We briefly mentioned the possibility of moving my office from Sherwood to this building.
I currently have a 9'x9' office that I share with my full time assistant. It barely contains our two desks, file cabinets and small table. As mentioned, we have to keep additional records in the storage closet, and space is so cramped it's hard to meet with parents or extended day staff.
If we are considering placing the administrative office at this building, this would be additional square footage to what I've mentioned above and ideally it would be bigger than 9'x9'

I'm very flexible on scheduling time at Floral. I could do any afternoon between now and 10/6, or we can schedule something for after 10/16. The program operates from 3:15-6:00PM.

Karen Isaacson
Director of Extended Learning
Shrewsbury Public Schools
kisaacson@shrewsbury.k12.ma.us
508-841-8727

On Sep 20, 2017, at 11:48 AM, Katie Crockett <KCrockett@lamoureuxpagano.com> wrote:

Karen-

Thanks for getting this information to us so quickly – it is all quite helpful.

Regarding the storage, please clarify if the Sherwood model would be the best (combined storage/office area @430 sf) vs. the Floral St. storage @ 180sf (with the assumption that an office space would be developed elsewhere).

Also, please confirm a good day/time to check out the Floral Street site when we might be able to meet you there.

Appreciate all your attention to this,

Katie

Kathryn Crockett, AIA, LEED AP
Executive Vice President

<image014.png>

Lamoureux Pagano Associates
108 Grove Street, Suite 300
Worcester, MA 01605
Tel. 508-752-2831
Fax 508-757-7769
www.lamoureuxpagano.com

From: Karen Isaacson [mailto:kisaacson@shrewsbury.k12.ma.us]
Sent: Wednesday, September 20, 2017 10:57 AM
To: Katie Crockett <KCrockett@lamoureuxpagano.com>
Cc: pcollins@shrewsbury.k12.ma.us; Chris Girardi <cgirardi@shrewsbury.k12.ma.us>; Sean Brennan <SBrennan@lamoureuxpagano.com>
Subject: Re: Extended Day Program Agenda - Beal School

Hi Katie and Sean,

It was a pleasure meeting you yesterday. Thanks for taking the time to learn about the various extended learning programs in Shrewsbury.

Here's some follow-up information per your request.

Summer usage across the district in 2017:

- Floral
    - Summer Enrichment (4 weeks) - 340 students

    - Elementary special ed (6 weeks) - 80 students
- Sherwood -
    - Middle School Enrichment (4 weeks) - 200 students
    - Middle & HS special ed (6 weeks) - 80 students
- Coolidge
    - English Language Education and Reading programs (5 weeks) - 80 students
    - Parks and Rec also runs a summer program on the Coolidge fields and playground. They only use the building when it rains. (enrollment unknown, not school operated)
    - Kindergarten transition (1 week) - one classroom
- Beal
    - English Language Education - (3 weeks) 11 students
    - Kindergarten transition (1 week) - one or two classrooms?
- Spring
    - Kindergarten transition (1 week) one classroom
- Paton
    - Kindergarten transition (1 week) one classroom

Extended Day traffic:

I analyzed the sign-out sheets at both Floral and Sherwood (each of these programs have 110-120 students.)
There are never more than 10 students being signed out in any given 5 minute period - typically it's 5 or fewer. According to the site coordinators, it's rare that there would be more than 6 parked cars at a time.

Extended Day storage:
At Sherwood, the storage area outside the cafeteria is approximately 48' x 9'. The space includes a desk for the site coordinator and electrical outlets, but no phone and no direct computer connection (lap top connects via wifi)

At Floral, there is a storage/office area off of the cafeteria approximately 15' x 12' (no phone, no computer). There are two large storage cabinets stored within the cafeteria. There is an equipment closet near the playground exit approximately 9' x 5'

Photos are attached.

Let me know if there's any other information that would be helpful, and feel free to contact me if you want to walk through the Floral extended day space.

Regards,
Karen

Karen Isaacson
Director of Extended Learning
Shrewsbury Public Schools
kisaacson@shrewsbury.k12.ma.us
508-841-8727

<image015.jpg><image003.jpg><image016.jpg><image017.jpg><image018.jpg><image010.jpg><image011.jpg><image019.jpg>

On Sep 18, 2017, at 10:29 AM, Katie Crockett <KCrockett@lamoureuxpagano.com> wrote:

See attached for agenda for tomorrow morning's Extended Day program meeting.

Feel free to contact me if you have any questions/comments.

Katie

Kathryn Crockett, AIA, LEED AP
Executive Vice President

<image001.png>

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<1717 Extended Day Program Agenda.doc>

Shrewsbury Public Schools

Extended School Care Enrollment 2017-2018

AFTER SCHOOL - by grade

Grade	Enrolled	Waitlist
K	49	30
1	83	42
2	74	33
3	75	32
4	79	32
Total	360	169

AFTER SCHOOL - by school

School	Enrolled	Waitlist
Beal	47	30
Coolidge	69	42
Floral	113	33
Paton	66	32
Spring	65	32
Total	360	169

BEFORE SCHOOL - by grade

Grade	Enrolled
K	35
1	48
2	47
3	49
4	50
Total	229

BEFORE SCHOOL - by school

School	Enrolled
Beal	25
Coolidge	54
Floral	61
Paton	50
Spring	39
Total	229

All numbers listed as FTEs

Extended Day enrollment as percentage of total district enrollment (K-4)

After School	15%
Before School	10%
After School + Waitlist	25%

26 September 2017

AGENDA Transportation Program

Beal Project Brief Overview

I. GENERAL
- 750 student K-1– or 790 student K-4 school, 250 anticipated students in Extended Day program, full school in summer
- Transportation funding mechanism

II. VEHICLES
- Full size busses: total number, maximum queue
- SPED busses: total number, maximum queue
- Parent cars: total number, maximum queue
- Service
- Quantity/ideal location of drop off areas

III. PARKING
- Staff
- Visitors
- After School
- Summer Program
- Assembly
- Community Use

IV. PEDESTRIANS/BICYCLES

V. EMERGENCY VEHICLE ACCESS

VI. LOCATION CONSIDERATIONS
- Route efficiency
- K-1 vs. K-4 factors
- Access

VII. OTHER

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

MEMO OF PROGRAMMING MEETING TRANSPORTATION

26 September 2017

ATTENDANCE: Steve Rocco, Safety, Security, & Transportation
Sean Lyonnais, AA Transport Representative
Patrick Collins, SPS, Asst. Superintendent for Finance & Operations
Chris Girardi, Principal, Beal Early Childhood Center
Kathryn Crockett, LPA
Sean Brennan, LPA

ITEM:	DESCRIPTION:	RESPONSIBILITY:
09.26.17.01	**GENERAL OVERVIEW OF BUSSING SYSTEM** Pat Collins gave and overview of the system busing system is structured. The current system is categorized as a three-tier system where each bus is utilized for transportation to each of the major grade levels High School, Middle School, and Elementary School. This is accomplished by staggered start/end times for the different grade levels with the high school starting/ending first followed by the middles schools, then the elementary schools. A comprehensive chart of pick-up/drop-off times for each bus was provided at the meeting along with the Frequently asked questions sections from the town's website, Transportation Presentation given last year date "September 21, 2016, and current percentages of walkers, bus riders, parent pick-up/drop-off, and after school enrollment"; see attached. Sean Lyonnais also provided a report with current ridership of the buses at each elementary school and their respective route set reports; see attached.	
09.26.17.02	**POLICY & FEES** Patrick Collins explained that the town currently adheres to the state's minimum requirements that all K-6 students that live 2 miles away from the school they are enrolled in qualify for free busing, along with any students who qualify for free/reduced lunch and have special transportation as part of their Individualized Education Program. Students who do not qualify for free busing can sign up for busing for a fee. All students are required to sign up for busing each year during an open enrollment period starting in April and running through June for the coming year. The portal for signing up is able to identify if students qualify for free busing or are required to pay a fee and this child's information is relayed to AA transportation where busing routes are generated. Overall the district see's approximately 50% of families who qualify for free busing opting out and 50% of those who do not qualify opting in. LPA requested that the town provide a breakdown of the students opting-in/out for each of the elementary schools to get a better picture of what can be anticipated at the new elementary school.	Patrick Collins

MEMO OF PROGRAMMING MEETING TRANSPORTATION

26 September 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	It is not anticipated that the policy to adhere to minimum state requirements for bussing will change in the near future.	
09.26.17.03	**ANTICPATED TRANSPORTATION** The group discussed anticipated load for each mode of transportation and came to consensus on the following figures: • Buses: 12-15 including special education [2-3 Buses] • Cars: ±15% of the students is the average among the other elementary schools (110 total cars for 750 students, 120 for 790 students) • Walkers: ±7% is the average among the other elementary schools (50 walkers for 750 students, 55 for 790 students). All agreed once a site is selected some of these percentages may need to be weighted differently based on the sites location.	LPA
09.26.17.04	**SITE CIRCULATION** Town and representatives agreed that it would be desirable to the vehicular transportation on separate loops; one for full size buses [10-12], one for 2/3 sized special education buses[2-3], and one for parent pick-up/drop-off [±120]. The town provided information on Floral Elementary in regards to visitor parking and reported that the school sees ±50 visitors a day with the average at one time being around ±10. Also at Floral there are several students who are considered "walkers" who's children are ultimately picked up by their parents a street over from their respective schools. This will need to be taken into consideration when calculating the amount of parent vehicular traffic to the site. Town stated that deliveries for food service and supplies is not an issue at any of their current school and does not anticipated it being one at the new school cause the vendors schedule around pick-up/drop-off times. Parents are not allowed to drop off students early so queuing of cars occurs at both pick-up and drop-off times. However drop-off does not take as long as pick-up since parents do not need to be identified prior to releasing the children to them. Where these pick-up and drop offs occur in relationship to the building layout will be look at more carefully as the program is developed.	LPA
09.26.17.05	**PARKING** The town stated that Floral has a staff of 75-100 on any given day. Patrick Collins stated he would take a closer look at the anticipated staffing requirements and get back to us with a better figures for both the regular school staff, extended day staff, and the summer enrichment staff. There is little overlap between extended day staff and the regular staff since most of the extended day staff are also regular day staff.	Patrick Collins

MEMO OF PROGRAMMING MEETING TRANSPORTATION

26 September 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	School events, i.e. celebrations, parents night, etc., are typically kept to no more than two grades at a time. With this in mind the potential parking needed to accommodate two grades at the new school would be in the range of ±316 cars.	

Memo by: Sean Brennan, LPA
cc: Attendees

Current Elementary Transportation

2017-2018 School Year

Beal 2.0 Transportation Brain Storm

Elementary Overview:

Beal Early Childhood Center (See Maps Attached)

- AM Buses
  - Estimated Total Beal students 265 / Riders 186
    - KF = 128 / 93 Riders
    - KA = 75 / 37 Riders
    - 1st = 62 / 56 Riders
  - 70% Riders
  - 9 Buses Currently / 2 Special Education Buses
  - Average 20 students per bus (ranging from 6 – 32)
  - Average 30 – 35 minutes (ranging 16 to 36 minutes)

- Special Education Bus @ 10:45AM
  - 2 Riders – 2 on reduced day schedule
    - 1 wheelchair / 1 walk on

- Mid-Day
  - KA OUT @ 11:50 AM - (3 Buses)
  - Estimated KA students 75 / 37 Riders
    - 49% Ride
  - KP IN @ 12:45 PM – (3 Buses)
  - Estimated KP students 91 / 66 Riders
    - 73% Ride

- PM Buses
  - Estimated Total Beal students 281 / Riders 215
    - KF = 128 / 93 Riders
    - KP = 91 / 66 Riders
    - 1st = 62 / 56 Riders
  - 77% Riders
  - 7 Buses Currently / 2 Special Education Buses
  - Average 28 students per bus (ranging from 9 – 52)
  - Average 35 – 40 minutes (ranging 23 – 42 minutes)

Floral Street School (See Maps Attached)

- Buses
  - Estimated Total Floral students 808 / 595 Riders
    - 1st Graders = 140 / 97
    - 2nd through 4 = 668 / 498
  - 75% Riders
  - 11 Buses Currently / 1 Special Education Buses combined with Beal
  - Average 53 students per bus (ranging from 48 – 66)
  - Average 24 - 30 minutes (15 to 39 minutes)

Paton School (See Maps Attached)

- Buses
  - Estimated Total Paton students 358 / 215 Riders
    - K = 20 / 15 riders
    - 1st Graders = 62 / 38 Riders
    - 2nd through 4 = 276 / 162 Riders
  - 60% Riders
  - 5 Buses Currently / 1 Special Education Buses
  - Average 40 students per bus (ranging from 30 – 54)
  - Average 24 minutes (ranging from 16 - 31 minutes)

Spring Street School (See Maps Attached)

- Buses
  - Estimated Total Floral students 367 / 234 Riders
    - KF = 41 / 21 Riders
    - 1st Graders = 74 / 49 Riders
    - 2nd through 4 = 252 / 164 Riders
  - 64% Riders
  - 6 Buses Currently / 1 Special Education Buses
  - Average 38 students per bus (ranging from 32 - 45)
  - Average 25 minutes (ranging from 21 to 28 minutes)

Coolidge School (See Maps Attached)

- Buses
  - Estimated Total Floral students 444 / 269 Riders
    - KF = 43 / 28 riders
    - 1st Graders = 119 / 77 Riders
    - 2nd through 4 = 281 / 164 Riders
  - 61% Riders
  - 5 Buses Currently / 2 Special Education Buses
  - Average 51 students per bus (ranging from 35 – 62)
  - Average 30 – 22 minutes (ranging from 19 to 25 minutes)

Route Set Report for BEAL + W KA IN

Student File: **2017-2018 STUDENTS** Routing Scheme: **2017-2018 ROUTES** Days: **MTWHF**

Delay Times (sec)
Stop Delay: **15**
Student Delay: **5**

Route Load Parameters
Desired: **1**
Maximum: **1**

Route Time Parameters (min)
Desired: **40**
Maximum: **40**

Routed Students: **178**

Waiting Requests: **0**

Route Count: **9**

CRITERIA

INFO Field: BUS PRIV

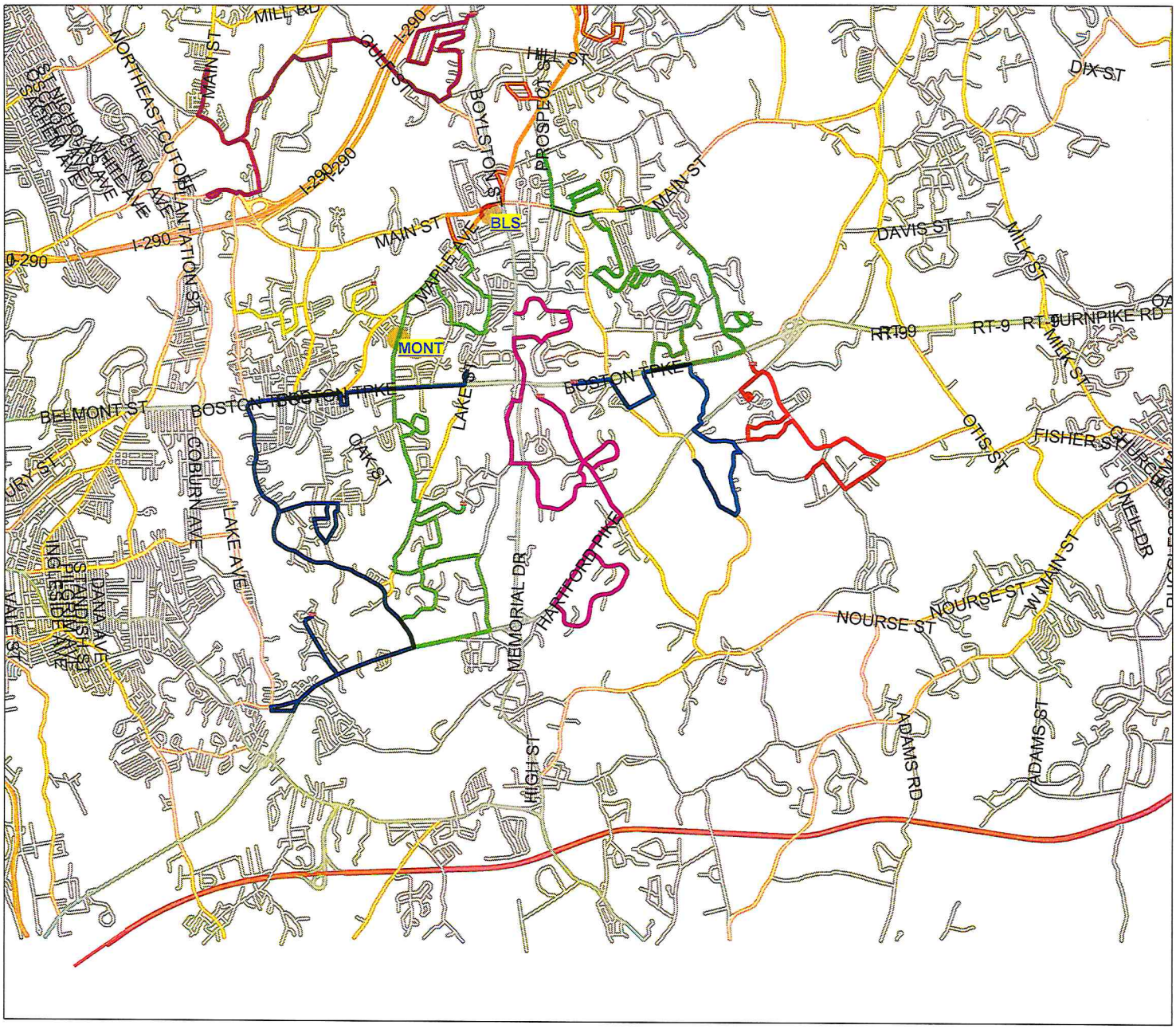
School	Program	Grades	Direction	Time	INFO Value	Boundary	Exclude
2710005 - BEAL SCHOO	0 - PUBLIC	PFD-PFI	Inbound	9:00 AM	Y		
2710005 - BEAL SCHOO	0 - PUBLIC	KF-KF	Inbound	9:00 AM	Y		
2710005 - BEAL SCHOO	0 - PUBLIC	KA-KA	Inbound	9:00 AM	Y		
2710005 - BEAL SCHOO	0 - PUBLIC	01-01	Inbound	9:00 AM	Y		

ROUTES

Route #	Description	Bus #	Load	Anchor Location	Anchor Time	Total Distance (mi)	Total Time	Days
9BA		9	17	BLS	8:57 AM	8.90	36:05	MTWHF
10BA		10	25	BLS	8:55 AM	8.38	35:02	MTWHF
17BA		17	32	BLS	8:56 AM	6.51	21:30	MTWHF
20BA		20	23	BLS	8:58 AM	10.18	32:26	MTWHF
31BA		31	13	BLS	8:58 AM	9.37	30:35	MTWHF
33BA		33	22	BLS	8:55 AM	9.08	32:58	MTWHF
39BA		39	30	BLS	8:57 AM	7.72	28:48	MTWHF
40BA		40	6	BLS	8:53 AM	4.51	16:15	MTWHF
#41		41	10	BLS	8:42 AM	6.43	20:35	MTWHF

10/6/2017 10:19:59 AM

Shrewsbury Public Schools
Route Map



Route Set Report for BEAL + W KA OUT

Student File: **2017-2018 STUDENTS** Routing Scheme: **2017-2018 ROUTES** Days: **MTWHF**

Delay Times (sec)
Stop Delay: **15**
Student Delay: **5**

Route Load Parameters
Desired: **1**
Maximum: **1**

Route Time Parameters (min)
Desired: **35**
Maximum: **35**

Routed Students: **38**

Waiting Requests: **0**

Route Count: **3**

CRITERIA

INFO Field: BUS PRIV

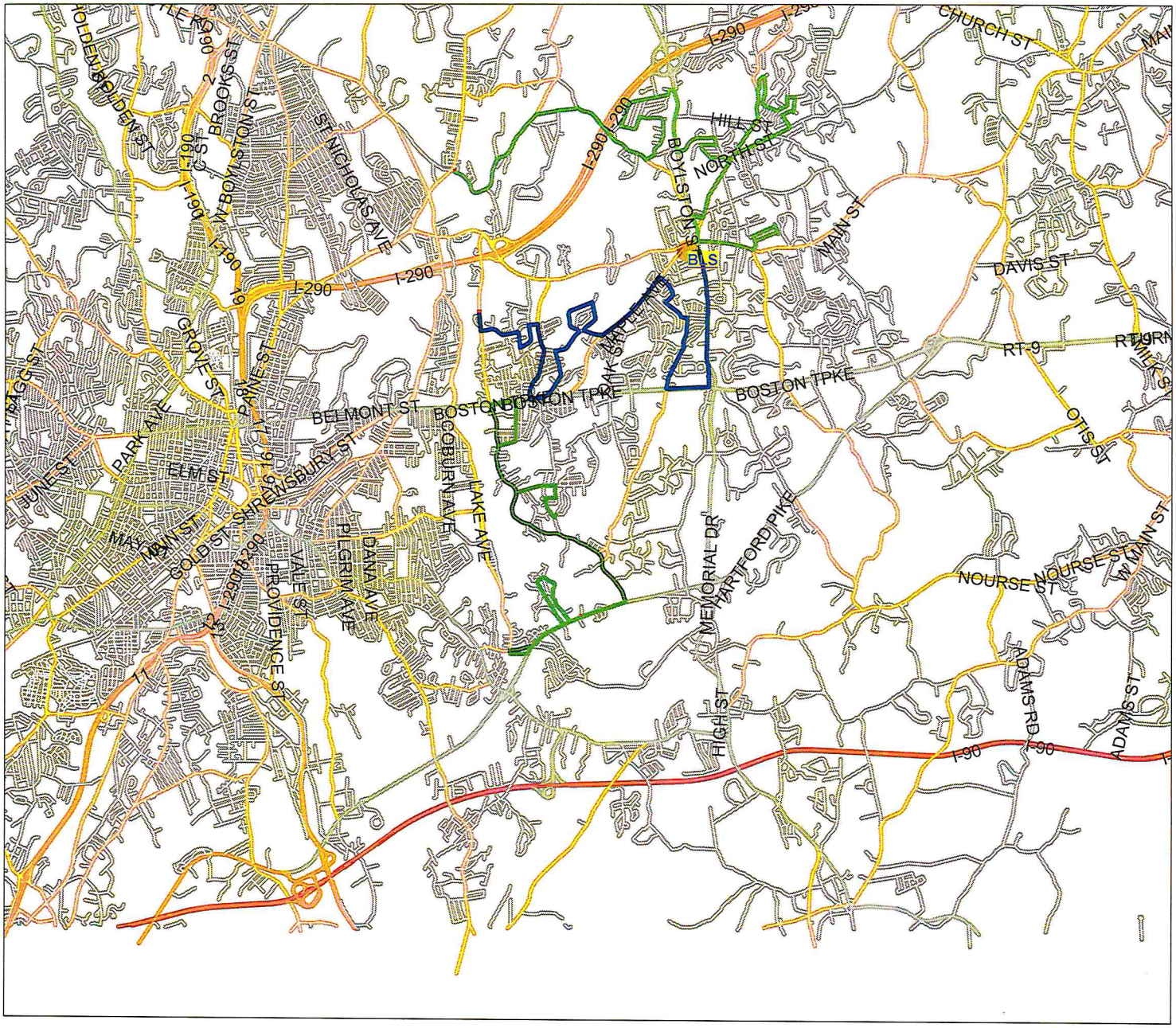
School	Program	Grades	Direction	Time	INFO Value	Boundary	Exclude
2710005 - BEAL SCHOO	0 - PUBLIC	KA-KA	Outbound	12:00 PM	Y		

ROUTES

Route #	Description	Bus #	Load	Anchor Location	Anchor Time	Total Distance (mi)	Total Time	Days
8K		8	10	BLS	11:55 AM	11.34	35:34	MTWHF
9K		9	16	BLS	12:06 PM	11.50	35:44	MTWHF
30K		30	12	BLS	11:55 AM	7.78	28:41	MTWHF

10/6/2017 10:20:55 AM

Shrewsbury Public Schools
Route Map



Route Set Report for BEAL + W KP IN

Student File: **2017-2018 STUDENTS** Routing Scheme: **2017-2018 ROUTES** Days: **MTWHF**

Delay Times (sec)		Route Load Parameters		Route Time Parameters (min)	
Stop Delay:	**15**	Desired:	**1**	Desired:	**36**
Student Delay:	**5**	Maximum:	**1**	Maximum:	**36**
Routed Students:	**66**	Waiting Requests:	**1**	Route Count:	**3**

CRITERIA

INFO Field: BUS PRIV

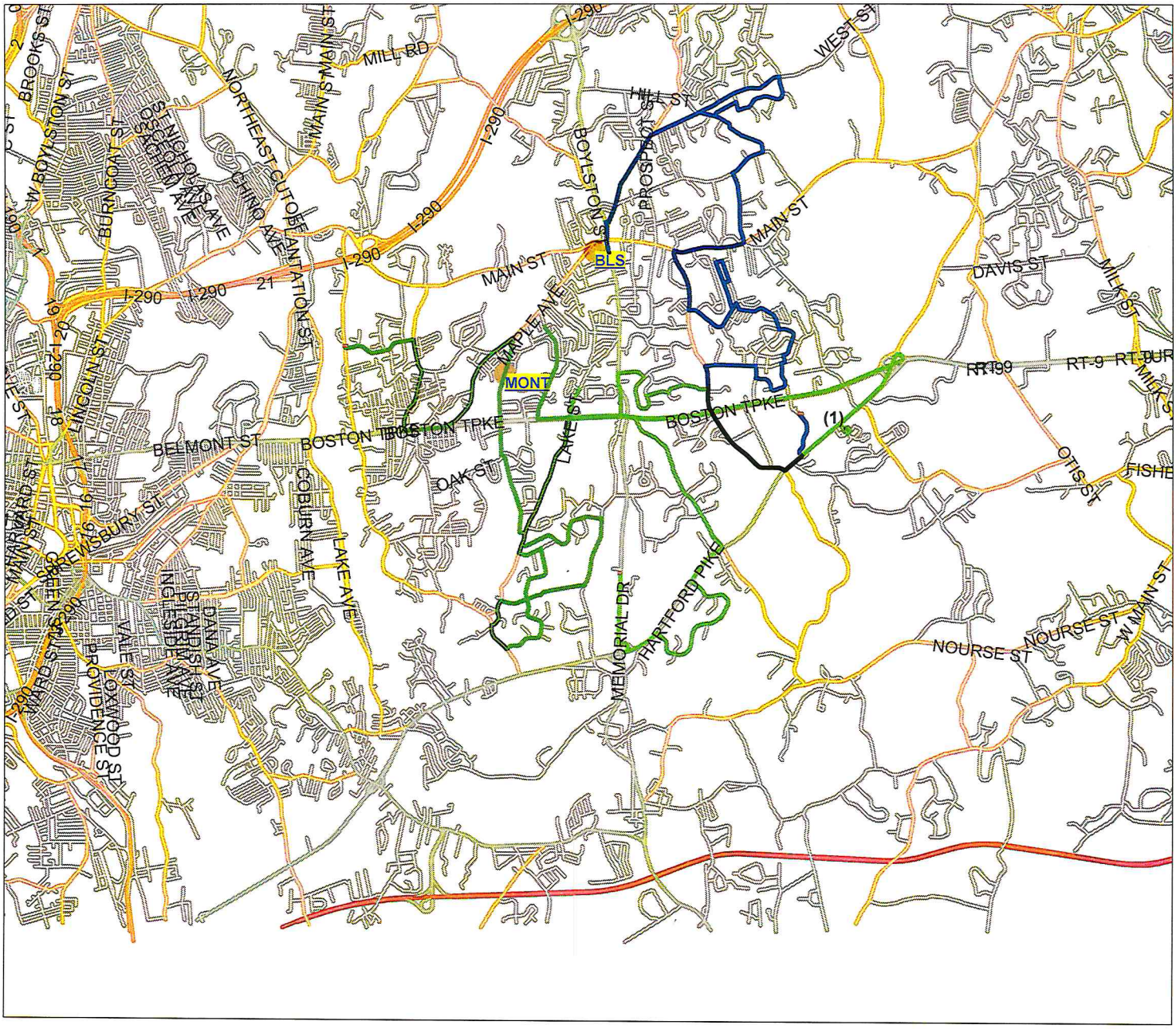
School	Program	Grades	Direction	Time	INFO Value	Boundary	Exclude
2710005 - BEAL SCHOO	0 - PUBLIC	KP-01	Inbound	12:40 PM	Y		
2710005 - BEAL SCHOO	1 - SPECIAL NEEDS	KP-KP	Inbound	12:40 PM			

ROUTES

Route #	Description	Bus #	Load	Anchor Location	Anchor Time	Total Distance (mi)	Total Time	Days
1K		1	20	BLS	12:47 PM	14.53	40:12	MTWHF
31K		31	14	BLS	12:50 PM	11.12	41:23	MTWHF
39K		39	32	BLS	12:41 PM	10.84	40:33	MTWHF

10/6/2017 10:22:28 AM

Shrewsbury Public Schools
Route Map



Route Set Report for BEAL + W KP OUT

Student File: **2017-2018 STUDENTS** Routing Scheme: **2017-2018 ROUTES** Days: **MTWHF**

Delay Times (sec)
Stop Delay: **15**
Student Delay: **5**

Route Load Parameters
Desired: **1**
Maximum: **1**

Route Time Parameters (min)
Desired: **45**
Maximum: **45**

Routed Students: **197**

Waiting Requests: **1**

Route Count: **7**

CRITERIA

INFO Field: BUS PRIV

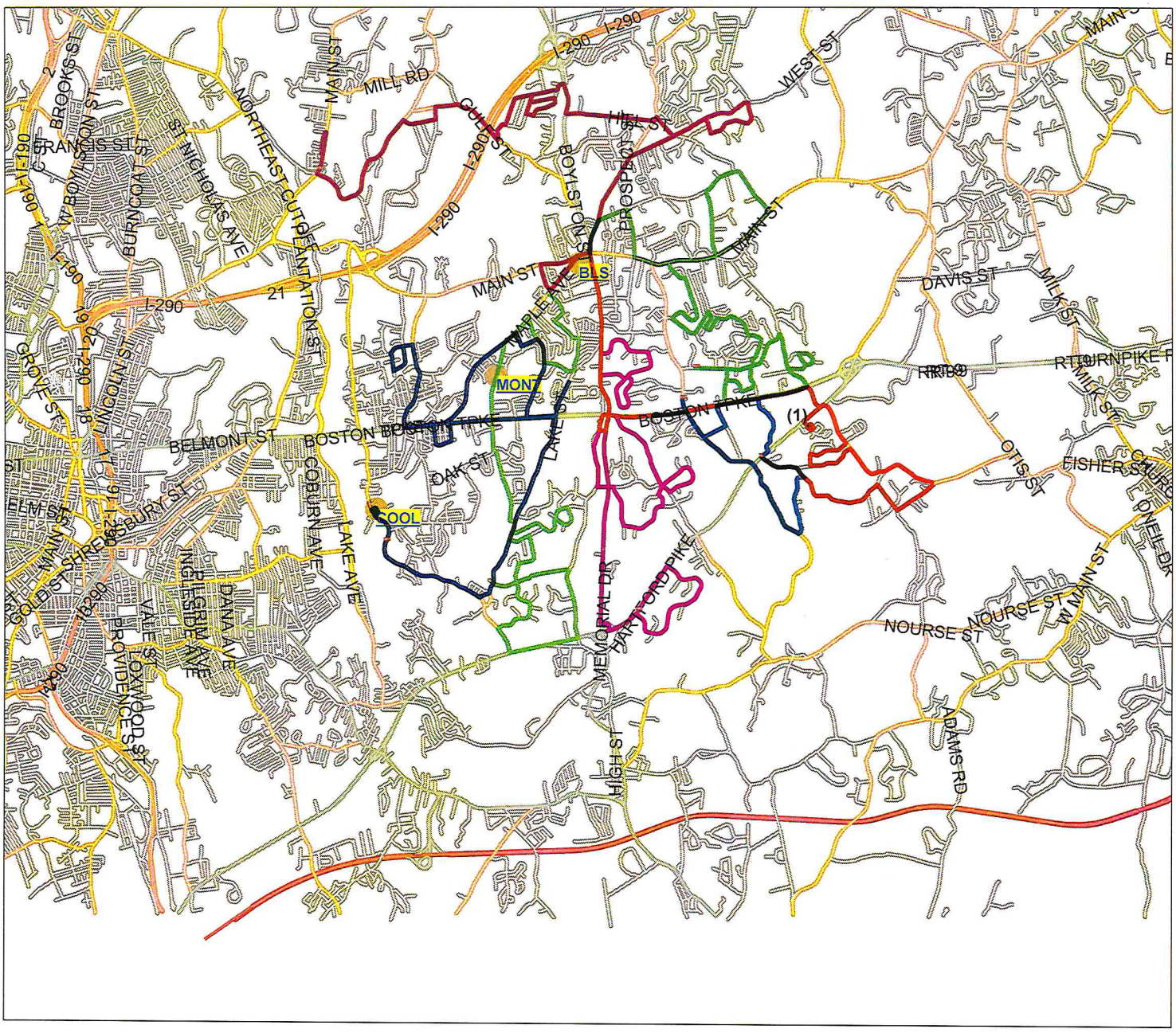
School	Program	Grades	Direction	Time	INFO Value	Boundary	Exclude
2710005 - BEAL SCHOO	0 - PUBLIC	KF-KF	Outbound	3:40 PM	Y		
2710005 - BEAL SCHOO	0 - PUBLIC	KP-KP	Outbound	3:40 PM	Y		
2710005 - BEAL SCHOO	0 - PUBLIC	01-01	Outbound	3:40 PM	Y		

ROUTES

Route #	Description	Bus #	Load	Anchor Location	Anchor Time	Total Distance (mi)	Total Time	Days
9BP		9	19	BLS	3:47 PM	8.89	37:12	MTWHF
10BP		10	37	BLS	3:36 PM	10.25	41:19	MTWHF
17BP		17	52	BLS	3:35 PM	6.97	23:43	MTWHF
20BP		20	20	BLS	3:41 PM	12.05	39:47	MTWHF
31BP		31	9	BLS	3:45 PM	10.10	32:38	MTWHF
33BP		33	24	BLS	3:45 PM	10.38	37:50	MTWHF
BO		39	36	BLS	3:37 PM	8.60	28:31	MTWHF

10/6/2017 10:23:30 AM

Shrewsbury Public Schools
Route Map



Route Set Report for FLORAL IN

Student File: **2017-2018 STUDENTS** Routing Scheme: **2017-2018 ROUTES** Days: **MTWHF**

Delay Times (sec)
Stop Delay: **15**
Student Delay: **5**

Route Load Parameters
Desired: **1**
Maximum: **1**

Route Time Parameters (min)
Desired: **30**
Maximum: **30**

Routed Students: **584**

Waiting Requests: **4**

Route Count: **11**

CRITERIA

INFO Field: BUS PRIV

School	Program	Grades	Direction	Time	INFO Value	Boundary	Exclude
2710020 - FLORAL ST	0 - PUBLIC	01-04	Inbound	8:45 AM	Y		

ROUTES

Route #	Description	Bus #	Load	Anchor Location	Anchor Time	Total Distance (mi)	Total Time	Days
1FA		1	51	FLOR	8:43 AM	7.44	34:14	MTWHF
2FA		2	49	FLOR	8:38 AM	2.12	10:17	MTWHF
6FA		6	49	FLOR	8:43 AM	3.39	17:53	MTWHF
11FA		11	66	FLOR	8:37 AM	9.14	28:35	MTWHF
22FA		22	48	FLOR	8:33 AM	4.29	16:56	MTWHF
24FA		24	48	FLOR	8:43 AM	5.79	22:56	MTWHF
43FA		43	50	FLOR	8:32 AM	4.74	20:02	MTWHF
51FA		51	63	FLOR	8:40 AM	4.37	15:40	MTWHF
52FA		52	58	FLOR	8:44 AM	6.99	28:13	MTWHF
53FA		53	53	FLOR	8:43 AM	9.81	39:22	MTWHF
54FA		54	49	FLOR	8:44 AM	8.87	28:24	MTWHF

Route Set Report for FLORAL OUT

Student File: **2017-2018 STUDENTS** Routing Scheme: **2017-2018 ROUTES** Days: **MTWHF**

Delay Times (sec)
Stop Delay: **15**
Student Delay: **5**

Route Load Parameters
Desired: **1**
Maximum: **1**

Route Time Parameters (min)
Desired: **30**
Maximum: **45**

Routed Students: **555**

Waiting Requests: **4**

Route Count: **11**

CRITERIA

INFO Field: BUS PRIV

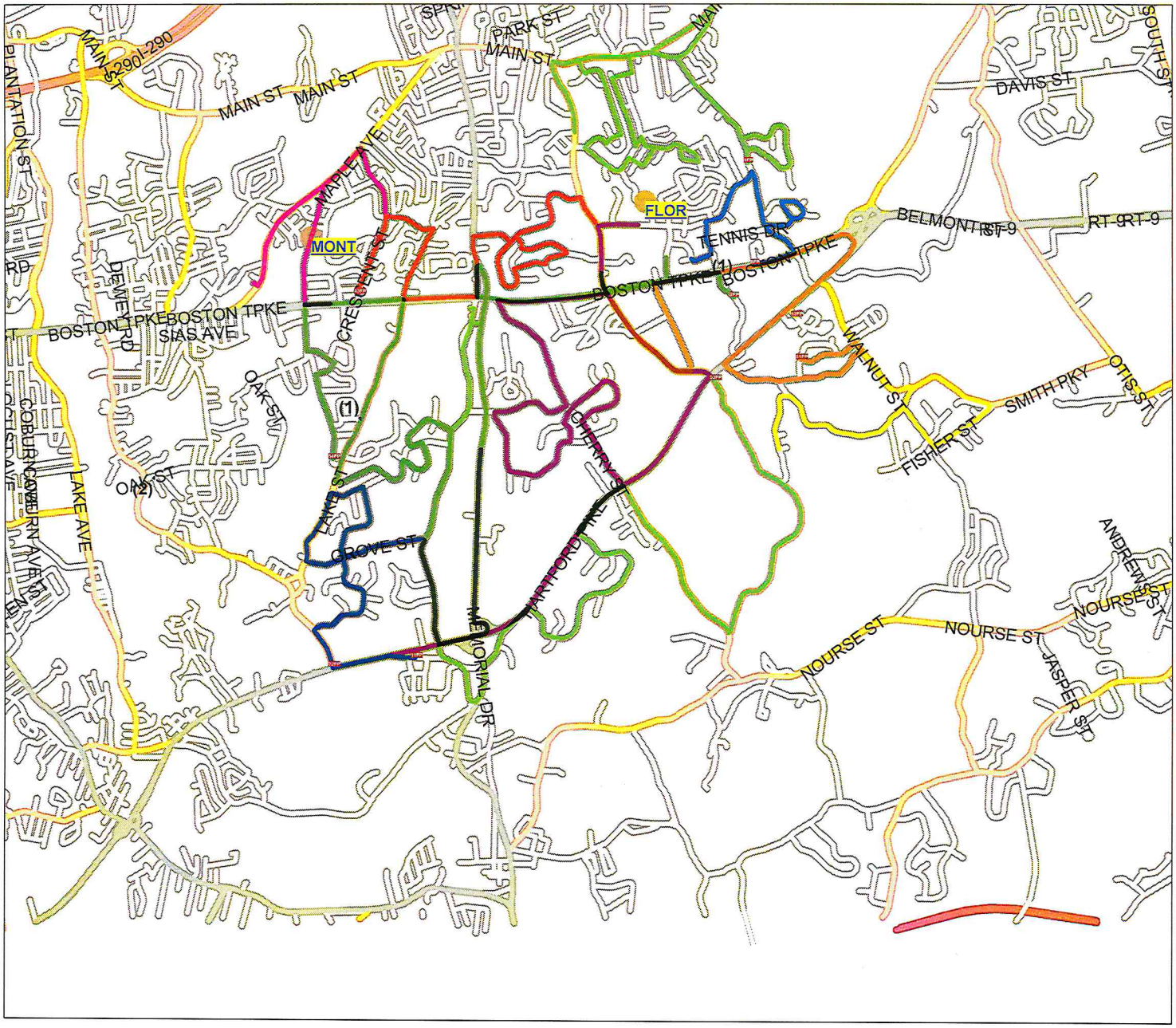
School	Program	Grades	Direction	Time	INFO Value	Boundary	Exclude
2710020 - FLORAL ST	0 - PUBLIC	01-04	Outbound	3:25 PM	Y		

ROUTES

Route #	Description	Bus #	Load	Anchor Location	Anchor Time	Total Distance (mi)	Total Time	Days
1FP		1	50	FLOR	3:23 PM	7.53	29:23	MTWHF
2FP		2	51	FLOR	3:28 PM	1.63	9:12	MTWHF
6FP		6	44	FLOR	3:29 PM	2.66	14:59	MTWHF
11FP		11	56	FLOR	3:30 PM	7.78	31:40	MTWHF
22FP		22	54	FLOR	3:33 PM	9.70	30:50	MTWHF
24FP		24	42	FLOR	3:38 PM	5.42	20:57	MTWHF
43FP		43	48	FLOR	3:25 PM	4.48	19:29	MTWHF
51FP		51	64	FLOR	3:35 PM	5.39	19:47	MTWHF
52FP		52	52	FLOR	3:25 PM	6.17	25:43	MTWHF
53FP		53	48	FLOR	3:35 PM	9.58	38:39	MTWHF
54FP		54	46	FLOR	3:24 PM	9.18	28:33	MTWHF

10/6/2017 10:25:00 AM

Shrewsbury Public Schools
Route Map



Route Set Report for PATON IN

Student File: **2017-2018 STUDENTS**

Routing Scheme: **2017-2018 ROUTES**

Days: **MTWHF**

Delay Times (sec)
- Stop Delay: **15**
- Student Delay: **5**

Route Load Parameters
- Desired: **1**
- Maximum: **1**

Route Time Parameters (min)
- Desired: **45**
- Maximum: **45**

Routed Students: **198**

Waiting Requests: **2**

Route Count: **5**

CRITERIA

INFO Field: BUS PRIV

School	Program	Grades	Direction	Time	INFO Value	Boundary	Exclude
2710025 - PATON ES	0 - PUBLIC	KF-KF	Inbound	8:45 AM	Y		
2710025 - PATON ES	0 - PUBLIC	01-04	Inbound	8:45 AM	Y		

ROUTES

Route #	Description	Bus #	Load	Anchor Location	Anchor Time	Total Distance (mi)	Total Time	Days
7PA		7	30	PAT	8:35 AM	4.17	16:49	MTWHF
8PA		8	38	PAT	8:44 AM	6.21	25:06	MTWHF
30PA		30	54	PAT	8:34 AM	5.10	23:41	MTWHF
32PA		32	33	PAT	8:51 AM	7.99	31:02	MTWHF
55PA		55	43	PAT	8:42 AM	5.39	26:10	MTWHF

Route Set Report for PATON OUT

Student File: **2017-2018 STUDENTS** Routing Scheme: **2017-2018 ROUTES** Days: **MTWHF**

Delay Times (sec)
Stop Delay: **15**
Student Delay: **5**

Route Load Parameters
Desired: **1**
Maximum: **1**

Route Time Parameters (min)
Desired: **45**
Maximum: **45**

Routed Students: **200**

Waiting Requests: **2**

Route Count: **5**

CRITERIA

INFO Field: BUS PRIV

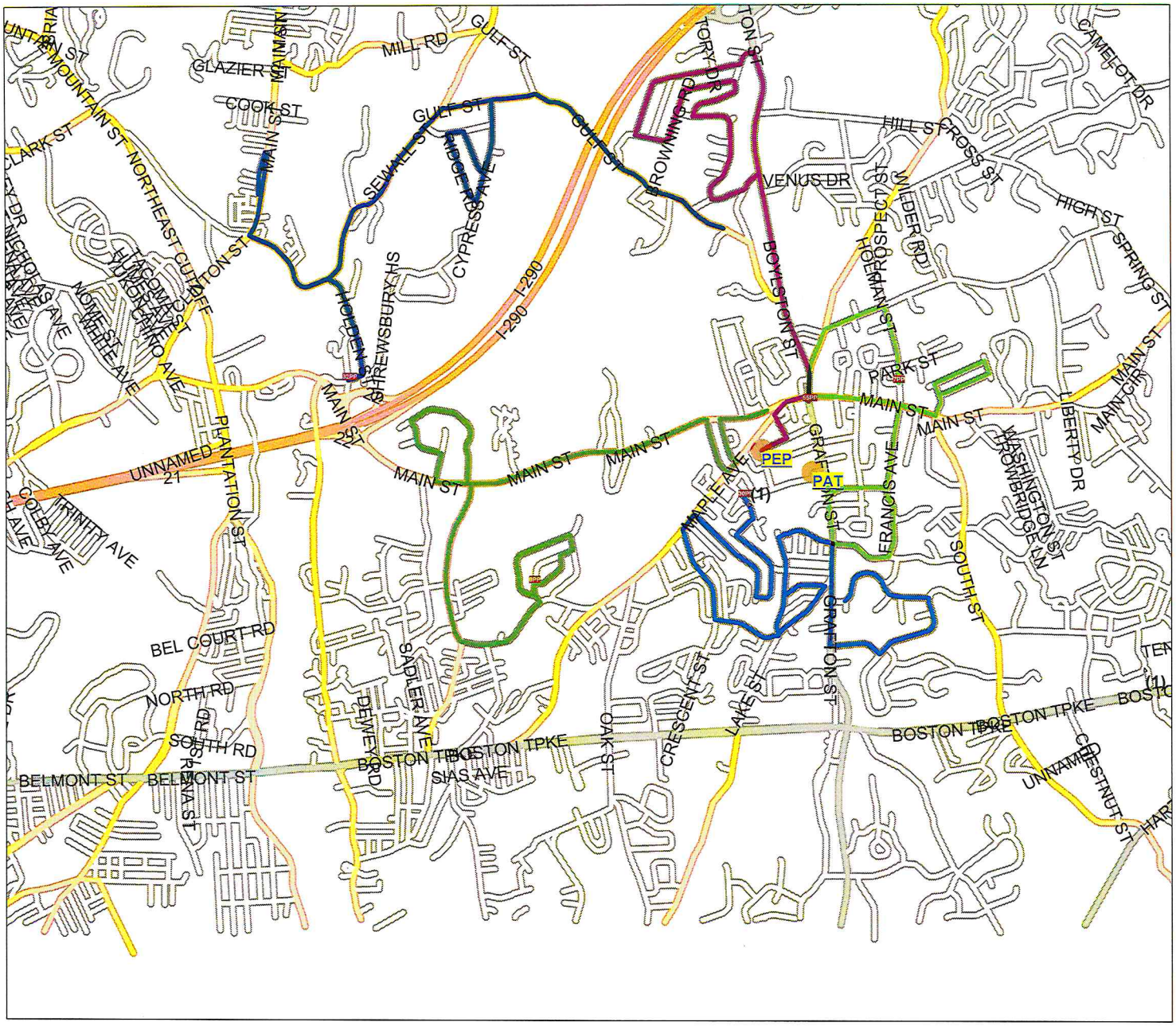
School	Program	Grades	Direction	Time	INFO Value	Boundary	Exclude
2710025 - PATON ES	0 - PUBLIC	KF-KF	Outbound	3:25 PM	Y		
2710025 - PATON ES	0 - PUBLIC	01-04	Outbound	3:25 PM	Y		

ROUTES

Route #	Description	Bus #	Load	Anchor Location	Anchor Time	Total Distance (mi)	Total Time	Days
7PP		7	31	PAT	3:25 PM	5.07	25:22	MTWHF
8PP		8	35	PAT	3:32 PM	5.97	22:37	MTWHF
30PP		30	56	PAT	3:15 PM	5.24	23:33	MTWHF
32PP		32	34	PAT	3:35 PM	6.89	28:13	MTWHF
55PP		55	44	PAT	3:17 PM	5.46	27:09	MTWHF

10/6/2017 10:26:13 AM

Shrewsbury Public Schools
Route Map



Route Set Report for SPRING IN

Student File: **2017-2018 STUDENTS** Routing Scheme: **2017-2018 ROUTES** Days: **MTWHF**

Delay Times (sec)
Stop Delay: **15**
Student Delay: **5**

Route Load Parameters
Desired: **1**
Maximum: **1**

Route Time Parameters (min)
Desired: **30**
Maximum: **0**

Routed Students: **225**

Waiting Requests: **1**

Route Count: **6**

CRITERIA

INFO Field: BUS PRIV

School	Program	Grades	Direction	Time	INFO Value	Boundary	Exclude
2710035 - SPRING ST	0 - PUBLIC	KF-KF	Inbound	8:45 AM	Y		
2710035 - SPRING ST	0 - PUBLIC	KA-KA	Inbound	8:45 AM	Y		
2710035 - SPRING ST	0 - PUBLIC	01-04	Inbound	8:45 AM	Y		

ROUTES

Route #	Description	Bus #	Load	Anchor Location	Anchor Time	Total Distance (mi)	Total Time	Days
3SA		3	38	SPNG	8:40 AM	4.73	26:59	MTWHF
4SA		4	45	SPNG	8:44 AM	5.91	28:47	MTWHF
5SA		5	33	SPNG	8:42 AM	4.60	22:00	MTWHF
12SA		12	38	SPNG	8:43 AM	4.14	21:42	MTWHF
14SA		14	37	SPNG	8:44 AM	4.44	24:57	MTWHF
21SA		21	34	SPNG	8:42 AM	4.92	25:03	MTWHF

Route Set Report for SPRING OUT

Student File: **2017-2018 STUDENTS** Routing Scheme: **2017-2018 ROUTES** Days: **MTWHF**

Delay Times (sec)
Stop Delay: **15**
Student Delay: **5**

Route Load Parameters
Desired: **1**
Maximum: **1**

Route Time Parameters (min)
Desired: **30**
Maximum: **45**

Routed Students: **225**

Waiting Requests: **1**

Route Count: **6**

CRITERIA

INFO Field: BUS PRIV

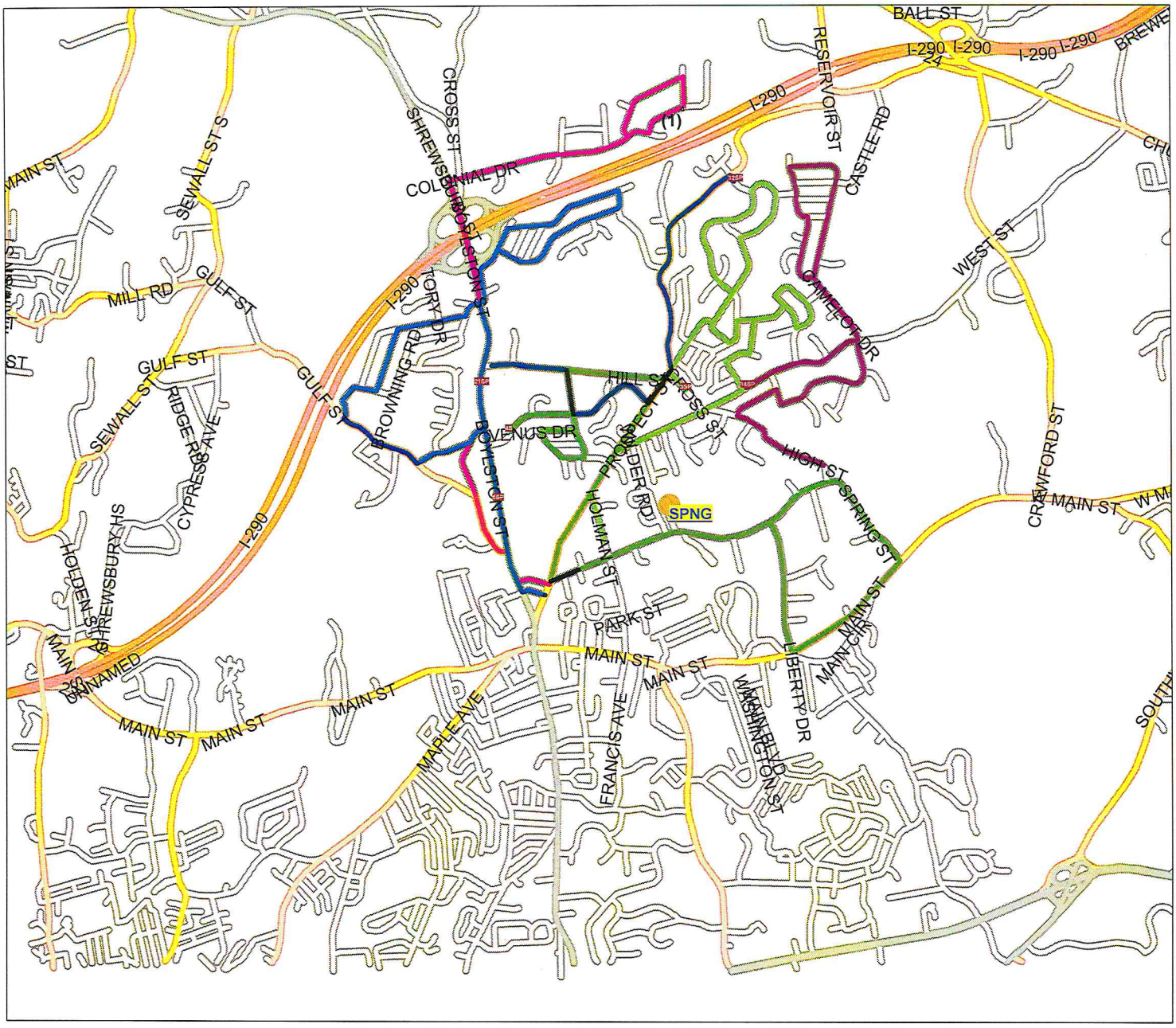
School	Program	Grades	Direction	Time	INFO Value	Boundary	Exclude
2710035 - SPRING ST	0 - PUBLIC	KF-KF	Outbound	3:25 PM	Y		
2710035 - SPRING ST	0 - PUBLIC	KP-KP	Outbound	3:25 PM	Y		
2710035 - SPRING ST	0 - PUBLIC	01-04	Outbound	3:25 PM	Y		

ROUTES

Route #	Description	Bus #	Load	Anchor Location	Anchor Time	Total Distance (mi)	Total Time	Days
3SP		3	40	SPNG	3:36 PM	4.90	28:05	MTWHF
4S		4	43	SPNG	3:25 PM	5.91	28:35	MTWHF
5SP		5	35	SPNG	3:33 PM	5.77	26:47	MTWHF
12SP		12	38	SPNG	3:32 PM	3.81	18:24	MTWHF
14SP		14	35	SPNG	3:27 PM	4.49	24:44	MTWHF
21SP		21	34	SPNG	3:22 PM	5.83	27:03	MTWHF

10/6/2017 10:27:14 AM

Shrewsbury Public Schools
Route Map



Route Set Report for COOLIDGE IN

Student File: **2017-2018 STUDENTS** Routing Scheme: **2017-2018 ROUTES** Days: **MTWHF**

Delay Times (sec)
Stop Delay: **15**
Student Delay: **5**

Route Load Parameters
Desired: **1**
Maximum: **1**

Route Time Parameters (min)
Desired: **45**
Maximum: **45**

Routed Students: **255**

Waiting Requests: **0**

Route Count: **5**

CRITERIA

INFO Field: BUS PRIV

School	Program	Grades	Direction	Time	INFO Value	Boundary	Exclude
2710015 - COOLIDGE E	0 - PUBLIC	KF-04	Inbound	8:45 AM	Y		

ROUTES

Route #	Description	Bus #	Load	Anchor Location	Anchor Time	Total Distance (mi)	Total Time	Days
13CA		13	62	COOL	8:42 AM	5.33	25:16	MTWHF
15CA		15	61	COOL	8:38 AM	5.69	25:33	MTWHF
18CA		18	35	COOL	8:37 AM	4.09	20:39	MTWHF
19CA		19	62	COOL	8:35 AM	4.20	21:43	MTWHF
34CA		34	35	COOL	8:41 AM	4.10	19:43	MTWHF

Route Set Report for COOLIDGE OUT

Student File: **2017-2018 STUDENTS** Routing Scheme: **2017-2018 ROUTES** Days: **MTWHF**

Delay Times (sec)
Stop Delay: **15**
Student Delay: **5**

Route Load Parameters
Desired: **1**
Maximum: **1**

Route Time Parameters (min)
Desired: **45**
Maximum: **45**

Routed Students: **250**

Waiting Requests: **0**

Route Count: **5**

CRITERIA

INFO Field: BUS PRIV

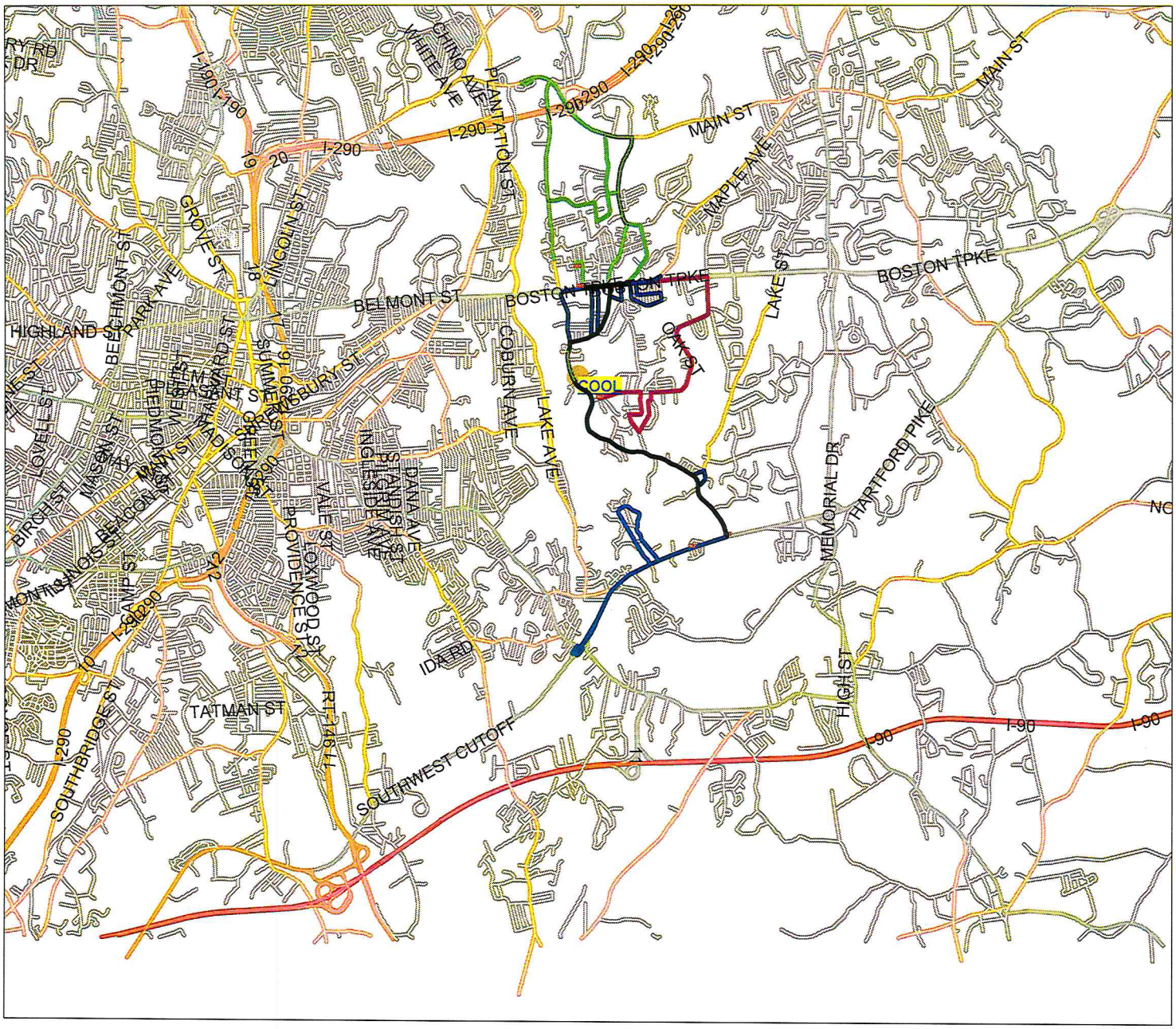
School	Program	Grades	Direction	Time	INFO Value	Boundary	Exclude
2710015 - COOLIDGE E	0 - PUBLIC	KF-04	Outbound	3:25 PM	Y		

ROUTES

Route #	Description	Bus #	Load	Anchor Location	Anchor Time	Total Distance (mi)	Total Time	Days
13CP		13	58	COOL	3:32 PM	5.20	23:56	MTWHF
15CP		15	61	COOL	3:30 PM	7.09	27:12	MTWHF
18CP		18	36	COOL	3:22 PM	6.31	24:10	MTWHF
19CP		19	59	COOL	3:33 PM	3.70	20:23	MTWHF
34CP		34	36	COOL	3:19 PM	4.04	19:50	MTWHF

10/6/2017 10:28:27 AM

Shrewsbury Public Schools
Route Map



	Beal		Coolidge		Floral		Paton		Spring	
Total Enrollment [8/29/17]	310		415		753		343		357	
		%		%		%		%		%
Bus Ride at least once per day	244	79%	268	65%	586	78%	213	62%	235	66%
Walkers	3	1%	24	6%	50	7%	23	7%	30	8%
After School Program	47	15%	69	17%	113	15%	66	19%	65	18%
Parent Pick at end of School [est.]	40	13%	64	15%	65	9%	63	18%	50	14%
	334		425		814		365		380	

Totals	
K-4 Enrollment	2178
Bus Ride at least once per day	
Walkers	
Parent Pick at end of School or 6pm	
Extended School Care	

	Beal	Coolidge	Floral	Paton	Spring
Total Enrollment [8/29/17]	310	415	753	343	357
Number of buses servicing the school	12	7	11	7	6
Total/Buses--Gross--does not represent reality..just a factor for estimating	26	59	68	49	60

Based on this info I'd estimate 12-15 buses servicing a school of 790 on a daily basis.

Shrewsbury Public Schools Transportation Update September 21, 2016

Patrick Collins,
Assistant Superintendent for Finance & Operations

Stephen Rocco,
Transportation, Safety & Security Coordinator

Topics

- Services & Contracted Providers
- Vehicles and Routes
- Contract and Rates
- System Changes: 2016-2017
- Ridership
- State Reimbursements
- FY17 Budget
- Future Considerations

Services & Contracted Providers

Service	Vendor	Notes
Regular day [aka Home to School]	AA Transportation	►Shrewsbury Public Schools ►Assabet Valley Reg. Technical H.S. ►St. Mary, St. John's, Al-Hamra, Montessori
Out of District-Special Education	Assabet Valley Collaborative	►Private school placements throughout the state.
Athletic Competitions	AA Transportation	►High school and limited middle school events
Homeless Students	Varied	►Includes busing students sheltering in other towns back to SPS and students sheltering in Shrewsbury to other public school systems
Summer School	AA Transportation	For special education students with transportation in their IEP
Field Trips ["yellow bus"]	AA Transportation	Coach buses contracted separately for long trips or special events

Vehicles and Routes ["Regular Day Busing"]

- Vehicles
  - 41 , 77 seat buses
    - 38 for public & private schools
    - 3 for Assabet Valley Reg. Tech. H.S.
  - 6, 34 seat half-buses 3 with wheel chair lift
  - All equipped with two video cameras
  - All equipped with GPS devices with live monitoring of location, speed, stops
  - All equipped with two-way radios
  - All drivers also have cell-phone capacity in event of emergency
  - All model year 2011 or newer

- 248 Total Routes
  - Morning= 118
  - Mid-day= 14
  - Afternoon= 116

Bus Utilization Chart

MORNING SCHEDULE

		Private			
	Assabet	St. Mary's	St. John's	Private Schools:	Spring
	7:49/7:50am	7:45/8:00am	7:50/8:05	Montessori 8:30	Paton
				Al Hamra 8:15	Floral
	High Sch.	Oak Middle	Sherwood	Parker Road (8:30)	Coolidge
	7:15/7:35am	7:45/8:00am	7:50/8:00am	Lil. Colonials (8:15)	Beal/Beal West
					9:00/9:15am
BUS #					
1	SHS	OAK MIDDLE	SHERWOOD		FLORAL
2	SHS	OAK MIDDLE	SHERWOOD		FLORAL
3	SHS	OAK MIDDLE	SHERWOOD		SPRING
4	SHS	OAK MIDDLE	SHERWOOD		BEAL
5	SHS	OAK MIDDLE	SHERWOOD		SPRING
6	SHS	OAK MIDDLE	SHERWOOD		FLORAL
7	SHS	OAK MIDDLE	SHERWOOD		PATON
8	SHS	OAK MIDDLE	SHERWOOD		PATON
9	SHS	OAK MIDDLE	SHERWOOD		BEAL
10		OAK MIDDLE	SHERWOOD		BEAL
11	SHS	OAK MIDDLE	SHERWOOD		FLORAL
12	SHS	OAK MIDDLE	SHERWOOD		SPRING
13		OAK MIDDLE	SHERWOOD		COOLIDGE
14	SHS	OAK MIDDLE	SHERWOOD		SPRING
15		OAK MIDDLE	SHERWOOD		COOLIDGE
17		OAK MIDDLE	SHERWOOD		BEAL
18	SHS	OAK MIDDLE	SHERWOOD		COOLIDGE
19	SHS	OAK MIDDLE	SHERWOOD		COOLIDGE
20	SHS	OAK MIDDLE	SHERWOOD		BEAL
21	SHS	OAK MIDDLE	SHERWOOD		SPRING
22	SHS	OAK MIDDLE	SHERWOOD		FLORAL
24	SHS	OAK MIDDLE	SHERWOOD		FLORAL
30		OAK MIDDLE	SHERWOOD		PATON
31		ST MARY'S / ST JOHN			BEAL
32	SHS	OAK MIDDLE	SHERWOOD		PATON
33	SHS	OAK MIDDLE	SHERWOOD		BEAL
34		ST MARY'S / ST JOHN			COOLIDGE
35		OAK MIDDLE SPED	SHERWOOD SPED	PATON / SPRING /BEAL SPED	
36	SHS SPED	OAK MIDDLE SPED	SHERWOOD SPED	PARKER ROAD (EAST)	COOLIDGE SPED
37	AL-HAMRA		PARKER ROAD PRESCHOOL		SPRING SPED
38		PARKER ROAD PRESCHOOL			FLORAL SPED
39		OAK MIDDLE	SHERWOOD		BEAL
40	SHS	OAK MIDDLE	SHERWOOD		BEAL
41		ST MARY'S / ST JOHN			MONTESSORI
43		OAK MIDDLE	SHERWOOD		FLORAL
51	SHS	OAK MIDDLE	SHERWOOD		FLORAL
52	SHS	OAK MIDDLE	SHERWOOD		FLORAL
53	SHS	OAK MIDDLE	SHERWOOD		FLORAL
54		OAK MIDDLE	SHERWOOD		FLORAL
55		OAK MIDDLE	SHERWOOD		PATON
60	AL-HAMRA			MONTESSORI	
61		ST MARY'S / ST JOHN		PARKER ROAD (EAST)	COOLIDGE SPED
62		ST MARY'S / ST JOHN		MONTESSORI	
63		EVOLUTION PROGRAM			PATON SPED
AV-1	ASSABET VALLEY				
AV-2	ASSABET VALLEY				
AV-3	ASSABET VALLEY				

MID-DAY SCHEDULE

	Dismissal	Dismissal		Arrival
	Lil C	BEAL 11:50		BEAL 12:45
	10:45am		Arrival	
	Parker AM		Parker pm	
	11:00am		12:00	
BUS #				
1				
2				
3				
4				
5				
6				
7		KA-OUT		
8		KA-OUT		
9			KP-IN	
10				
11				
12		KA-OUT		
13				
14				
15				
17				
18				
19				
20			KP-IN	
21				
22				
24				
30				
31				
32				
33				
34				
35	PARKER ROAD (EAST) OUT		PARKER ROAD (WC) IN	
36	PARKER ROAD OUT		PARKER ROAD IN	
37	PARKER ROAD OUT		PARKER ROAD IN	
38			PARKER ROAD (EAST) IN	
39				
40				
41				
43				
51				
52				
53			KP-IN	
54				
55				
60				
61			PARKER ROAD IN	
62				
63				
AV-1				
AV-2				
AV-2				

AFTERNOON SCHEDULE

			Parker Road	Spring, Paton
			Parker Road East	Coolidge, Floral
			2:30	3:15pm
		St. John's / St. Mary's		Private Schools:
	High Sch.	both 2:20pm	Assabet	Montessori 3:30p
	Lil Col.		2:42pm	Al Hamra 3:30pm
	2:00/2:10pm	Oak Middle	Sherwood	Beal/Beal West
		2:35pm	2:35pm	3:30pm
BUS #				
1	SHS	OAK MIDDLE	SHERWOOD	FLORAL
2	SHS	OAK MIDDLE	SHERWOOD	FLORAL
3	SHS	OAK MIDDLE	SHERWOOD	SPRING
4	SHS	OAK MIDDLE	SHERWOOD	BEAL
5	SHS	OAK MIDDLE	SHERWOOD	SPRING
6	SHS	OAK MIDDLE	SHERWOOD	FLORAL
7	SHS	OAK MIDDLE	SHERWOOD	PATON
8	SHS	OAK MIDDLE	SHERWOOD	PATON
9	SHS	OAK MIDDLE	SHERWOOD	BEAL
10		OAK MIDDLE	SHERWOOD	BEAL
11	SHS	OAK MIDDLE	SHERWOOD	FLORAL
12	SHS	OAK MIDDLE	SHERWOOD	SPRING
13		OAK MIDDLE	SHERWOOD	COOLIDGE
14	SHS	OAK MIDDLE	SHERWOOD	SPRING
15		OAK MIDDLE	SHERWOOD	COOLIDGE
17		OAK MIDDLE	SHERWOOD	BEAL
18	SHS	OAK MIDDLE	SHERWOOD	COOLIDGE
19	SHS	OAK MIDDLE	SHERWOOD	COOLIDGE
20	SHS	OAK MIDDLE	SHERWOOD	BEAL
21	SHS	OAK MIDDLE	SHERWOOD	SPRING
22	SHS	OAK MIDDLE	SHERWOOD	FLORAL
24	SHS	OAK MIDDLE	SHERWOOD	FLORAL
30		OAK MIDDLE	SHERWOOD	PATON
31		ST MARY'S / ST JOHN		BEAL
32	SHS	OAK MIDDLE	SHERWOOD	PATON
33	SHS	OAK MIDDLE	SHERWOOD	BEAL
34		ST MARY'S / ST JOHN		COOLIDGE
35		PARKER RD EAST / OAK & SHERWOOD MIDDLE SCHOOL SPED		SPRING / BEAL SPED
36	SHS SPED	PARKER RD EAST / OAK & SHERWOOD MIDDLE SCHOOL SPED		COOLIDGE SPED
37		PARKER ROAD		SPRING SPED
38		PARKER ROAD		FLORAL SPED
39		OAK MIDDLE	SHERWOOD	BEAL
40	SHS	OAK MIDDLE	SHERWOOD	AL-HAMRA
41		ST MARY'S / ST JOHN		MONTESSORI
43		OAK MIDDLE	SHERWOOD	FLORAL
51	SHS	OAK MIDDLE	SHERWOOD	FLORAL
52	SHS	OAK MIDDLE	SHERWOOD	FLORAL
53	SHS	OAK MIDDLE	SHERWOOD	FLORAL
54		OAK MIDDLE	SHERWOOD	FLORAL
55		OAK MIDDLE	SHERWOOD	PATON
60		ST MARY'S / ST JOHN		AL-HAMRA ACADEMY
61		EVOLUTION		COOLIDGE SPED
62		ST MARY'S / ST JOHN		MONTESSORI
63		EVOLUTION		PATON SPED
AV-1	ASSABET			
AV-2	ASSABET			
AV-2	ASSABET			

Contract and Rates

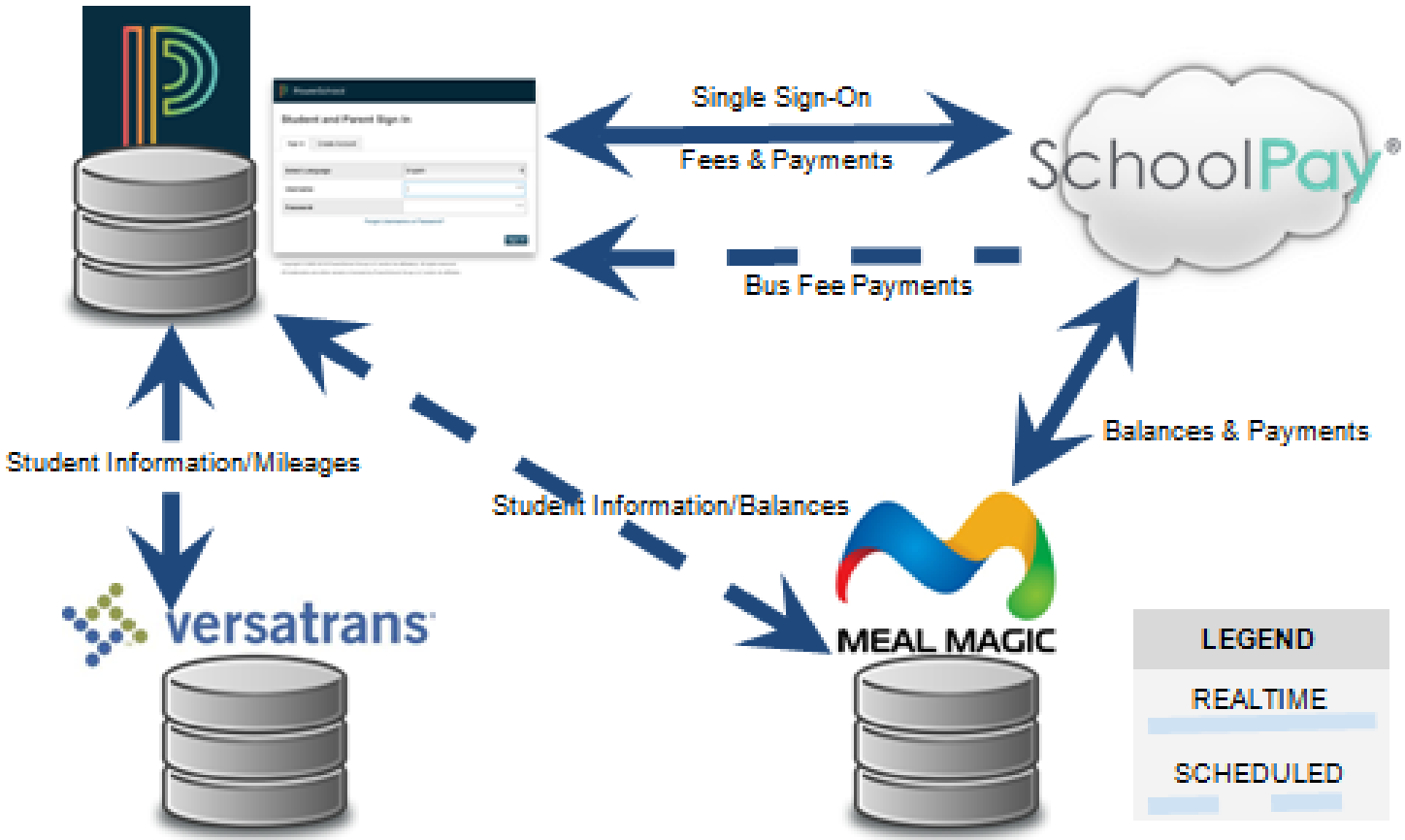
- Service is bid per MGL Chapter 30B
- Current five-year contract with AA Transportation effective FY14-FY18
- FY17 Rate is $330.14 per bus per day which equates to $59,425 per bus per school year. Contract allows for annual increase tied to the Consumer Price Index
- Most buses operate on 3-tier system with a high school, middle school, and elementary school route each morning and afternoon. Some buses also have a mid-day commitment for half-day kindergarten or preschool.

System Changes: 2016-2017

- Registration and payment systems were re-engineered to incorporate online payment option and automated "approvals" upon completion of payment, if required
- The registration deadline was changed from June 1st to June 30th with the hope that fewer would have to pay a late fee
- All special education students with specialized transportation were automatically registered obviating the need for parents to do this
- Assabet and private school registrations shifted from a paper-based system to an online *Googleform* and emailed bus information instead of a mailed letter

Online Payment System

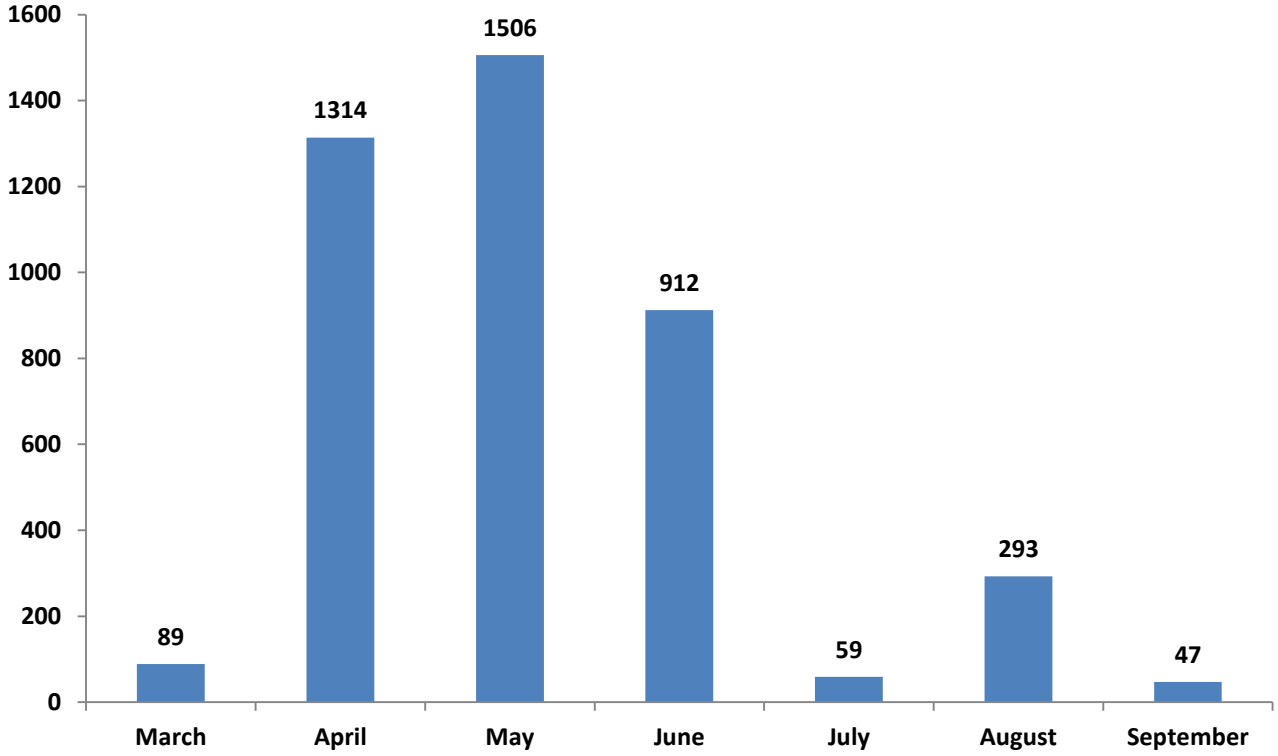
Systems Design Flow Chart



Ridership

School District	Riders
Shrewsbury Public Schools	4,361
Assabet Valley Regional Tech. H.S.	118
St. John's High School	52
St. Mary School	54
Al Hamra Academy	49
Montessori School	14
Out of District Students	50
Total Daily Riders	**4,698**

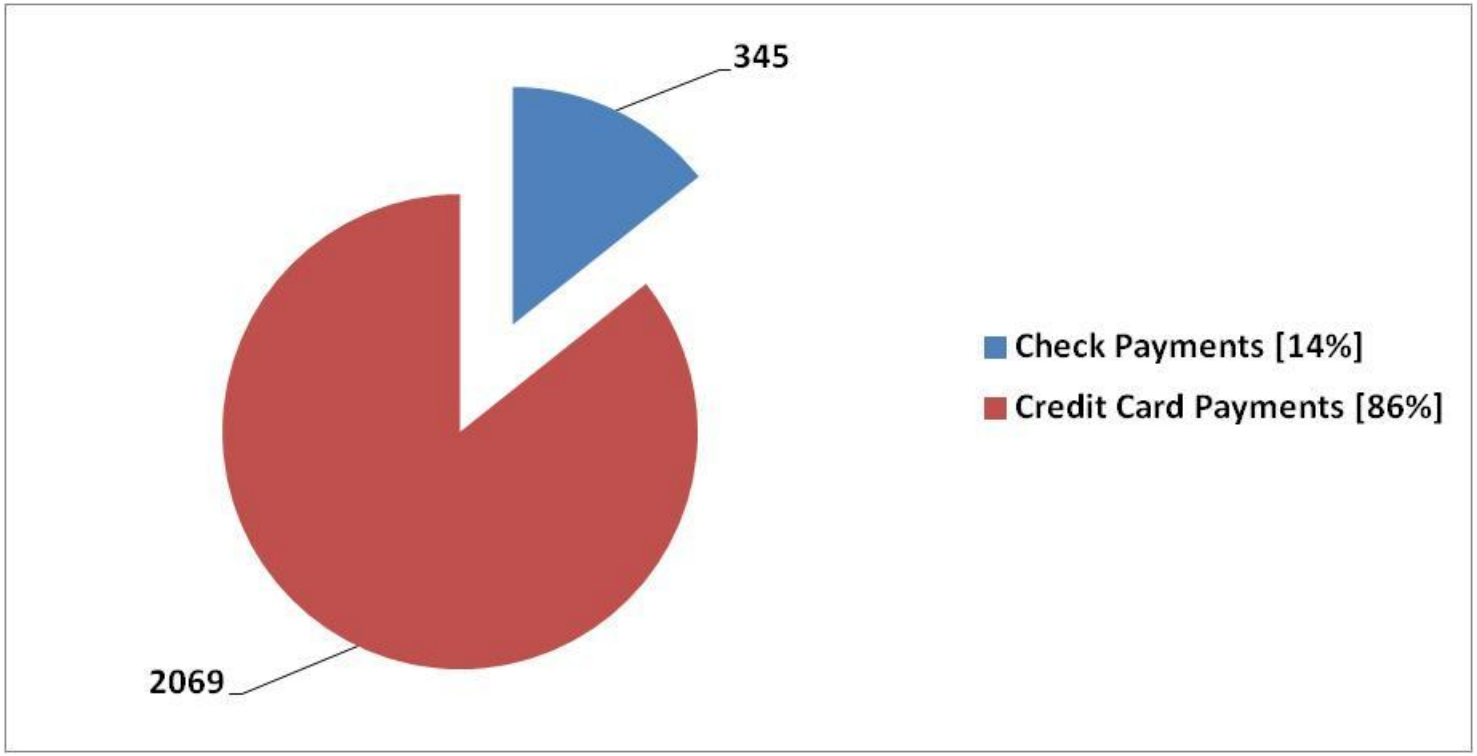
S.P.S. Registrations by Month



We launched “pilot program” in March to test new systems.
Public rollout of registration and payment began in April.

So far, 157 families paid a late registration fee. The remainder of July through September registrations are new students to the district.

Payment Method



Strong preference of parents to pay by credit card.

Average Cost v. Fee

- 4,499 students currently registered in district, private schools, and Assabet
- Total budget of $3,083,289
- Average cost=$656/student
- Fee=$275/student

FY17 Budget

Transportation Service	FY17 All Budgets	Notes
Regular Day	$ 2,267,130	$1.6M Oper. Budget and $645K funded via fee revenue
Special Education: Out of District & In-District	$ 1,433,715	Funded via special education grant
Bus Monitors	$ 277,611	Operating Budget
Vocational	$ 181,967	Operating Budget
Athletics	$ 110,000	Operating Budget
Special Education: Summer	$ 65,724	Operating Budget
Homeless	$ 45,000	Operating Budget
High School Clubs/Events [Speech & Debate]	$ 10,000	Operating Budget
Music Performances/Events	$ 4,570	Operating Budget
Transportation Services- All Funds	**$ 4,395,717**	

State Reimbursements

Type	FY14	FY15	FY16	FY17 est.
Out of District-Vocational	■ $89,646 ■ 86.93%	■$0 ■0%	■$95,274 ■54.6%	■$14,053 ■7.8%
Homeless	■$28,341 ■50.83%	■$7,456 ■34.4%	■$16,113 ■36.1%	■$5,051 ■31%

Notes:

1. These are general fund receipts and not at disposal or available for direct use by School Dept.
2. Variability from year to year makes it difficult to budget for this revenue.
3. Timing of state budget approval in July does not allow for precise budgeting at municipal level in May.

Fee Based Program

- Operating an efficient operation with fixed routes and stops
- Increased expectations for service when some parents pay

- These two things sometimes conflict

Future Considerations for Operational Improvement

- Assessment of “start-of-school” issues that re-occur each year and may be preventable
- Review eligibility and service levels for in-district special education transportation
- Review impact and viability of Bus Change Request Process
- Refine Assabet and private school registrations and communications to current and prospective parents

2 October 2017

AGENDA Community Use Program

Beal Project Brief Overview

I. GENERAL
- For 750 – 790 student elementary school, full school program during the summer
- Division of responsibilities for Community Use: Parks and Recreation, School Dept., Others
- Outside organization use of building/fields

II. COMMUNITY PROGRAMS @ PUBLIC SCHOOLS
- Town Recreational (inside building)
- Town Recreational (site)
- Volunteer Organizations (PTO/Scout Groups/Fundraisers/Training, etc.)
- Rental Organizations
- Projected use at a school of proposed size
- Confirm site location factors (if any)

III. FACILITIES REQUIRED
- Gymnasium size
  - Locker rooms
  - Storage (confirm if separate required)
- Meeting space (Common room, Conference Room, etc.)
- Activity space (Art, Music, etc.)
- Materials Storage (non-gym related)
- Office
- Confirm after hours areas for access/support
- Outdoor play areas
- Athletic fields: confirm Parks and Recs. Field needs/requirements including types of fields, storage, spectator/dugout development, etc.
- Communications: separate or linked to school district
- Toilet Rooms for fields

IV. SITE FEATURES
- Parent pick up/drop off: quantity, process
- Vans/busses
- Parking
- Emergency access

V. OTHER

MEMO OF PROGRAMMING MEETING
COMMUNITY USE

02 October 2017

ATTENDANCE: Angela Cornacchioli Snell, Director of Parks, Recreation, & Cemetery
Donna Manzolli, Shrewsbury Public School Facility Rentals
Patrick Collins, SPS, Asst. Superintendent for Finance & Operations
Chris Girardi, Principal, Beal Early Childhood Center
Kathryn Crockett, LPA
Sean Brennan, LPA

ITEM:	DESCRIPTION:	RESPONSIBILITY:
10.02.17.01	**GENERAL OVERVIEW OF COMMUNITY USE** Town reported that all rental spaces are available to each individual school first for their own use, then the Parks & Recreation Department second, and then to community groups. During the school year rental spaces are typically available Mon.-Fri. 6:00p.m. – 10:00p.m. and 8:00 a.m.-10:00p.m. on Sat. and Sun. to groups other than the school itself. During the summer the rental space availability is dictated by the extended year programs and Parks and Rec. events. The most highly sought after rental space is currently the indoor basketball courts. Documents & Calendars showing the various groups were provided; see attached	
10.02.17.02	**MSBA POLICIES & TOWN NEEDS** LPA informed the group that the MSBA space summary template anticipates a "Cafetorium" configuration, Cafeteria and stage. LPA has had success in the past on other projects, including Sherwood Middle, in achieving a Gymnasium and stage configuration. The MSBA space summary template allocates 6,000 sq.ft. for the gymnasium in an elementary school. The group discussed the pro's/con's of the two configurations and it became clear that the best option as far as community and after hours use would be to go with a cafetorium configuration. This will give the district the greatest amount of flexibility in utilizing/renting out the spaces. Given the demand for gymnasium space, the town stated that it is desirable to have a gymnasium similar in size to the Floral Street School gymnasium [7,000sq.ft.], the court is slightly smaller than a high school court measuring in at 50' x 84'. Depending on the number of physical education teaching stations needed for a school of this size will also be a factor in its overall size. Sherwood Middle School's gymnasium was larger than the space summary template allocation due to a greater number of teaching station being needed to serve the school. MSBA recently issued a policy memo on Gymnasiums and the following is an excerpt: "The district may choose to build a gymnasium and related spaces in excess of MSBA guidelines, but in no event shall the gymnasium itself exceed 12,000 nsf. The MSBA will participate in a gymnasium up to no more than 6,000 nsf, unless adjusted	LPA

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	by the MSBA to increase teaching stations for enrollment and/or the education plan." LPA to review and report back on the number of teaching stations needed for this school after Physical Education Programming meeting has occurred.	
10.02.17.03	**RENTAL SPACES UTILIZATION** The district strives to limit rentals to the major common spaces: gymnasiums, auditoriums, media centers, cafeterias. They have on occasion rented out other spaces such as computer labs, conference rooms, art rooms, and on the rare occasion general classrooms. Consideration of aligning some of these spaces more closely with the other major common spaces should be considered in the design to allow for lockdown of major academic areas during off hours.	LPA
10.02.17.03	**GYMNASIUM NEEDS** The town stated that storage for the various programs is highly desirable and that the separate community use storage similar to that at Sherwood Middle would serve this school well. Given the high demand and different age groups it is advantageous to have the basketball hoops be adjustable to accommodate the different age groups. Direct access to the exterior and/or the Lobby is highly desirable for after hour use.	LPA
10.02.17.04	**OFF-HOURS & EXTENDED YEAR** There is a need for a greeting station in the lobby to monitor the main entrance and direct people in the right direction. This type of station is implemented and used at other schools in the district and would be beneficial to have it incorporated in the overall design of the lobby.	LPA
10.02.17.05	**OUTDOOR FEATURES** The Parks and Recreation department report that the softball field currently at Beal is highly utilized by town leagues. If this field were to be lost in the re-use of the Beal site it will need to be replicated either at the new school or somewhere else in town. Parks & Recreation already rents baseball & softball fields from UMass to meet the demand of the town leagues. It was reported that a flat, open play field similar in size to Floral Street School [120'x180'lined field] would also serve this school well in addition to the tot lots needed for recess. Parks & Recreation provided a document on play structures and called to LPA's attention the need to meet MAAB regulations as they are more stringent than the ADA requirements. [attached]. The town is not interested in artificial turf at this time but would like to consider an irrigation system depending on the play field that ultimately end up being included. The town anticipates utilizing portable toilets at the playfield during off-hours. Additional parking was reported as a nonissue at the other district schools due to minimal overlap between programs.	LPA

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

MEMO OF PROGRAMMING MEETING
COMMUNITY USE

02 October 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
10.02.17.05	**MISCELLANEOUS** Auxiliary administration office is often used for visiting personnel and is a desirable feature. PTO at Beal is run out of the Gymnasium and they utilize two portable storage cabinets.	LPA

Memo by: Sean Brennan, LPA
cc: Attendees

SHREWSBURY PUBLIC SCHOOLS
100 Maple Avenue • Shrewsbury, MA • 01545 • (508) 841- 8400

Application for Use of the School Facilities

Organization _____Org. ID# _____

Billing Address _____

Phone (days) _____ Phone (evenings) _____

Contact Person _____ Alternative Contact _____

Date (s) _____

School _____

Space (room) requested _____

Building opened at _____ Building closed at _____

Purpose of the Event _____

Is a school monitor needed? _____

Is kitchen help requested? _____

Is the AV Technician needed? _____

Will income be derived? _____

In the event open to the public? _____

What is your admission price? _____

Estimated Attendance _____

Non-Profit or For-Profit group? _____

Will equipment be moved in? _____ When? _____

What type? _____

OFFICE USE ONLY

Booked _____

Invoice Sent _____

Total # of hours _____

Total Amount Due _____

If school equipment is desired, indicate below

Microphone | Microphone Stand | Microphone Cables

Sound Console | Amplifier System | Other

Projection Device

Office Use Only

Date received _____ Is space available? _____

Athletic Director's Signature (use of high school gym) _____

(Jay Costa, AD (508)-841-8840)

Shrewsbury Parks and Recreation

Run Date: 09/29/17

Run Time: 4:01P

RecTrac

MAY 2017 CALENDAR

Beal School

User: ACS

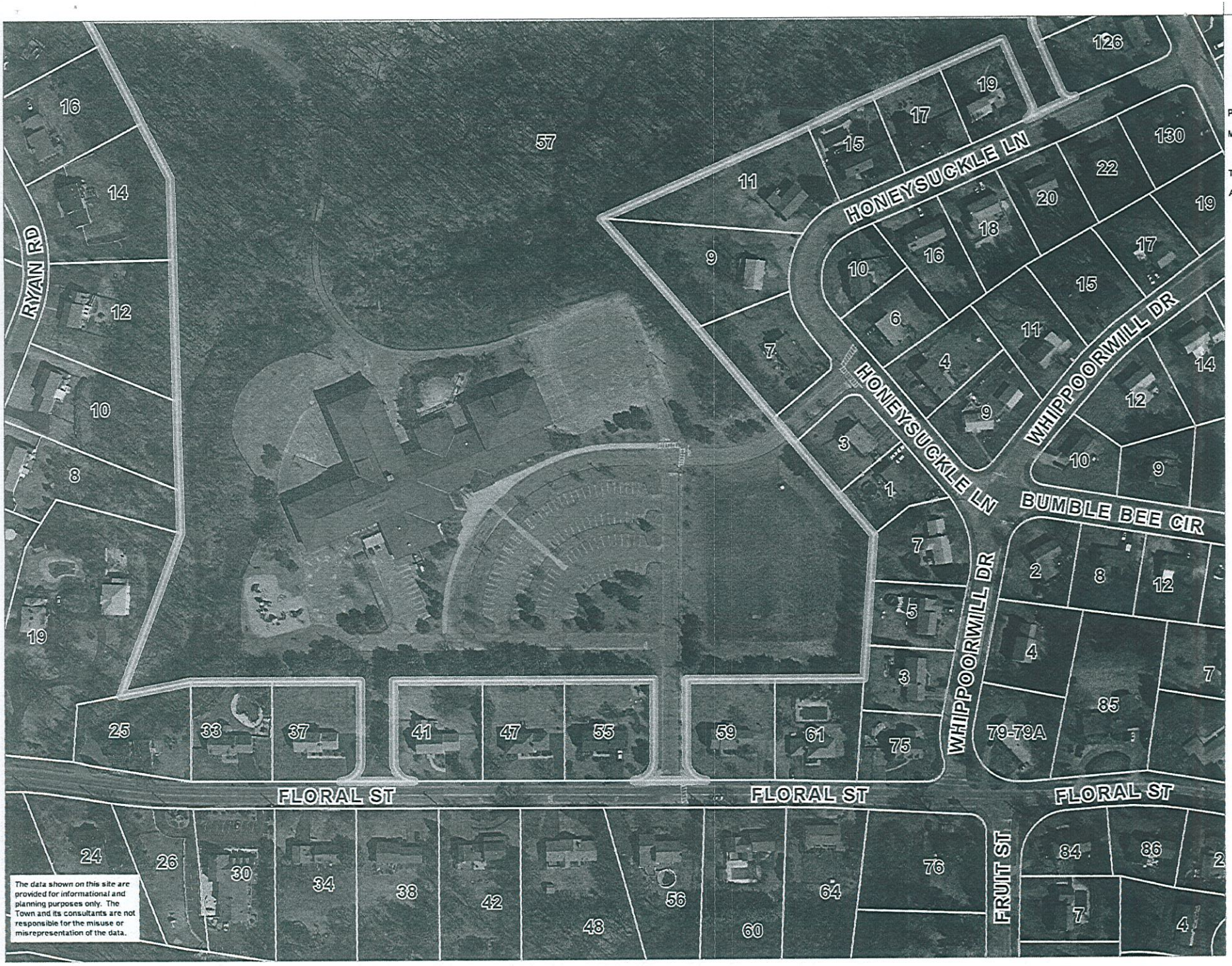
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 Shrewsbury Little League 5:00P- 8:00P BASE ==> PBEAL Shrewsbury Little League softball	2 Shrewsbury Little League 5:00P- 8:00P BASE ==> PBEAL Shrewsbury Little League softball	3 Shrewsbury Little League 5:00P- 8:00P BASE ==> PBEAL Shrewsbury Little League softball	4 Shrewsbury Little League 5:00P- 8:00P BASE ==> PBEAL Shrewsbury Little League softball	5 Shrewsbury Little League 5:00P- 8:00P BASE ==> PBEAL Shrewsbury Little League softball	6 Shrewsbury Little League 8:00A- 8:00P BASE ==> PBEAL Shrewsbury Little League SLL softball
7 Shrewsbury Little League 8:00A- 8:00P BASE ==> PBEAL Shrewsbury Little League SLL softball	8 Shrewsbury Little League 5:00P- 8:00P BASE ==> PBEAL Shrewsbury Little League softball	9 Shrewsbury Little League 5:00P- 8:00P BASE ==> PBEAL Shrewsbury Little League softball	10 Shrewsbury Little League 5:00P- 8:00P BASE ==> PBEAL Shrewsbury Little League softball	11 Shrewsbury Little League 5:00P- 8:00P BASE ==> PBEAL Shrewsbury Little League softball	12 Shrewsbury Little League 5:00P- 8:00P BASE ==> PBEAL Shrewsbury Little League softball	13 Shrewsbury Little League 8:00A- 8:00P BASE ==> PBEAL Shrewsbury Little League SLL softball
14 Shrewsbury Little League 8:00A- 8:00P BASE ==> PBEAL Shrewsbury Little League SLL softball	15 Shrewsbury Little League 5:00P- 8:00P BASE ==> PBEAL Shrewsbury Little League softball	16 Shrewsbury Little League 5:00P- 8:00P BASE ==> PBEAL Shrewsbury Little League softball	17 Shrewsbury Little League 5:00P- 8:00P BASE ==> PBEAL Shrewsbury Little League softball	18 Shrewsbury Little League 5:00P- 8:00P BASE ==> PBEAL Shrewsbury Little League softball	19 Shrewsbury Little League 5:00P- 8:00P BASE ==> PBEAL Shrewsbury Little League softball	20 Shrewsbury Little League 8:00A- 8:00P BASE ==> PBEAL Shrewsbury Little League SLL softball
21 Shrewsbury Little League 8:00A- 8:00P BASE ==> PBEAL Shrewsbury Little League SLL softball	22 Shrewsbury Little League 5:00P- 8:00P BASE ==> PBEAL Shrewsbury Little League softball	23 Shrewsbury Little League 5:00P- 8:00P BASE ==> PBEAL Shrewsbury Little League softball	24 Shrewsbury Little League 5:00P- 8:00P BASE ==> PBEAL Shrewsbury Little League softball	25 Shrewsbury Little League 5:00P- 8:00P BASE ==> PBEAL Shrewsbury Little League softball	26 Shrewsbury Little League 5:00P- 8:00P BASE ==> PBEAL Shrewsbury Little League softball	27 Shrewsbury Little League 8:00A- 8:00P BASE ==> PBEAL Shrewsbury Little League SLL softball
28 Shrewsbury Little League 8:00A- 8:00P BASE ==> PBEAL Shrewsbury Little League SLL softball	29	30 Shrewsbury Little League 5:00P- 8:00P BASE ==> PBEAL Shrewsbury Little League softball	31 Shrewsbury Little League 5:00P- 8:00P BASE ==> PBEAL Shrewsbury Little League softball			

RecTrac

MAY 2017 CALENDAR

Coolidge School

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE1 Shrewsbury Little League No access prior to 5 pm Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE2 Shrewsbury Little League No access prior to 5 pm Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE3 Shrewsbury Little League No access prior to 5 pm	2 Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE1 Shrewsbury Little League No access prior to 5 pm Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE2 Shrewsbury Little League No access prior to 5 pm Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE3 Shrewsbury Little League No access prior to 5 pm	3 Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE1 Shrewsbury Little League No access prior to 5 pm Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE2 Shrewsbury Little League No access prior to 5 pm Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE3 Shrewsbury Little League No access prior to 5 pm	4 Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE1 Shrewsbury Little League No access prior to 5 pm Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE2 Shrewsbury Little League No access prior to 5 pm Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE3 Shrewsbury Little League No access prior to 5 pm	5 Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE1 Shrewsbury Little League No access prior to 5 pm Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE2 Shrewsbury Little League No access prior to 5 pm Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE3 Shrewsbury Little League No access prior to 5 pm	6 Shrewsbury Little League 8:00A- 8:00P BASE ==> BASE1 Shrewsbury Little League SLL games & practices Shrewsbury Little League 8:00A- 8:00P BASE ==> BASE2 Shrewsbury Little League SLL games & practices Shrewsbury Little League 8:00A- 8:00P BASE ==> BASE3 Shrewsbury Little League SLL games & practices
7 Shrewsbury Little League 8:00A- 8:00P BASE ==> BASE1 Shrewsbury Little League SLL games & practices Shrewsbury Little League 8:00A- 8:00P BASE ==> BASE2 Shrewsbury Little League SLL games & practices Shrewsbury Little League 8:00A- 8:00P BASE ==> BASE3 Shrewsbury Little League SLL games & practices	8 Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE1 Shrewsbury Little League No access prior to 5 pm Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE2 Shrewsbury Little League No access prior to 5 pm Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE3 Shrewsbury Little League No access prior to 5 pm	9 Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE1 Shrewsbury Little League No access prior to 5 pm Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE2 Shrewsbury Little League No access prior to 5 pm Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE3 Shrewsbury Little League No access prior to 5 pm	10 Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE1 Shrewsbury Little League No access prior to 5 pm Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE2 Shrewsbury Little League No access prior to 5 pm Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE3 Shrewsbury Little League No access prior to 5 pm	11 Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE1 Shrewsbury Little League No access prior to 5 pm Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE2 Shrewsbury Little League No access prior to 5 pm Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE3 Shrewsbury Little League No access prior to 5 pm	12 Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE1 Shrewsbury Little League No access prior to 5 pm Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE2 Shrewsbury Little League No access prior to 5 pm Shrewsbury Little League 5:00P- 8:00P BASE ==> BASE3 Shrewsbury Little League No access prior to 5 pm	13 Shrewsbury Little League 8:00A- 8:00P BASE ==> BASE1 Shrewsbury Little League SLL games & practices Shrewsbury Little League 8:00A- 8:00P BASE ==> BASE2 Shrewsbury Little League SLL games & practices Shrewsbury Little League 8:00A- 8:00P BASE ==> BASE3 Shrewsbury Little League SLL games & practices



Parcels w/Orthos
MA Highways
Interstate
US Highway
Numbered Routes
Town Boundary
Abutting Towns

0 270 540 ft

Printed on 09/29/2017 at 04:22 PM

MapsOnline

Calendar

Sun	Mon	Tue	Wed	Thu	Fri	Sat
28	29	30	31	Sep 1	2	3
4	5	6 **6:30p** CMF Basketball	7 **6p** CMF Basketball (Fe	8 **4p** SET Course **6p** CMF Basketball (Fe	9	10
11	12 **6p** CMF Basketball (Fe	13 **6:30p** CMF Basketball	14 **6p** CMF Basketball (Fe	15 **6p** CMF Basketball (Fe	16	17
18	19	20	21	22 **6p** CMF Basketball (Fe **6:30p** PTO Meeting-Fl	23	24
25	26 **6p** CMF Basketball (Fe **7p** SEPAC Meeting	27 **6:30p** CMF Basketball	28 **5:30p** Ext Day Meeting **6p** CMF Basketball (Fe	29 **6p** CMF Basketball (Fe	30	Oct 1

Calendar

Sun	Mon	Tue	Wed	Thu	Fri	Sat
25	26 **6p** CMF Basketball (Fe **7p** SEPAC Meeting	27 **6:30p** CMF Basketball	28 **5:30p** Ext Day Meeting **6p** CMF Basketball (Fe	29 **6p** CMF Basketball (Fe	30	Oct 1
2 **1p** Daisy Troop Meetin	3 **6p** CMF Basketball (Fe	4	5 **6p** CMF Basketball (Fe	6 **6p** CMF Basketball (Fe **6p** ELE Parent Mtg FS	7	8
9	10	11 **6:30p** CMF Basketball	12 **6p** CMF Basketball (Fe **6p** PTO Meeting @ Flc	13 **4p** SET Course **6:30p** CMF Basketball	14	15
16	17 **6p** CMF Basketball (Fe	18 **6p** DI - Vidya **6:30p** CMF Basketball	19 **6p** CMF Basketball (Fe	20 **6:30p** CMF Basketball	21	22 **9** SBA - Cruz
23 **9** SBA - Cruz	24 **6:30p** CMF Basketball **7p** SEPAC Meeting	25 **6p** DI - Vidya	26 **6p** CMF Basketball (Fe	27 **6:30p** CMF Basketball	28	29 **7** Shrewsbury Children
30 **1p** Girl Scouts	31	Nov 1 **6p** DI - Vidya	2	3 **7p** Para Meeting 7 PM	4 **5:30p** Parker Road Pre **6p** St. Mary's Parish Bi	5 **9** SBA - Cruz **9** PTO Textile Recyclin **2:30p** DI - Vanitha

Calendar

Sun	Mon	Tue	Wed	Thu	Fri	Sat
30 **1p** Girl Scouts	31	Nov 1 **6p** DI - Vidya	2	3 **7p** Para Meeting 7 PM	4 **5:30p** Parker Road Pre **6p** St. Mary's Parish Bi	5 **9** SBA - Cruz **9** PTO Textile Recyclin **2:30p** DI - Vanitha
6 **9** SBA - Cruz	7	8 **6p** DI - Vidya **6:30p** CMF Basketball	9 **6:30p** CMF Basketball	10 **4p** SET Course **6:30p** CMF Basketball	11	12
13	14	15 **6p** DI - Vidya	16 **5p** FSS SCHOOL COU **6p** St. Mary's Basketba	17	18 **7** Floral Fun Fair	19 **7** Floral Fun Fair
20 **9** SBA - Cruz	21 **6p** SHS Cross Country	22 **6p** DI - Vidya	23	24	25	26 **9** SBA - Cruz **2:30p** DI - Vanitha
27 **1p** Girl Scouts	28 **6p** Parks & Rec Youth **7p** SEPAC Meeting	29 **6p** Parks & Rec Youth **6p** DI - Vidya	30 **6p** Parks & Rec Youth	Dec 1 **6p** Parks & Rec Youth **7p** Para Prof Mtg	2 **6p** St. Mary's Parish Bi **7p** India Society of Wo	3 **8** Parks & Rec Basketb **3p** India Society Christ **4:30p** SBA - Cruz **8p** India SOciety Chris

Calendar

Sun	Mon	Tue	Wed	Thu	Fri	Sat
27 **1p** Girl Scouts	28 **6p** Parks & Rec Youth **7p** SEPAC Meeting	29 **6p** Parks & Rec Youth **6p** DI - Vidya	30 **6p** Parks & Rec Youth	Dec 1 **6p** Parks & Rec Youth **7p** Para Prof Mtg	2 **6p** St. Mary's Parish Bi **7p** India Society of Wo	3 **8** Parks & Rec Basketb **3p** India Society Christ **4:30p** SBA - Cruz **8p** India SOciety Chris
4	5 **6p** Parks & Rec Youth	6 **6p** Parks & Rec Youth **6p** DI - Vidya	7 **6p** Parks & Rec Youth	8 **4p** SET Course **6p** Parks & Rec Youth	9 **6p** St. Mary's Parish Bi	10 **9** SBA - Cruz **2:30p** DI - Vanitha
11	12 **6p** Parks & Rec Youth	13 **6p** Parks & Rec Youth **6p** DI - Vidya	14 **6p** Parks & Rec Youth	15 **6p** Parks & Rec Youth	16 **6p** St. Mary's Parish Bi	17
18 **12:30p** Girl Scouts	19 **6p** Parks & Rec Youth **7p** SEPAC Meeting	20 **6p** Parks & Rec Youth **6p** DI - Vidya	21 **6p** Parks & Rec Youth	22 **6p** Parks & Rec Youth	23 **6p** St. Mary's Parish Bi	24
25	26	27 **6p** Biscotti Basketball	28	29 **4:30p** Cramer Basketb **6p** Biscotti Basketball	30	31 **9** SBA - Cruz

Calendar

Sun	Mon	Tue	Wed	Thu	Fri	Sat
Jan 1	2 **6p** Parks & Rec Youth	3 **6p** Parks & Rec Youth **6p** DI - Vidya	4 **6p** Parks & Rec Youth	5 **6p** Parks & Rec Youth **7p** Para Prof Mtg	6 **6p** St. Mary's Parish B	7 **9** SBA - Cruz **2:30p** DI - Vanitha
8 **11:30** Pitching Clinic	9 **6p** Parks & Rec Youth	10 **6p** Parks & Rec Youth **6p** DI - Vidya **6:45p** Grade 4 Health	11 **6p** Parks & Rec Youth **6:15p** FSS PTO Meeti	12 **4p** SET Course **6p** Parks & Rec Youth	13 **6p** St. Mary's Parish B	14 **9** SBA - Cruz **2:30p** DI - Vanitha
15 **12p** Pitching Clinic **1p** Girl Scouts	16 **6p** Parks & Rec Youth	17 **6p** Parks & Rec Youth **6p** DI - Vidya	18 **5p** FSS School Counci **6p** Parks & Rec Youth	19 **6p** Parks & Rec Youth	20 **6p** St. Mary's Parish B	21 **9** SBA - Cruz **2:30p** DI - Vanitha
22 **12p** Pitching Clinic	23 **6p** Parks & Rec Youth	24 **6p** Floral Chorus Conc **6p** DI - Vidya	25 **6p** Chorus Concert FS	26 **6p** Parks & Rec Youth	27 **6p** St. Mary's Parish B	28 **9** SBA - Cruz **2:30p** DI - Vanitha
29 **12p** Pitching Clinic	30 **6p** Parks & Rec Youth **7p** SEPAC	31 **6p** Parks & Rec Youth **6p** DI - Vidya	Feb 1 **6p** Parks & Rec Youth **6p** ESC Staff Meeting	2 **6p** Parks & Rec Youth **7p** Para Prof Mtg	3 **6p** St. Mary's Parish B	4 **8:30** Parks & Rec Boys **2:30p** DI - Vanitha **3p** SBA - Cruz

Calendar

Sun	Mon	Tue	Wed	Thu	Fri	Sat
29 **12p** Pitching Clinic	30 **6p** Parks & Rec Youth **7p** SEPAC	31 **6p** Parks & Rec Youth **6p** DI - Vidya	Feb 1 **6p** Parks & Rec Youth **6p** ESC Staff Meeting (	2 **6p** Parks & Rec Youth **7p** Para Prof Mtg	3 **6p** St. Mary's Parish B	4 **8:30** Parks & Rec Boys **2:30p** DI - Vanitha **3p** SBA - Cruz
5 **11** Blue & Gold Banque **12p** Pitching Clinic	6 **6p** Parks & Rec Youth	7 **12:15p** Pathways PD **12:15p** Pathways-Heal **6p** Parks & Rec Youth **6p** DI - Vidya	8 **3:30p** Elementary Prin **6p** Parks & Rec Youth **6:15p** Floral PTO Meet **6:15p** Floral PTO Meet	9 **4p** SET Course **6p** Parks & Rec Youth	10 **6p** St. Mary's Parish B	11 **9** SBA - Cruz **2:30p** DI - Vanitha
12 **12p** Pitching Clinic **1p** Girl Scouts	13 **6p** Parks & Rec Youth	14 **6p** Parks & Rec Youth **6p** DI - Vidya	15 **5p** FSS School Counci **6p** Parks & Rec Youth	16 **6p** Parks & Rec Youth **7p** DI Meeting - Lavany	17 **6p** St. Mary's Parish B	18 **12** Gym Refinishing **9** SBA - Cruz **2:30p** DI - Vanitha
19 **12** Gym Refinishing	20 **12** Gym Refinishing	21 **12** Gym Refinishing **8** Extended Day Vacati **3:30p** Union Mtg-Davic	22 **12** Gym Refinishing **8** Extended Day Vacati	23 **12** Gym Refinishing **8** Extended Day Vacati	24 **12** Gym Refinishing **8** Extended Day Vacati	25 **9** SBA - Cruz **2:30p** DI - Vanitha
26 **12p** Pitching Clinic	27 **6p** Parks & Rec Youth **7p** SEPAC	28 **6p** DI - Vidya **6p** SBA-Montigny **7p** SBA - Hartelius	Mar 1 **6p** SBA - Diaz **7:30p** SBA - Hartelius	2 **6p** DI - Ankita **6p** SBA (Kamin) **7p** Para Prof Mtg-Medi **7:30p** SBA - Daley	3 **6p** St. Mary's Parish B	4 **8** Girls Softball Tryouts **2p** DI - Lavanya **2:30p** DI - Vanitha

Calendar

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26 **12p** Pitching Clinic	27 **6p** Parks & Rec Youth **7p** SEPAC	28 **6p** DI - Vidya **6p** SBA-Montigny **7p** SBA - Hartelius	Mar 1 **6p** SBA - Diaz **7:30p** SBA - Hartelius	2 **6p** DI - Ankita **6p** SBA (Kamin) **7p** Para Prof Mtg-Medi **7:30p** SBA - Daley	3 **6p** St. Mary's Parish B	4 **8** Girls Softball Tryouts **2p** DI - Lavanya **2:30p** DI - Vanitha
5 **12p** Pitching Clinic **12:30p** Eagle Scout C **2p** DI - Ankita **4p** Biscotti Baseball	6	7 **1p** Pathways Prof Dev **6p** DI - Vidya **6p** DI-Ankita	8 **6p** PTO Meeting FSS	9 **6p** DI Ankita **6p** SBA - Kamin	10 **6p** St. Mary's Parish B **6p** DI - Ankita **6:30p** DI - Vidya	11 **9** SBA - Kamin **10:30** SBA - Cramer **12:30p** Girl Scouts Thi **2:30p** DI - Vanitha **3p** SBA - Hartelius
12 **12p** Pitching Clinic	13	14	15 **5p** FSS School Counci **6p** SBA - Cramer	16 **4p** SET Course **6p** SBA - Kamin **7p** SEPAC **7:30p** SBA - Soldo	17 **6p** ELE Annual Family	18 **2p** Girls Softball (Span **2:30p** DI - Vanitha
19 **12p** Pitching Clinic **3p** Boy Scout Blue & G **4p** Biscotti Baseball	20 **6p** CMF Basketball	21 **6p** Little League Safety **6p** DI - Vidya **6:30p** CMF Basketball	22 **5p** Floral PTO Mgt-Sch **6:30p** CMF Basketball **6:30p** DI - Vidya	23 **8** SLT **6p** CMF Basketball	24 **6:30p** DI - Vidya	25 **7** Parker Road Literacy **2p** Girls Softball (Span
26 **7** Snow Day Parker Rc **4p** Biscotti Baseball	27 **6p** CMF Basketball **7p** SEPAC	28 **6p** DI - Vidya **6:30p** CMF Basketball	29 **6:30p** CMF Basketball **6:30p** DI-Vidya	30 **6p** CMF Basketball	31 **6:30p** DI - Vidya	Apr 1

Calendar

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26 **7** Snow Day Parker Rc **4p** Biscotti Baseball	27 **6p** CMF Basketball **7p** SEPAC	28 **6p** DI - Vidya **6:30p** CMF Basketball	29 **6:30p** CMF Basketball **6:30p** DI-Vidya	30 **6p** CMF Basketball	31 **6:30p** DI - Vidya	Apr 1
2 **2p** Girls Softball (Span	3 **6p** CMF Basketball	4 **6:30p** CMF Basketball	5 **6:30p** CMF Basketball	6 **4p** SET Course **6:30p** CMF Basketball **6:30p** Para Prof Mtg-M	7 **4p** Literacy Night 4 to 9	8 **9** PTO Recycling Even
9 **1p** Girl Scouts	10 **6p** CMF Basketball	11 **6p** DI - Vidya **6:30p** CMF Basketball	12 **6p** FSS PTO Meeting **6:30p** CMF Basketball	13 **3:15p** Introduction to V **5:45p** Asst Supt Public **5:45p** Asst Supt Public **6p** CMF Basketball	14 **4p** Ext Day Event-Flora	15
16 Easter	17	18 **6p** DI - Vidya	19	20 **6:30p** CMF Basketball	21	22
23	24 **6p** CMF Basketball **7p** SEPAC	25 **6p** DI - Vidya **6:30p** CMF Basketball	26 **5p** FSS School Counci **6:30p** CMF Basketball	27 **6p** CMF Basketball	28	29 **7** Floral Community Ga **7** Shrewsbury Children
30 **1p** Girl Scouts Meeting	May 1 **6p** CMF Basketball	2 **6p** Chorus Concerts-G	3 **6p** Chorus Concerts-G	4 **6p** CMF Basketball **7p** Para Prof Mtg	5	6

Calendar

Sun	Mon	Tue	Wed	Thu	Fri	Sat
30 **1p** Girl Scouts Meeting	May 1 **6p** CMF Basketball	2 **6p** Chorus Concerts-G	3 **6p** Chorus Concerts-G	4 **6p** CMF Basketball **7p** Para Prof Mtg	5	6
7	8 **3:30p** Mental Health Fi **6p** CMF Basketball	9 **6p** DI - Vidya **6:30p** CMF Basketball	10 **5:15p** FSS PTO Meeti **6p** DI - Vidya **6:30p** CMF Basketball	11 **6p** CMF Basketball **7p** SEPAC	12 **6p** Girl Scout Father/D	13
14	15 **3:45p** Mental Health Fi **6p** CMF Basketball	16 **6p** DI - Vidya **6:30p** CMF Basketball	17 **6:30p** CMF Basketball	18 Floral Goes Green-Pr **6p** CMF Basketball	19	20
21	22 **6p** CMF Basketball **7p** SEPAC	23	24 **6:30p** CMF Basketball	25 **6p** CMF Basketball	26	27
28	29	30 **6:30p** CMF Basketball	31 **8p** CMF Basketball	Jun 1 **6:30p** CMF Basketball **7p** Para Prof Mtg	2	3

Calendar

Sun	Mon	Tue	Wed	Thu	Fri	Sat
28	29	30 **6:30p** CMF Basketball	31 **8p** CMF Basketball	Jun 1 **6:30p** CMF Basketball **7p** Para Prof Mtg	2	3
4 **1p** Girl Scout Meeting **5p** Al-Hamra Graduatic	5	6	7	8	9 **4p** Floral Gr 4 Celebrat	10 **Floral Gr 4 Celebratio**
11 **Floral Grade 4 Celebr**	12	13	14 **4p** Open House for Ne **6p** Frankian Celebratio **6:15p** Powell End of Y	15 **6p** New Family Parent **6:30p** CMF Basketball	16 **6p** Little Beginnings Pr	17
18	19 **6p** Borraccino Morrisse	20	21	22 **6:30p** CMF Basketball	23	24
25	26	27	28	29	30	Jul 1

2207		Sandy	Georgian	845-1811
2723				
2771				
2552	Academy of Indian Music	Neelima	Chaturvedi	508-845
2396	Adult Ed.	Kris	Cobb	
2393	After School Music Lessons	Anthony	Uglialoro	
1772	Al-Hamra Academy	Noor	Ali	393-0171
2576	Aligiarh Alumni Association of	Sadia	Chaghtai	508-842
2018	All Sport & Cheerleading	Bill	Martin	865-8634
2741	All-Access	Walter	Hildebrand	508-845
1706	All-Pro Productions	John	Dumas	508-486
2474	Alumni Association	Christina	Manos	508-853
2099	Babe Ruth League	Don	Green	845-5071
2633	Basketball	Robert	Sarnie	508-845
2573	Basketball Specialists School	Ilya	Nichula	508-816
2615	Bay State Games	Gary Patch		978-534
2234	Bay State Power Youth	Peter	Bohush	508-845
632	Beal School Events	Jayne	Wilkin	8865
1652	Beal School PTO	Cheryl	Brenner	508-845
2237	Beijing Chinese Language	Weichu	Xu	774-262
2294	Bob C	Bob	Cornachioli	8820
2588	Boston Dance Company	James	Reardon	617-491
1616	Boy Scout Troop #114	Virgil	Gray	
1802	Boy Scout Troop #158	John	Travers	508-845
2216	Boy Scouts			
2381	Brownie Troop #423	Sarah	Fredrick	508-845

2471	Brownie Troop 30302	Tracy	Brusa	
2450	Brownie Troop 30582	Jennifer	Barry	508-925
2444	Brownie Troop 30584	Mary	Courtemanche	
2456	Brownie Troop 30996	Angela	Snell	508-873
2090	Brownies #30813	Jennifer	Barry	
2402	Building Improvements			
2468	Building Maintenance	Tim	Callahan	1/508-958
2441	Buildings Department	Bob	Cox	
2369	CBS	Mark	Adler	508-841
2399	Central District Festival	Andrea	Sanders	508-842
2189	Central Mass Athletic Club	John	Kottori	
1937	Central Mass Basketball	Jim	Diamantopolos	845-9100
2561	Central Mass Dance Academy	Kellie	Shea	774-696
2768	Central Massachusetts Honor	Dr. Bradley	Ethington	315-383
2585	Centre Stage Productions	Michael	Lapomardo	508-868
2306	Champion Volleyball School	Chris	Ridolfi	508-579
2279	CMF Basketball	Frank	Ferreer	
2726	Codeworkshops	Kiran	Adapa	617-447
2744	Common Core Forum	Elliott	Scott	508-451
1073	Coolidge School Events	Amy	Clouter	8880
1661	Coolidge School PTO	Lauren	Schmautz	
2252	Council on Aging COA	Dick	Correia	
2405	Cub Pack 158	John	Travers	
1634	Cub Scout Pack #146	Jim	Anable	792-6681
2033	Cub Scout Pack #142	Dina	Nichols	842-2911
2141	Cub Scout Pack #62	Mike	Robillard	508-523

2141	Cub Scout Pack 62	Michael	Robillard	
2594	Cub Scouts			
2210	Cub Scouts Troop 114	Virgil	Gray	774-317
2117	Daisies Troop #289	Hadar	Hawk	845-9509
2114	Daisies Troop #587	Hadar Hawk		845-9509
2102	Daisy Girl Scouts	Christina	Luther	508-736
2528	Daisy Troop #11140	Jen	Rudsit	508-308
2390	Daisy Troop #924	Tracy	Ottaviano	508-842
2546	Dance Company of Worcester	Matt	Parello	774-287
2432	Dazzle Cheer	Cheryl	Correia	508-842
2366	Denise Day Dance Center	Denise	Day	508-845
2492	DESE	John	Sullivan	
2147	Destination Imagination	David	Geary	508-845
2696	DPD Deficiency Foundation	Sapna	Krishnan	508-792
2603	Elite Academy of Dance	Lauren	Mangano	774-696
2417	ELNA	Deborah	Peeples	508-
812	Extended Day	Danielle	Murray	8727
1700	First Robotics	Raj	Patel	
797	Floral Street School			
1484	Floral Street School Events	Lisa	McCubrey	8720
626	Floral Street School PTO			841-1013
2225	Friends of Shrewsbury Crew	Ed	Mahan	774-262
2567	Girl Scout Cadette Troup	Ann	Collins	508-842
2177	Girl Scout Troop #315	Robin	Murphy	831-0841
695	Girl Scout Troop #332	Teresa	Bashant	508-845
2087	Girl Scout Troop #924	Julie	Kelland	842-7978

1844	Girl Scout Troop #926	Risa	Harrington	-842-3184
2483	Girl Scouts Troop 30325	Janice	Heipler	508-842
2645	Grade 6 Basketball	Nicholas	Smyrnios	508-842
2750	Gymnastics Learning Center	Jennifer	Belculfine	508-792
920	High School Alumni	Ron	Sanguinet	508-842
1649	High School Athletics	Jay	Costa	8840
1037	High School Boosters			
959	High School Events	Todd	Bazydlo	8808
1715	High School Music	Bonnie	Narcisi	8826
2027	High School Summer School			8824
2609	Hindu Swayam Serak Sangh	Kavitha	Arramraj	917-319
2375	Hit Quarters	Joe		508-842
2066	Hot Styx Hockey Camp	Paula	Toti	852-8014
2531	Independent Basketball	Ray	Gouley	508-831
2621	Independent Basketball	Ray	Gouley	508-831
2513	India Society of Worcester			
2639	ISHA Foundation Inc	Rebecca	Reynolds	508-332
2039	Islamic Society of Greater	Mohammad	El Refaei	508-335
2720	Jack’s Garage	Jack	Shanahan	508-393
2765	John Biscotti Basketball	John	Biscotti	508-845
2387	Jr. Girl Scout Troop 30926	LeeAnn	Desmarais	508-845
2516	Jr. Girl Scouts 30813	Christine	Brann	
2342	Jr. Prom Committee	Darlene	Parseghian	
2687	Judy Hermans School of	Judy	Hermans	
2777	Kalaimagal Tamil School Inc.	Devi	Sundaresan	508-493
2183	Kaplan Test Prep &	Catherine	Yates	978-448

2357	Kumon Shrewsbury	Joe	Sugawara	508-450
2753	Largess-Cook Basketball	Erin	Cook	
2606	LAUNA (Lithuanian Athletic	Attn: Arunas	Morkunas	
2537	Laurene Aldorisio Academy of	Laurene	Aldorisio	508-836
2420	League of Women Voters	Robin	Snyder	
854	Lesley College	Zineb	Benjelloun, Budget	617-349
2348	Liberty Church	Jason	McGee	508-845
2276	Little Beginings Pre School	Mellissa	Cole	841-4110
2423	M.B.C. Pride AAU	Matt	Knowles	508-450
2774	MA Republican Caucus	Cassidy		
2654	MA. Huskies	Jim	Butcher	508-366
2195	Mass Veterans Inc	C/O Pat	Collins	
2270	Massachusetts Emergency	Linda	Gosselin	508-865
2717	Men’s Summer League	Chris	Kinback	508-523
2414	MIAA	c/o Steve	Lynch	
2627	Michael McCaffrey Hope	Patty	McCaffrey	
2045	Mid-Mass Basketball	Ken	Lee	1956
2756	Milan Cultural Association			
1778	Montessori Center	Donna	Leo	508-842
2249	MTRS	Scott	Cauley	617-679
2525	N.E. School of Music	Pranoti	Mandrekar	508-579
2597	New England Hindi Manch	Preetesh	Shrivastava	781-534
2315	New England Malayalee	Rema	Nair	
2738	North American Chorus	XiaoFeng	Cheng	508-250
2171	Oak Middle Events	Ann	Jones	
2108	Opera Worcester	Bernadine	Birch	432-7141

2486	Pan Mass Challenge Kids	Kristen	Boudreau	508-789
2093	Parker Road Preschool	Lisa	Robinson	8713
767	Paton School Events	Jayne	Wilkin	8630
1982	Paton School PTO	Lorraine	Daigneault	774-280
2600	Paula Zawalich Dance	Pamela	Moscatelli	508-845
2501	Pie in the Sky Production	Darlene	Walsh	978-838
2336	Professional Development	Jay	Cummings	
2453	PSUG Power School Users	Marcia	Perreira	508-873
2219	PTO			
2309	Raganjali School of Music	Asha	Raghapathy	508-845
2303	Relay for Life of Shrewsbury	Abby	Zimage	508-270
2591	Reliant Medical Group	Kim	Hescock	508-595
2630	Road Scholars Road Race	Michelle	Biscotti	
1724	Rotary	Joe	Montecalvo	234
2111	SAC	Kiro	Kuzmanovski	865-1208
2465	Sacred Heart Basketball	Rick	Laramee	508-523
2477	SAYFCO Shrewsbury	Barbara	Peters	
635	School Committee	Mark	Murray	
821	School Department	Joseph	Sawyer	8406
2495	SEA	Kelly	Finneran	
2783	SELCO	Jackie	Pratt	
2204	Senior Citizen Computer	Stacey	Lavely	
2297	Shamrocks Basketball AAU	Tom	Henrickson	774-239
2735	She Protects	David	Fort	617-756
1583	Sherwood Middle Events	Jane	Lizotte	8670
2714	Sherwood Middle Events	Jane	Lizotte	8670

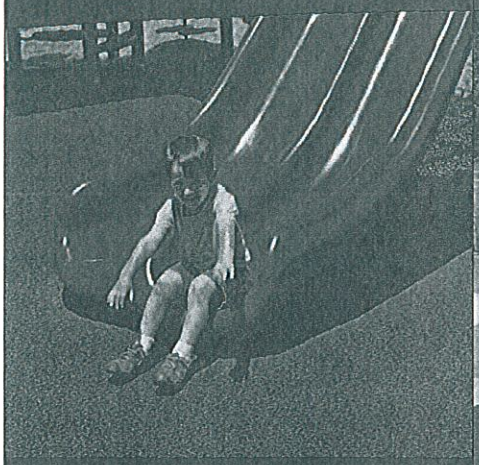
2669	Sherwood Summer	Karen	Caitlin Daley	
2042	Shrews Education Foundation	Melisa	Hollenback	508-845
2657	Shrewsbury Athletic Club	Bridget	Rubin	508-523
683	Shrewsbury Basketball	Paul	Durkee	
2321	Shrewsbury Basketball, Inc	Lisa	Talbot	508-845
1853	Shrewsbury Children's	Erin	Sparrow	781-258
2240	Shrewsbury Community	Pina	Altomari	842-9078
2540	Shrewsbury Friends of Senior	Arthur	Dobson	508-842
2699	Shrewsbury Girl Scouts	Mary	Courtemanche	508-842
2012	Shrewsbury Girls Lacrosse	John	Barry	
2612	Shrewsbury Girls Softball	Scott	Spangenberg	508-523
2408	Shrewsbury Little League	James	LeMay	508-842
617	Shrewsbury Parks &	Gary	Grindle	
2363	Shrewsbury Police	Mark	Hester	508-841
2429	Shrewsbury Public Library	Ellen	Dolan	
2264	Shrewsbury Sai Center	Sathya	Jambunathan	
2624	Shrewsbury Slamm Girls	Rich	Edstrom	508-523
2285	Shrewsbury Summer Musical	Bonnie	Narcisi-Gorey	841-8826
1631	Shrewsbury Youth Baseball	Dave	Walker	
1808	Shrewsbury Youth Football-	Sean	Weafer	508-958
1688	Shrewsbury Youth Soccer	Iqbal	Khan, Vice President	781-442
2732	Shri Gurvsthan (Dwarkamai,	Suresh	Kalathur	508-523
2360	SHS Service Learning Group	Erica	Maroise	
1943	Soccer Camp	Bill	Martin	865-8634
2063	South County Physical Ther.	Jacqueline	Amiro	832-2628
2570	Special Olympics	Matthew	Ruxton	508-485

1904	SPED	Melissa	Maguire	8665
1814	SPED PAC	Stacey	Lavely	
2678	SPED Summer Program-HS	Moe	Monopoli	
2675	SPED Summer Program-	Kristen	Herrick	
2618	Speech & Debate	Marc	Rischitelli	
1985	Spirit of Shrewsbury	Sabina	Terrades	508-845
995	Spring Street Events	Bryan	Mabie	8704
2786	SSSO of Northeast Inc	Prasanthy	Punnamaraju	508-215
2543	St. Mary's Alumni	Sira	Naras	508-845
2534	St. Mary's Basketball	Phil	Lemieux	508-523
614	St. Mary's Parish Team	Tom	Gordon	508-868
2789	St. Mary's Parish Team	Tom	Gordon	508-868
2522	St. Mary's School Team	Jeannie	MacDOnough	508-397
1709	Stepping Stone Theatre	Carol	Williams	792-0824
2564	Summer Basketball League	Peter	Grillo	508-414
2192	Summer Concert Band	Brian	Liporto	
1679	Summer Enrichment	Jean Brunell	Meg Bartlet	1696
2642	Summer Institute	Mary Beth	Banios	
2198	SYSF	Jeffrey	Chin	845-6932
2132	Take Charge Basketball	Gerry	Nowasacki	842-6014
2291	Team Massachusetts	Shawn	Jeffries	
2579	Telugu Association of Greater	Sri	Reddy	617-803
2372	The Princeton Review	Abby	Avoryie	617-558
2354	Title I	Patty	Lambert	
2438	Town Democratic Committee	Paula	Buonomo	508-842
1694	Town Of Shrewsbury	Dan	Morgado	8375

2660	U.S. Army Reserves	Aaron	Pollack	508-755
2003	UMass Amherst Reading	Dawn	Gernhardt	1-800-964
2180	Universal Technical Institute	Mike	Tirese	886-2271
2507	USA Hockey	Robert	Sachse	978-835
2318	Visual Arts	Pam	LeBlanc	
2747	Volleyball Clinic	Rich	Harrington	
2636	Worcester County United	Lauren	Chenevert	774-249
2582	Worcester Heat Travel	Phil	Price	508-842
2762	Worcester Team United			
1625	Youth Hockey-SYHA	John	Gaston	774-275
2222	Youth Hoops - CMYBL	Francis	Ermilio	
2015	Youth Lacrosse	Don	Beall	845-1678

IMPAX™

Poured in Place Rubber: Aliphatic



A high traffic area surface with bright UV resistant color and design options

Basics at a glance:

Price	Mid
Maintenance	Low
Access	High
Color Options	12+
Warranty	5 years

Description

PIP Aliphatic is a great solution for play areas expecting regular use and/or larger numbers of children. It utilizes an aliphatic binder to provide clear bright colors immediately after installation and an upgrade in UV protection. It's a great alternative for lighter or brighter shades, or school colors where initial ambering is not acceptable.

Aliphatic provides a seamless, accessible play surface, with several color choices that can be laid in patterns, or mixed to create different shades and tones of color. Higher use of black in the color mix can provide cost savings.

The product is easy to clean using a leaf blower to remove loose debris, and a mild soap solution for stains. Repair kits are available for small areas, ask about our maintenance program to maximize the life and performance of your surface.

Benefits

- Uniform, stable accessibility
- Aesthetically pleasing
- Themed graphic inlay options
- Easier cleaning and maintenance
- No initial binder ambering

Tips

- Mix black into your color choice for cost savings
- Mixing at least two colors within a large color field will provide more depth to your overall surface appearance
- Maintenance is required to keep high traffic areas sealed

Basic Specification

Product is comprised of two layers, consisting of an impact layer made of clean, recycled SBR rubber, and a wear layer, comprised of ½" thick EPDM rubber.

Binder is a basic, single component aliphatic agent. Product to be installed over asphalt, concrete, or compacted stone. Temperature should be a minimum of 40-45 degrees Fahrenheit during installation.

Thicknesses will vary to meet specific playground equipment fall heights.

This product meets all applicable ASTM standards. For more information, please refer to our complete product specification.

GameTime®
A PLAYCORE Company

Purple | Blue | Green | Bright Yellow | Orange | Terra Cotta | Brown | Tan | Egg Shell | Light Grey | Charcoal | Black | 50/50 Mix

1.800.235.2440 www.gametime.com

All colors shown are approximate and may vary nationwide

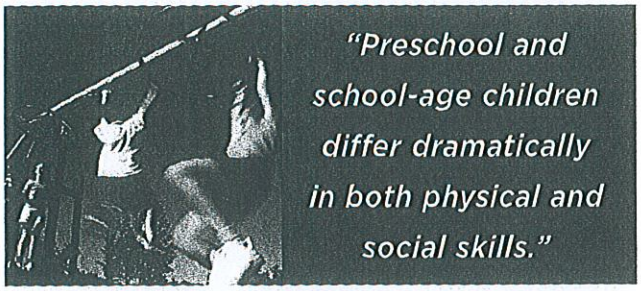
landscape structures

Age-Appropriate Play Equipment

Playguide™ Bulletin No. 1

One of the biggest challenges in designing a playground is creating safe, developmentally appropriate play experiences for children of different ages.

In its *Handbook for Public Playground Safety,* the Consumer Product Safety Commission (CPSC) has this to say about the topic of age-appropriate play:



Preschool and school-age children differ dramatically not only in physical size and ability, but also in their cognitive and social skills. Therefore, age-appropriate playground designs should accommodate these differences with regard to the type, scale and the layout of equipment.

The CPSC *Handbook* divides playground users into two groups:

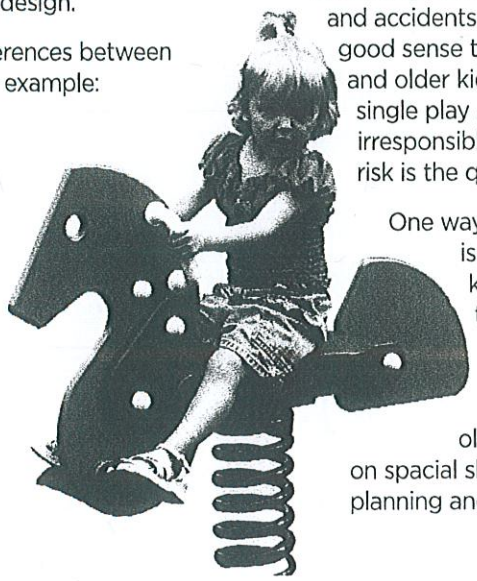
- *Preschool children,* 2- to 5-years-old
- *School-age children,* 5- to 12-years-old

A third group, *infants and toddlers,* includes children under 2 years of age. The CPSC doesn't address the needs of this group in its *Handbook* guidelines. However, the growing importance of non-parental childcare makes it obvious that the safety needs of infants and toddlers can be an important consideration in playground design.

The emotional and developmental differences between these age groups can be dramatic. For example:

Infants and toddlers

Infants are sensory creatures who explore relentlessly with their eyes, hands, feet, torsos, noses and mouths. They creep, crawl, sit up, pull up, and otherwise exert themselves at ground or floor level until they learn to walk, when they launch themselves on the journey to being "toddlers" – a term that is defined more by state licensing requirements than by any universally recognized developmental standard.



Toddlers need space to exercise their new physical freedom while avoiding territorial conflict with their peers.

Preschoolers

Two-year-olds (in some states, 2-1/2- or 3-year-olds) represent the lower age limit of the preschool group. These children are new to the playground, and like having a place of their own, sized appropriately. These youngsters have a limited attention span. For this audience, the best playground challenges involve climbing over, under and around things, plus activities that foster fine motor skills.

Older preschoolers, in the 3- to 5-year-old range enjoy dramatic play and imitating others. Social skills are just developing, and a desire to be like the "big kids" may result in conflicts and exposure to physical risk. Supervision is quite important at this age.

School-age children

Children ages 5 to 12 are learning and building skills rapidly. They are working on fine motor skills, gross motor skills, coordination, strength and balance. Their social skills are becoming more evolved and elaborate games and competitions abound on the playground.

At the older end of this age range, there are children who are about to make the transition from elementary school to junior high. These 12-year-olds (or older) can be nearly twice the height of a preschooler and can have more than eight times the grip strength. They are high-spirited, subject to peer pressure and fond of "goofing off" on the playground. These traits can lead to aggression and vandalism on the playground. In addition, older children often forget that preschoolers are smaller and weaker and accidents can result. For this reason, it just makes good sense to have separate areas for preschoolers and older kids. Trying to blend kids of all ages into a single play area for economic reasons is irresponsible and self-defeating, since unnecessary risk is the quickest path to injuries and lawsuits.

One way to short circuit an unpleasant outcome is to provide sufficient challenge for older kids, both physical and mental, to keep them engaged in their own space. Web climbers, natural rock-type climbers, fitness equipment and other age-appropriate components keep older kids busy and active. They can work on spacial skills, hand-eye coordination, motor planning and use their imaginations to create games.

Match abilities with appropriate activities

To minimize your risk and provide children of all ages with a safer, more satisfying play experience, you should consider separating age groups.

1. An ***infant and toddler*** area for babies and children under the age of 2. This might include:

- Tunnel mazes and activity panels with "pull-up" handles for infants.
- Small multi-level playstructures for toddlers, with crawl tunnels and slides of modest height.

2. A ***preschool area*** for children between ages 2 and 5. This play area should include one or more of the following items:

- *A linked playstructure* that is scaled to young children's dimensions, with age-appropriate play activities such as crawl tunnels, small slides, enclosed play spaces, activity panels that develop fine motor skills and decks of modest height.
- *Independent play events* such as spring riders, talk tubes and "theme" climbers that promote active and fantasy play.
- *A sandbox with play tables* for manipulative play.
- *Learning wall clusters* at ground level for young children of all abilities.

3. A ***school-age area*** for 5- to 12-year-olds should feature:

- *A linked playstructure* with decks and play activities geared to the body dimensions and play needs of older children.
- *Swings, climbers, fitness clusters, spinners* and other independent play events designed to provide physical challenges.
- *Sports equipment* such as basketball outfits or tetherball.

Provide a buffer zone

A buffer zone will provide separation between the age-specific play areas. This can be an area with benches and picnic tables, a pedestrian path, a decorative fence, or landscaping such as a hedge or a row of closely spaced evergreens.

For security, each play area should be visible from the other as well as from nearby benches. Having rest rooms and drinking fountains nearby (and within view) is also desirable.

Allocate your budget

In building a playground, a good rule of thumb is to spend 60 percent of your budget on equipment for older children and 40 percent for toddlers and preschoolers. This ratio should be varied if infants are present or to suit other specific needs on your playground.

Obtain expert advice

Your play equipment manufacturer should be able to help you design a total play area that serves all the ages of your users. Increasingly, outdoor playground equipment has been designed with specific age groups in mind. Landscape Structures offers specific play systems for children 2 to 5, 5 to 12 and for the pre-teen/teen years, as well as independent play items based on each age group's interests and abilities.

For more information on how to design and equip your play area to meet the challenge of age-appropriateness, call your local Landscape Structures representative.

Appropriate Landscape Structures play systems and play events by age group

Infants*	Toddlers*	Ages 2-5*	Ages 5-12*
Infant Maze	ToddlerTown	PlayShaper® structures	Evos™ and PlayBooster® structures
Learning Walls	Clubhouses	Decks 48" and under	Spacenet™ Climbers
	Independent Tunnels	Low swings	Mobius™ Climbers
	Talk Tubes	Crawl tunnels	Natural Elements
		Cozy Climber™	Orbiter™ Spinner
		Bridges and ramps	Decks up to 72"
		Balance beam	Higher swings
		Single/double poly slides	Corkscrew/Loop poles
		Tunnel slide	Climbers
		Activity panels	All slides
		Spring riders	Upper-body equipment
		3-Panel Mobius™ Climber	Track rides
		Tetrahedron Spacenet™ Climber	Spring platform
			Fitness equipment
			Sports equipment

** Many of the examples listed can be used for other age groups. However, such events should be located in separate areas rather than being shared. Care must be taken to avoid crowding and traffic conflicts. Infants, in particular, should always be under close supervision.*

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Shrewsbury Public Schools

Policies, Procedures and Regulations Governing Use of School Facilities

Revised July 10, 2013

Joseph M. Sawyer, Ed. D.
Superintendent

Dear Community Member:

This brochure contains all the information that you need to reserve school facilities in the Shrewsbury Public Schools. The Shrewsbury School Committee supports the use of school facilities by community groups (after normal use by students and faculty) and believes that such use enriches the quality of life in Shrewsbury for everyone – students and adults alike.

These policies, procedures, and regulations represent the efforts of the School Committee to encourage the use of school facilities by Shrewsbury groups and bring greater consistency to the regulations and fee structure associated with the program.

Shrewsbury has many school and community groups that have used school facilities for their meetings and events for many years. The School Committee is pleased to invite you to hold your events in the schools as it continues to develop its partnership with the community.

Sincerely,

Joseph M. Sawyer

Joseph M. Sawyer, Ed. D.
Superintendent of Schools

Facility Rental Rates Group Classification

Group A: Recognized school or civic groups based in Shrewsbury but not necessarily established as non-profit organizations

School operating budget pays for all costs associated with these activities to include overtime for custodians, cafeteria, and AV staff.

Group B: Non-profit groups and all other groups classified under section 501 (c) 3 of the IRS tax code, with a majority of the participants residing in Shrewsbury
$80/hour for secondary school classrooms and all other spaces. (Elementary school classrooms are not typically rented.) Organizations in Group B may use designated classrooms without charge under the following circumstances:
a) Timeframe: 5-6pm daily*
b) School: designated by administration
*provided that regular custodial service is available.

Group C: For-profit groups and non-profit groups that have fewer than half of the participants residing in Shrewsbury.
$105/hour for classroom or other similar spaces. (elementary classrooms are not typically rented)
$260/hour for gym, cafeteria & auditorium spaces.
Additional charges will apply for:
Cafeteria Worker: $30/hour AV Technician: $45/hour Additional Custodian: $35/hour
Police: billed by Police Dept.

Group D: For-profit camps

Fee will be 15% of gross revenue collected by camp operator. Other contracting provisions apply. Camp rental contract available at the Central Office located in the Town Hall. A projection of anticipated gross revenue may be requested along with a roster of participants.

REGULATIONS GOVERNING USE OF SCHOOL FACILITIES

In order to provide for the efficient and judicious use of school facilities, the following regulations will apply. All users of school facilities shall agree and ensure that:

1. 25% of required fees shall be paid ten working days in advance of use and that the balance will be paid upon billing.
2. A majority of the participants shall be Shrewsbury residents when fees are assessed from the "Shrewsbury non-profit" schedule (Group B).
3. No unauthorized third party shall be granted permission to use the facility or any portion thereof without prior approval from the Director of Business Services.
4. Participants shall not be restricted from participation for reasons of race, religion, age, sex, sexual orientation, creed, national origin or disability conditions.
5. The representative specified in the contract as responsible for school facilities (i.e., the person who reserves the space) shall be present at all scheduled event.
6. No signs, banners and pennants shall be erected without prior approval.
7. No school supplies (paper, cleaning materials, etc.) shall be used.
8. School Department equipment shall not be used (e.g., computers, copy machines, projection equipment, etc.) Any exceptions or specific requests in this regard shall be made in advance to the Director of Business Services.
9. The number of attendees at any event shall not exceed the authorized capacity of the facility. There shall be one chaperone for every 25 children.
10. Vehicles of participants shall be parked only in school parking lots.
11. Participants shall be restricted to assigned areas.
12. Food and drink shall occur only in authorized areas.
13. No nails, screws, hooks, or any fixture shall be attached to any part of the building.
14. There shall be no defacing or misuse of property and no marking or erasing of black/white boards (unless authorized).
15. Activities shall be orderly and, when necessary in the opinion of the Shrewsbury Public Schools, police will be hired to ensure public/property safety.

16. There shall be no smoking in any school building or on school grounds.
17. No alcoholic beverages shall be served or consumed in buildings or on grounds.
18. No gaming shall be permitted.
19. The use of animals on school property shall be permitted only when, in the opinion of the Shrewsbury Public Schools, such use will not promote undue risk to people or property. Animals shall not be permitted inside buildings (except in the case of guide dogs) without the express permission of the Director of Business Services, and, when animals are used on school grounds, the area shall be cleaned.
20. Contracted time limits shall be observed and the building left in a neat and orderly condition. Reimbursement shall be made for damages during the use.
21. They shall hold harmless and indemnify the Shrewsbury Public Schools with respect to any claim of loss, injury, or damage because of negligence of the user or user's employees or agents, including damage to school property. User groups are required to produce a certificate of insurance naming the Shrewsbury Public Schools as an additional insured.
22. They shall comply with all federal, state and local laws, regulations and licensing requirements, including but not limited to the Americans with Disabilities Act.

I hereby agree to the terms above as a condition of the use of school facilities in the Shrewsbury Public Schools:

_____ _____

Individual Reserving School Space Date

_____

Organization

_____ _____

Representative of the Shrewsbury Schools Date

SHREWSBURY PUBLIC SCHOOLS

POLICY FAMILY	RENTAL AND USE OF SCHOOL FACILITIES	851

851.

Philosophy of After-Hours Use

The School Committee encourages the use of school facilities for educational, recreational, cultural, and civic purposes by recognized organizations within the town. Such use, in the judgment of the Committee, must be reasonably accommodated within the capacity of the facilities requested and cannot interfere with school programs. Additionally, the use of facilities must be consistent with the school's energy conservation program.

The fees associated with the use of facilities will vary contingent upon the nature of the sponsoring group and the activity. It is not the intent of the Committee that for-profit groups be subsidized by public funds. Such groups shall incur additional charges for the use of school buildings.

The Committee reserves the right to modify or waive fees when, in its judgment, circumstances so warrant.

Implementation

1. For non-school related activities, all costs shall be borne by the user group. Fees will include the direct costs associated with the activity and overhead expenses.
2. School buildings and equipment will not be rented to citizens for private parties or activities.
3. This policy does not disqualify the use of school facilities by religious organizations. However, religious organizations will not be permitted to establish their primary place of worship at school facilities.
4. The categories of groups and the fee schedule shall be available in the School Department. Fees will be assigned according to the following groups:

Group A: Recognized school or civic groups based in Shrewsbury but not necessarily established as non-profit organizations (e.g., PTO, school councils, Music Association, Shrewsbury Child Development Committee, Shrewsbury Alumni Association, etc.).

Group B: Non-profit groups (e.g., all Shrewsbury youth sports groups, churches and all other groups classified under section 501(c) 3 of the IRS tax code) with a majority of the participants residing in Shrewsbury.

Group C: For-profit groups (e.g., Amway, private dancing schools, theater groups) and non-profit groups that have fewer than half of the participants residing in Shrewsbury (Scottish Festival, colleges, armed forces, etc.).

Group D: For-profit camps (e.g., basketball and soccer camps)

5. The School Department requires that adequate staff be scheduled to ensure the security of the building and to provide for expeditious cleaning. The terms of existing labor contracts will be consulted when hiring staff.
6. All user groups shall save and hold harmless the Shrewsbury Public Schools and its officers and employees and assume responsibility for all liabilities arising from incidents as a result of use of the facilities.
7. The School Department reserves the right to schedule events in the facility that is most appropriate, given the size of the group and nature of the activity.

Regulations

All user groups will adhere to the "Regulations Governing Use of School Facilities." The School Committee reserves the right to limit or exclude the use of school facilities by any group that violates one or more of the regulations.

Use of Funds

Funds received in connection with the rental of school facilities will be deposited into a separate revolving account. Such funds will be used to pay the associated costs of the activity (e.g. custodial fees) and/or make building repairs, replace worn equipment, or offset the costs for energy and custodial supplies.

Review

The School Committee will review the fee structure for the use of school facilities on an annual basis.

Adopted 10/8/69
Amended

10 October 2017

AGENDA Building Systems Program

Beal Project Brief Overview

I. GENERAL
- For 750 – 790 student elementary school, full school program during the summer
- Expected to be new construction, 2-story
- Planned to be used year round

II. MECHANICAL SYSTEMS
- Building to be air conditioned
- Preferred heating/ventilating systems: chiller vs. RTUs
- Manufacturer requests: boilers, controls, RTUs, etc.
- Confirm gas as primary energy source
- Preferred boiler room location, level of access to ext./int. of school
- Servicing requirements: roof access, filter changing

III. PLUMBING SYSTEMS
- Manufacturer requests: fixtures, fittings, etc.
- Review low water usage/ hands free requirements: urinals, toilets, sinks, battery vs. hardwired sensors, water bottle drinking fountains
- Confirm if sand and gas traps have specific requirements

IV. FIRE PROTECTION SYSTEMS
- Water pressure in various sections of town
- Any unique requirements (dry system, standpipes, etc.)

V. ELECTRICAL SYSTEMS
- Extent of emergency power
- Generator preference
- Opportunities for grant programs through SELCO
- Photovoltaic interest

VI. IT
- Confirm extent of fiberoptic availability in town
- Interactive whiteboards/projectors
- Confirm wireless throughout with 1:1 objective
- Hardwired requirements
- Review standardized testing requirements
- Preferred manufacturers: network, servers, wireless access points
- SELCO Cable requirements

10 October 2017

AGENDA Building Systems Program

VII. TELECOMMUNICATIONS SYSTEMS
- Telephone system/PA
- Call assistance/lockdown
- Fire/Police communications
- Elevator telephone

VIII. SECURITY
- Confirm access control strategy
- Confirm camera system coverage (extent of exterior, corridors, connections to police station, etc.)

IX. SUSTAINABLE DESIGN
- Confirm LEED vs. NE-CHPS
- Confirm approach (cost/benefit analysis)
- Community involvement

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

MEMO OF PROGRAMMING MEETING
BUILDING SYSTEMS

10 October 2017

ATTENDANCE: Bob Cox, Superintendent of Public Buildings
Brian L'Heureux, Director of Information Technology
Bruce Card, Deputy Chief, Shrewsbury Fire Department
James Vuona, Chief, Shrewsbury Fire Department
Jay Hester, Chief, Shrewsbury Police Department
Patrick Collins, SPS, Asst. Superintendent for Finance & Operations
Chris Girardi, Principal, Beal Early Childhood Center
Robbie Burnett, ART Engineering
Kevin Seaman, Seaman Engineering
Kathryn Crockett, LPA
Sean Brennan, LPA

ITEM:	DESCRIPTION:	RESPONSIBILITY:
10.10.17.01	**GENERAL OVERVIEW OF BUILDING** Katie gave quick overview of the status of the design and reported that the town is anticipating the new school to be ±120,000 sq.ft. Given the year round use and recent implementation of air conditioning at other schools, the town would like the new building to be fully air conditioned. LPA understands the town wants to study sustainable design options and reported on recent implementation of several different sustainable solutions. Since Shrewsbury's electrical company is owned by the municipality, the design team will need to work closely with them to understand the viability of certain systems and if there are any rebate programs being offered. There will be a separate program meeting dedicated to sustainable design at a later date.	
10.10.17.02	**PROPRIETARY EQUIPMENT LIST & PREFERRED BUILDING COMPONENTS** Below is a list of items that will be proprietary for the project: • Cleaver Brooks Clear Fire Boilers [Natural Gas Only] • Sloan Flushometers • Sargent Locksets [Jim Harper – Company Rep.] • Epson short throw projector [model to be provided] • Aerohive Wifi • Cisco Network • Rawlings with Telecenter lockdown security • Brivo Access Controls • Security Camera External Login Interface [Company to be provided] Below is a list of preferred building components to serve as a basis of design: • EFCO Windows & Doors • Redundant Domestic Hot Water System [Not PVI] • EPDM Roofing 75 or 90 Mil Thickness/Built-Up Roof • Carpeting: Tandus or C&A	LPA

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	• Stair Treads: One piece tread and riser similar [Norament] • Stair Handrails: Stainless steel double height rails • Ceramic tile in Corridors, Lavatories, Cafeteria • Flooring: Polished Concrete or Forbo Marmoleum	
10.10.17.03	**MECHANICAL SYSTEMS** Town would like to zone the systems in a manner that would allow them to condition only certain spaces during off hours to cut down on energy costs. It would also be the town's preference to not rely on a single system for either heating or cooling, i.e. chiller system, so if a failure ever occurred or maintenance is needed only a small portion of the building would be offline. This will be reviewed in greater detail as the design progresses. The mechanical engineer feels as though given the scale and desire for full air conditioning that a displacement system would work well for this school. The design team recently implemented a full air conditioned displacement system at Nelson Place Elementary School and would be willing to setup a tour to see the system in use. Nelson Place also utilized super insulated envelope to help reduce the sizes/loads of the mechanical units. Other systems will be studied as the design progresses so the owner can make an informed decision. The town prefers the flexibility that roof top units offer, however team will study others as well so owner can make informed decision. Natural Gas powered heating/cooling equipment is required Walk up roof access similar to Sherwood is highly desirable Mechanical Room should be at grade level with exterior access that would not disrupt daily operations. Exterior access point should be large enough to accommodate replacement of any system components, i.e. double door vs. overhead door. This will be reviewed in greater detail as the design progresses.	LPA
10.10.17.04	**PLUMBING SYSTEMS** If utilities are not available at prospective alternative sites, Town anticipates it would bring in and/or upgrade infrastructure to bring in all town utilities: water, sewer, gas, electricity. This factor will need to be given extra consideration when evaluating alternative sites. Town would like to avoid the use of any electrical triggers for flushometers and faucets. Both fixtures should be trigger manually and the sinks will be spring loaded. Drinking fountains should have bottle fillers. Custodial area should have sink, toilet, and shower. LPA recommends that a shower be included somewhere in the school	LPA

MEMO OF PROGRAMMING MEETING
BUILDING SYSTEMS

10 October 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
10.10.17.05	**FIRE PROTECTION** Fire Department reported that they have certain thread sizes that should be coordinated at a later date. Elevator shaft should have a sprinkler head and/or heat detector in the elevator shaft. The building should have full perimeter access and be wide enough for the Fire Department's apparatuses. Standpipe connections should be provided in all stairs and on the roof. CO detectors will be required in certain locations if natural gas is utilized. The signaling for these detectors will need to be supervisory at a minimum; final decision on signal type to made at a later date.	LPA
10.10.17.06	**ELECTRICAL** At a minimum, the following items to be on emergency power: • Life safety • Security Systems • Data Closets • Mechanical • Select Administrative Areas • Freezer/cooler • Communication systems A diesel powered generator should be specified. The town would like to revisit whether any type of "shelter" designation will be sought for this school. The town felt as though the location of the new school will have a significant factor in this decision. Currently Oak Middle is the town's Main Shelter location with the High School as a back-up. The Senior Center is designated as a "warming center" in times of need. Signal repeaters were discussed and does not appear that it will be pursued for cellular devices but may need to be implemented for walkie talkies used by the school. Town is interested in seeing the cost analysis for photovoltaics, however, does not want placement of them on the roof due to maintenance issues. Incentives/ rebates offered by town electric company will be a significant factor in this decision.	LPA
10.10.17.07	**INFORMATION TECHNOLOGY** Town currently uses an Epson short throw projector at all the elementary schools and would want this item to be proprietary. Town IT department to review whether projector will interface with apps/tablets currently being used at Beal.	Brian L'Heureux LPA

MEMO OF PROGRAMMING MEETING
BUILDING SYSTEMS

10 October 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	Town IT department to research and report back on audio amplification systems to be used in classrooms; this will help determine if this item will need to be proprietary or not. Wifi system utilized by the town district wide is Aerohive and will need to be proprietary. Network system utilized by the town district wide is Cisco and will need to be proprietary. There will not be a server located at the new school. Town is centralizing their server infrastructure offsite. State mandated digital testing for 3rd graders will take effect in 2019. All IT components should be planned to have capacity to handle 1:1 technology allocation. This will be reviewed in greater detail as the design progresses. At this current time, the town would like to see two 2-jack plates per wall for a total of 16 standard wall drops per room, in addition to the 2 ceiling AP, 2 projector, and phone drops. Town would like CAT6A wiring to be specified. Given the robust nature of technology in schools today in addition to their continued upkeep it is advantageous to have a dedicated IT office at the school.	
10.10.17.08	**TELECOMMUNICATIONS** ART Engineering suggested that the town IT Department formalize their standards & proprietary items in a document that can be referenced in the specifications to avoid any conflicts and/or missing information. Below are some of the items recorded during the meeting NEC (proprietary) is tied into the rest of the town Voice over IP handsets Separate PA & Phone Handsets are programmed for dialing out as either restricted or unrestricted. Elevator phone will ring to the Police Department dispatch. Fire Department would like a phone on the ground level that can cut in to the elevator car communications line. This will allow them to communicate directly with the car when they are on site. Fire Department & Police department each have their own separate communications systems that will require their own antenna and possibly their own repeaters.	Brian L'Heureux LPA

MEMO OF PROGRAMMING MEETING
BUILDING SYSTEMS

10 October 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	There should be a direct line to dispatch through the utilization of a radio phone.	
10.10.17.09	**SECURITY** Current security protocol is to allow any teacher to trigger a lockdown. The system utilized for this is Rawlings with telecenter and will need to be proprietary. IT department to see if call assurance can be tied into the PA system. Both the Fire Department & Police Department have the ability to log into security camera system through a proprietary interface system. Access controls system is a proprietary system called Brivo. It interfaces with standard HID fob technology. The location of these controls will be reviewed in greater detail as the design progresses. Group agreed that intrusion detection throughout the ground floor at this time makes the most sense and will revisit as the design progresses. Cameras will be located at all exterior doors, interior corridors, and toilet room entrances. Town currently utilizes a classroom lockset that has a separate interior lockdown key. Lockset function will be review and approved at a later date Police department recommended that some type of additional barrier to be added at the main entrance to prevent an intruder from simply breaking through layers of glass. This will be reviewed in greater detail as the design progresses.	LPA
10.10.17.10	**SUSTAINABLE DESIGN** There will be a meeting at a later date to further discuss sustainable design features. At this time the town does not have a particular preference as to which sustainable design criteria they should follow. MSBA requires that either NE-CHPS or LEED V4 be utilized; LPA to report back on the pro's and cons.	LPA

Memo by: Sean Brennan, LPA
cc: Attendees

27 October 2017

AGENDA Arts Program

Beal Project Brief Overview

I. GENERAL
- For 790 K-4 student elementary school, full school program during the summer
- Preliminary status of program development: Schematic Design will revisit in much greater detail
- MSBA Arts Allotment:
  (2) Art Rooms (1000sf) with Storage (150sf)
  (2) Music Rooms (1200sf)
  (5) Music ensemble Rooms (75sf)
  Stage (1000sf)
- Wireless fully throughout school, interactive projectors in each instructional space
- Outside organization use of Arts spaces

II. OVERALL ORGANIZATION
- Desired adjacencies
  Art/Music
  Music/Stage
  Lobby/Art/Music
  Media Center
- Cafeteria/Stage vs. Gymnasium/Stage
- Art/Music interface with general curriculum at elementary level

III. ART PROGRAM
- Typical class size
- Curriculum needs
- Level of technology
- Display
- Kiln
- Specialty storage requirements

IV. MUSIC
- General classroom requirements/curriculum
- # choral participants
- # band/orchestra participants
- Music lessons/practice
- Assembly performance requirements

27 October 2017

AGENDA Arts Program

V. OTHER
- Confirm whether or not theater program
- Community/after school requirements

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

MEMO OF PROGRAMMING MEETING
ARTS PROGRAM

27 October 2017

ATTENDANCE: Amy Clouter, Asst. Superintendent for Curriculum and Instruction, Administration
Chris Girardi, Principal, Beal Early Childhood Center
Thomas O'Toole, Director of Performing Arts
Pamela LeBlanc, Director of Visual Arts
Kathryn Crockett, LPA
Sean Brennan, LPA

ITEM:	DESCRIPTION:	RESPONSIBILITY:
10.27.17.01	**GENERAL OVERVIEW OF BUILDING** Katie gave quick overview of the status of the design and reported that the town is anticipating the new K-4 school to be ±130,000 sq.ft. Given the year round use the new building is anticipated to be fully air conditioned. The project is also being design to have the capacity for future implementation of 1:1 technology with full wireless coverage throughout the building. As preliminary space summary template was distributed and the procedures for modifications was explained. The project is in the preliminary stages of design and the meeting today will cover bigger picture items [adjacencies, locations, operation, programs, etc.]	
10.27.17.02	**OVERALL ORGANIZATION** • The Directors both agreed that the art and music spaces should be part of the shared core common spaces. • Music Classroom should be adjacent to the stage so they can be utilized as green/dressing room for performances and events. • Group discussed the location of the stage at length and agreed that it would be desirable to have the stage off of the cafeteria as long as proper space & storage is allocated to the extended day program. This allocation of space & storage will prevent the extended day program from taking over the stage as administrative/storage space for their program allowing the stage to be readily available for use during the day. Having the stage off the Cafeteria also allows for the stage to be utilized as a flex space since it will have an operable partition to separate it from the cafeteria itself and can also be utilized outside of lunch periods. The gymnasium would not afford this same flexibility due to scheduling of the Gym itself. • There is a need for space for art shows. These shows typically involved community participation. The larger corridor space outside of the Art Rooms at Sherwood are not utilized for this purpose or during classes due to the logistics of setup/breakdown between each class period.	Katie Crockett Sean Brennan

MEMO OF PROGRAMMING MEETING
ARTS PROGRAM

27 October 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	• There are currently no cross curriculum activities between the Music & Visual Arts Departments. There is also no Theatre program currently at the elementary level. • Shrewsbury has implemented "Maker Spaces" in their other schools and anticipates one being implemented at the new school.	
10.27.17.03	**VISUAL ARTS PROGRAM** • Size of classroom and storage at Sherwood would be sufficient. Does not anticipate needing more than two classrooms to serve a school of this size. Whether the storage is shared or not will be discussed as the design progresses. Storage should be off the classrooms and not off the corridor. • Visual Arts Director would like to explore options of creating stronger physical connections between the two Art rooms. For example, Floral Street has a set of double doors connecting many of their classroom allowing collaboration. The downsides to this type of application is loss of wall space for storage/pinning up and the compromise in the acoustical separation between the rooms. • The program will require the installation of a Kiln. The location of the kiln will need to be worked through with the fire department to ensure no issues arise after occupancy. This may require the kiln being place in its own room separate from Art Storage.	Katie Crockett Sean Brennan
10.27.17.04	**MUSIC PROGRAM** • The Music program includes Chorus, Kodaly [dance/movement element], and Orff instruction. There is cross curriculum collaboration between the Music Department and the Physical Education Department. • Given the dance/movement element of the Kodaly program the general classroom will need to be 1500 sq.ft. which is slightly larger than the space summary allotment. • The school district has a very strong after school musical instrument instruction program. The program currently has ±415 students enrolled and is currently at capacity. Individual lessons occur in the general classrooms at their respective schools. This use of classrooms has served the district well and would alleviate the need for individual practice rooms. This space can be allocated to enlarge the base classrooms. • The Music rooms will all need to have a sink for cleaning of instruments. The rooms should also be carpeted and have	Katie Crockett Sean Brennan Thomas O'Toole

MEMO OF PROGRAMMING MEETING
ARTS PROGRAM

27 October 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	sufficient instrument storage. Music Director to provide list of equipment/instruments that will need to be stored. Desirable to have storage shared between the two classrooms. • Given the Curriculum there are not many requirements for furniture in the classrooms. There will need to be chairs for teachers/aides, two music stands, electronic keyboard for the teacher, file cabinets for music storage, risers for the choral program, and cart of music stands for performances. Chairs for the students are not needed under the current curriculum. • All 4th Graders are required to participate in Chorus. This would put the Choral program at ±200 students. The stage and risers should be planned for 100 students to allow for two sections to perform together. • The future of the music program anticipates the use of a technology area. This area would include space for four 61-Key Electronic Keyboard units. Could be as simple as a counter wired with power for the units. • The district also offers Orchestra starting halfway through the 4th Grade and Band starting in the 5th Grade. The two music classrooms would be sufficient to serve a school of this scale and would offer the opportunity to offer Band/Orchestra to lower grade level which is an anticipated growth pattern for the Music Department. The long term goals would be to start orchestra in the 3rd Grade and band in the 4th Grade.	Katie Crockett Sean Brennan Katie Crockett Sean Brennan

Memo by: Sean Brennan, LPA
cc: Attendees

2 November 2017

AGENDA K-4 Organization

Beal Project Brief Overview

I. GENERAL
- For 790 K-4 student elementary school, full school program during the summer, strong extended learning program
- Preliminary status of program development: Schematic Design will revisit in much greater detail
- MSBA Space Template (± 130,000 sf, similar in size to Sherwood Middle)
- Wireless fully throughout school, interactive projectors in each instructional space

II. OVERALL ORGANIZATION

- Academic organization: by grade, by clusters,
  Typical classrooms/SPED (inclusion and substantially separate)/toilets/common rooms/teacher planning
- Centralized administration vs. distributed
- Core facilities: gym, cafeteria, media center
- Art/Music locations
- Stage at gym vs. cafeteria
- Media Center as centralized space vs. distributed
- Other than extended learning, any district wide programs

III. SITE
- Play areas/recess
- Bus pick up drop off /building entry
- Parent pick up drop off /building entry

IV. OTHER
- Survey K-4 staff

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

MEMO OF PROGRAMMING MEETING
K-4 ORGANIZATION

2 November 2017

ATTENDANCE: Amy Clouter, Asst. Superintendent for Curriculum and Instruction, Administration
Chris Girardi, Principal, Beal Early Childhood Center
Wendy Bell, Principal, Walter J. Paton School
Lisa Robinson, Principal, Parker Road Preschool
Tiffany Ostrander, Interim Principal, Calvin Coolidge School
Lisa McCubrey, Principal, Floral Street School
Brian Mabie, Principal, Spring Street School
Kathryn Crockett, LPA
Sean Brennan, LPA

ITEM:	DESCRIPTION:	RESPONSIBILITY:
11.02.17.01	**GENERAL OVERVIEW OF BUILDING** Katie gave quick overview of the status of the design and reported that the town is anticipating the new K-4 school to be ±130,000 sq.ft. Given the year round use the new building is anticipated to be fully air conditioned. The project is also being design to have the capacity for future implementation of 1:1 technology with full wireless coverage throughout the building. As preliminary space summary template was distributed and the procedures for modifications was explained. The project is in the preliminary stages of design and the meeting today will cover bigger picture items [adjacencies, locations, operation, programs, etc.]	
11.02.17.02	**OVERALL ORGANIZATION** • The principals agreed that limiting the number of floors that any one student would have to transition to one level on any given day. This would translate to a school of two stories or a school with three levels where all the shared core common spaces are on the middle level. • The principals are familiar with the concept of "common rooms" since they were implemented in the design of Sherwood Middle. These "common rooms" help break down the scale of a large building which is very important with a school of this scale. They also allow opportunities for project based learning, individual instruction, & multipurpose activities • The configuration of the school should to the greatest extent not create any inequity between clusters/wings and should facilitate good flow between these spaces.	Katie Crockett Sean Brennan
11.02.17.03	**CLASSROOMS** • The new school is anticipated to have 40 general classrooms [5 grade levels of 8 classrooms each]. This number of classrooms is support by the School Committee's policy on teacher to student ratios. The details of fixtures, furnishings, and equipment will be covered in greater detail later on in the design process. Some	Katie Crockett Sean Brennan

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	items that came up in discussions included core academic classrooms all having day light, smart boards, sinks, and communicating doors. • General Classrooms range from 900-1000sq.ft. Kindergarten classrooms range from 1100-1300 sq.ft. [Includes a bathroom]. The size and allocation of special education classrooms will need to be determined after the district calculates the need and after the special education meeting is held. Special education rooms can be the same size a regular classrooms to further enhance flexibility of assigning spaces. As a reference the classrooms at Sherwood are ±900sq.ft. • The group discussed the distribution/clustering of classrooms and felt that allowing for flexibility in classroom assignments is vital to handling a bubble that may come forward and cross grade teaching opportunities. With this in mind the group reach consensus that the kindergarten classrooms should be allocated to the "main level" [Level with Share Core Common Spaces] but not all clustered together. Future education models are trending towards grade integration and would like to maintain this flexibility to the greatest extent possible. The classrooms should also be clustered round a "common space" in groups of ±4-5 [including special education].	Katie Crockett Sean Brennan
11.02.17.04	**SHARED STAFF RESOURCES** • The concept of a "knuckle" of shared spaces between "clusters" resonated with the group. This "knuckle" would include staff planning, student/faculty toilet rooms, teacher work rooms, etc. • Staff planning rooms would need to accommodate ±15 people for weekly staff meetings. School wide staff meetings are held monthly.	Katie Crockett Sean Brennan
11.02.17.05	**SHARED CORE SPACES** • There is consensus that all of the shared core spaces should be centrally located and capable of being accessed during off hours while prohibiting access to the academic wings. • The group agreed that the gymnasium, cafeteria, media center, art, and music shall all be considered part of the shared core spaces. • The group agreed that it would be advantageous to have an area in the media center to allow for large meetings [4 Classrooms – 80 ppl]	Katie Crockett Sean Brennan

MEMO OF PROGRAMMING MEETING
K-4 ORGANIZATION

2 November 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	• The district has strong program where students put on shows/performances for the community to view and should be planned for accordingly. These programs include special projects, art shows, chorus, and band. • The MSBA includes a stage as part of the space summary template. The group felt that having the stage of the cafeteria would allow the greatest amount of flexibility and utilization rather than putting it off of the gymnasium. Storage & Administrative space for the extended day program will need to be included to avoid this program taking over the stage area. • The space summary assumes two seatings for lunch which should be appropriate for serving lunch, supporting the extended day program, and holding special events. The furniture should be age appropriate and be able to be changed over fairly quickly to accommodate other uses. • The cafeteria will need to have direct access to an outdoor recess area.	Katie Crockett Sean Brennan
11.02.17.06	**OUTDOOR PLAY AREAS** • The town offers recess for student both during and outside of lunch time. These spaces will need to be separate from each other. Kindergarten will not have its own play area. Confirm number and location of play areas. • A blacktop area is preferable for the play area immediately adjacent to the cafeteria • The implementation of play structures at school has historically been on the shoulders of the PTO at each school. Whether the play structures are included in the scope or not spaces will need to be allocated for this use.	Katie Crockett Sean Brennan
11.02.17.07	**ADMINISTRATION** • The group felt strongly that the administration should be centralized to facilitate communication among members of the administration. • Sherwood had some of the administrative/staff offices distributed throughout the school. This model for some of the specialized staff may be desirable and will be discussed further as the design progresses.	Katie Crockett Sean Brennan
11.02.17.08	**STAFF SURVEYS** • Surveys were discussed briefly and the town asked that LPA provide a sample of the survey for their review.	Katie Crockett Sean Brennan

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

MEMO OF PROGRAMMING MEETING
K-4 ORGANIZATION

2 November 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	• District is currently preforming surveys on separate matters at the moment and would like to wait until those are completed before sending out a new one.	

Memo by: Sean Brennan, LPA
cc: Attendees

7 November 2017

AGENDA Physical Education

Beal Project Brief Overview

I. GENERAL
- For 790 K-4 student elementary school, full school program during the summer, strong extended learning program
- Preliminary status of program development: Schematic Design will revisit in much greater detail
- MSBA Space Template (± 130,000 sf, similar in size to Sherwood Middle)
- Wireless fully throughout school, interactive projectors in each instructional space

II. PE/Health
- Assumed core facility with close access to main entry

- MSBA PE/Health allotment:
  Gym 6,000sf (Sherwood= 8500sf; Floral = 7,000sf)
  Gym Storeroom 150sf
  Gym office/shower 150sf
- MSBA recently issued a policy memo on Gymnasiums and the following is an excerpt:
  "The district may choose to build a gymnasium and related spaces in excess of MSBA guidelines, but in no event shall the gymnasium itself exceed 12,000 nsf. The MSBA will participate in a gymnasium up to no more than 6,000 nsf, unless adjusted by the MSBA to increase teaching stations for enrollment and/or the education plan."
- PE/health curriculum overview
- # PE stations required (# students per class/# classes per week/#teachers)
- Confirm no locker rooms
- Adaptive PE requirements
- Health Classrooms requirements
- Community Use storage
- Assembly Use requirements (bleacher capacity, projection, etc.)
- Use of gym for parent pick up/drop off

III. SITE
- Play areas/recess
- PE facilities required (fields, outdoor storage, challenge course, etc.)
- Impact of year-round use

IV. OTHER

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

MEMO OF PROGRAMMING MEETING
PHYSICAL EDUCATION & HEALTH

11 November 2017

ATTENDANCE: Amy Clouter, Asst. Superintendent for Curriculum and Instruction, Administration
Chris Girardi, Principal, Beal Early Childhood Center
Debra Garcia, Director of Physical Education and Family & Consumer Science
Noelle Freeman, BSN, RN, NCSN, Director of Nursing
Kathryn Crockett, LPA
Sean Brennan, LPA

ITEM:	DESCRIPTION:	RESPONSIBILITY:
11.07.17.01	**GENERAL OVERVIEW OF BUILDING** Katie gave quick overview of the status of the design and reported that the town is anticipating the new K-4 school to be ±130,000 sq.ft. Given the year round use the new building is anticipated to be fully air conditioned. The project is also being design to have the capacity for future implementation of 1:1 technology with full wireless coverage throughout the building. The project is in the preliminary stages of design and the meeting today will cover bigger picture items [adjacencies, locations, size, programs, etc.]. Later on in the design process space specific details will be discussed and recorded on "Room Data" sheets showing all the require fixtures, furnishings, equipment, etc. needed to support the space. MSBA Policy: "The district may choose to build a gymnasium and related spaces in excess of MSBA guidelines, but in no event shall the gymnasium itself exceed 12,000 nsf. The MSBA will participate in a gymnasium up to no more than 6,000 nsf, unless adjusted by the MSBA to increase teaching stations for enrollment and/or the education plan."	
11.07.17.02	**GYMNASIUM LOCATION/ADJACENCIES** • There is consensus that the gymnasium should be part of the "shared core spaces". The "shared core spaces" will have the capability of being accessed during afterhours while prohibiting visitors from accessing the academic wings. • Accessing outdoor playfields and facilities is an essential part of the Physical education program. Therefore, direct access to the exterior off of the gymnasium is highly desirable.	Katie Crockett Sean Brennan
11.07.17.03	**GYMNASIUM SIZE/CAPACITY** • School Department to run numbers on the number of sections [P.E. & Adaptive P.E.] required for a school of this scale. Preliminary estimates look like 2 teaching station in the gymnasiums would be able to support a school of this scale based on current curriculum offerings. • There is consensus that a gymnasium similar in scale to that of Floral Street School will serve the school/district well. Floral Street School's gymnasium is ±7,000 square feet. There is a	Amy Clouter

MEMO OF PROGRAMMING MEETING
PHYSICAL EDUCATION & HEALTH

11 November 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	desire to hold school wide gathering in the gymnasium and school have the capacity for the both the student body and the faculty/staff. Achieving this level of capacity also supports the district's current pattern of group special events consisting of no more than two grade levels, their associated family members, and faculty/staff. LPA to run the calculations to see what size gymnasium will be needed to achieve this level of capacity and the associated code implications.	Katie Crockett Sean Brennan
11.07.17.04	**GYMNASIUM REQUIREMENTS** • Storage will need to be larger than the space summary allotment. Sherwood P.E. storage is ideal, Floral Street P.E. Storage would be adequate if office was not also in the storage area. Director to send list of all equipment used indoor & outdoors. • No shower required for gym office. • The district has no interest in having locker rooms and there are none at any of the other elementary schools. • All of the schools in the district have a rock wall as part of the Physical education program. The type/scale of the rock wall that should be implemented at the new school should be similar to that of Coolidge or Floral Street School. • No particular requirements needed for the court size, same size court as Floral Street would be adequate. There should be 6 adjustable hoops to allot for two have court configurations to run simultaneously. The court should have the capability to receive volleyball standards and lined accordingly. The space should also have bleachers • Audio visual requirements to include a large projection screen, sound system with a public address system. Appears to be consensus that a portable projection unit with floor outlet will serve the school best. • All controls should be under key control to limit damage that could be caused by improper operation, i.e. hoops, divider, screen, lights, etc. • Acoustics of the space are paramount if the space is to be used for dismissal and/or assembly use.	Debra Garcia Katie Crockett Sean Brennan

MEMO OF PROGRAMMING MEETING
PHYSICAL EDUCATION & HEALTH

11 November 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
11.07.17.05	**OUTDOOR PHYSICAL EDUCATION REQUIREMENTS** • All outdoor spaces should be located in a way to limit, if not completely avoid, having to cross a vehicular drive/road to ensure student safety. When outside teachers utilize walkie talkies and measure should be taken to ensure that the radios will work at all locations accessed outdoors by students/staff. There is no need to outdoor storage. • A large play field similar in size to Floral Street School [120'x180'] would be adequate in supporting the Physical Education curriculum and a school of this scale. The field should be located in a way that it is "separate" from the recess area. • An outdoor blacktop area is also utilized as part of the curriculum. This space can be the same one utilized for recess and should be sized accordingly. An outdoor fenced in Basketball area is desirable; no bleachers are needed.	Katie Crockett Sean Brennan
11.07.17.06	**HEALTH PROGRAM REQUIREMENTS** • Health is currently offered only to the 4th grade at the elementary level. Given the current assumption about the number of sections needed for each grade level, the 4th grade would have a total of 8 sections. Fourth Grade Health is offered once a week at each elementary school. Therefore based on current curriculum and number of 4th grade sections it will take two weekdays to satisfy the program. School district to review and report back on future needs/direction of the program to help inform how and where it is represented in the new school • The health program staff are shared throughout the district and are carried out in a typical classroom. If the curriculum where to expand and be conducted by each school respective P.E. teachers then there may be a desire to have a classroom space adjacent to the gymnasium to conduct the health program. Otherwise it may be advantageous to have the classroom near the fourth grade or adjacent to the media center with it serving a dual use space.	Amy Clouter Katie Crockett Sean Brennan
11.07.17.07	**NURSING SUITE** The group quickly discussed the programming aspects of the Nurse's suite and the following items came out of that discussion: • Nursing Suite should be part of the central administration • Adjacency to life skills is desirable however acoustical separation is paramount to prevent disruption.	Katie Crockett Sean Brennan

MEMO OF PROGRAMMING MEETING
PHYSICAL EDUCATION & HEALTH

11 November 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	• Other adjacencies considered included the gymnasium and play areas • Nursing Director is very interested in further discussing the layout and amenities, particularly the toilets • The opportunity of a shower somewhere in the school was discussed and that consideration for inclusion in the nursing suite should be considered.	

Memo by: Sean Brennan, LPA
cc: Attendees

13 November 2017

AGENDA STUDENT SUPPORT SERVICES

Beal Project Brief Overview

I. GENERAL
- For 790 K-4 student elementary school, full school program during the summer, strong extended learning program; 100% air conditioned
- Preliminary status of program development: Schematic Design will revisit in much greater detail
- MSBA Space Template (± 130,000 sf, similar in size to Sherwood Middle)
- Wireless fully throughout school, interactive projectors in each instructional space

II. OVERALL ORGANIZATION

- Academic organization: by clusters of about 5- 6 classrooms including inclusion SPED; K distinguished, 1-4 developed for flexibility
- Common Room: option for pull out/meeting space
- 2 clusters sharing: toilets/common rooms/teacher planning
- Centralized administration (SPED coordinator/conference room)
- Core facilities: gym, cafeteria, media center, art/music
- Media Center as centralized space vs. distributed
- Separate SPED bus drop off/pick up planned

III. MSBA Space Summary Template Allotment
- (6) Self-contained SPED w/toilet @ 950sf each + 60sf for toilet
- (4) Resource Room @ 500 sf each
- (2) Small Group Room @ 500sf each

IV. INCLUSION SPED
- Suite vs. full size classrooms
- Quantity/dispersion required
- # students/staff

V. OTHER INCLUSION PROGRAMS (# classrooms, size, adjacency)
- OT/PT
- Speech
- Title One/Reading
- Other

13 November 2017

AGENDA STUDENT SUPPORT SERVICES

VI. SUBSTANTIALLY SEPARATE SPED

- Programs served (District wide vs. elementary level)
- Proposed collaborative programs to return to District
- Ideal locations/# classrooms
- Grade access requirement
- Adjacent toilet room
- # students/staff

VII. ELL

- Projected # students/size of classrooms required
- Distribution in school
- Level of immersion required

VIII. OTHER

- Accessible site needs
- Speech reinforcement systems
- Other accommodations for learning assistance (cochlear implants, physical height, dietary, etc.)
- Administrative support required

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

MEMO OF PROGRAMMING MEETING
STUDENT SUPPORT SERVICES

13 November 2017

ATTENDANCE: Amy Clouter, Asst. Superintendent for Curriculum and Instruction, Administration
Chris Girardi, Principal, Beal Early Childhood Center
Meg Belsito, Director of Special Education & Pupil Services
Meghan Bartlett, Asst. Director of Special Education & Pupil Services
Kathy Lange-Madden, Director of English Language Education
Kathryn Crockett, LPA
Sean Brennan, LPA

ITEM:	DESCRIPTION:	RESPONSIBILITY:
11.13.17.01	**GENERAL OVERVIEW OF BUILDING** Katie gave quick overview of the status of the design and reported that the town is anticipating the new K-4 school to be ±130,000 sq.ft. Given the year round use the new building is anticipated to be fully air conditioned. The project is in the preliminary stages of design and the meeting today will cover bigger picture items [adjacencies, locations, size, programs, etc.]. Later on in the design process space specific details will be discussed and recorded on "Room Data" sheets showing all the require fixtures, furnishings, & equipment needed to support the space. Katie also touched upon the current overall configuration of the building that has come out of the previous programming meetings. These include academic clusters of 5-6 classrooms around a common room, a shared "knuckle" between pairs of clusters that will house teacher planning, toilets, and the "shared common core spaces" [Gymnasium, Cafeteria, Media Center, Music, Art] being located on the "main"/grade level with a centralized administration. Katie reviewed the MSBA space summary in regards to spaces allocated for Student Support Services. MSBA defers their review of Student Support Services to DESE, who will review the appropriateness of the spaces spaces being requested against the written support in the educational statement.	
11.13.17.02	**ESL/ELL PROGRAM** • At the Elementary level there are no dedicated ESL/ELL spaces. Sherwood does however have a dedicated space that is part of the main administration. This space will serve as a precedent for the spatial required for ESL/ELL instruction. The aforementioned space is ±500 square feet and has four tables with chair for 8-10 students. Students are grouped together for instruction based on their needs. • The district has 4% English Language Learners district wide. Thirty-three percent of the district wide population are First Language Not English and at the K-1 level that percentage jumps to fifty-five percent. Given these factors also with other trends observed, the district should take a closer look at projections and report back on anticipated needs.	Katie Crockett Sean Brennan Amy Clouter Kathy Lange-Madden

MEMO OF PROGRAMMING MEETING
STUDENT SUPPORT SERVICES

13 November 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	• The Director anticipates based on current figures that a total of four classrooms should be sufficient in serving a school of this scale [Estimated 80-100 Students]. The classrooms should be dispersed throughout the school with one of them close to the Kindergarten clusters.	Katie Crockett Sean Brennan
11.13.17.03	**INCLUSION SPECIAL EDUCATION** • Due to regulations and staffing class sizes would be best if they are kept to 10-12 students. This required space to support a classroom of this scale would be approximately half the size of a normal classroom with additional storage. • Based on the proposed scale of the school, the district anticipates needing one inclusion classroom per cluster. The current overall school organization is anticipated to have a total of ten clusters resulting in ten inclusion classrooms. This ratio of spaces to inclusion classrooms is in line with the current demographics they are seeing throughout the district. • The group discussed the requirements and allocation of the OT/PT at length using several existing conditions throughout the district as examples. One space that is of sufficient size that was referred to several times is the OT/PT room at Parker Road. There was consensus to carry two spaces at this time with one that will be adjacent to the gymnasium for support of Adaptive Physical Education. Adaptive P.E. is carried out differently depending on the district and will need to clearly define how it will be accommodated for in the new school. Another option discussed was to have two OT/PT classrooms, one near the academic areas with a calming space included. • There should be two spaces allocated to Speech that are large enough for instruction for 4-6 students. One of these rooms should be close to the kindergarten classrooms. • Four Title-I/Reading spaces with space for 4-6 students is being held as a placeholder for now. Director of Title-I/Reading instruction to review. • Given the scale and the population being served at the new school there will be a need for 2 Psychologists; one of those two positions may be an Adjustment Councilor in lieu of a Psychologist. These positions will require and office with space for 2-4 students at a table & chair setting. District & School administration to review the projections to see which positions will be serve the new school. These offices could be part of the central administration or dispersed. In either situation they should be accessible off of a corridor and not require access through another space.	Katie Crockett Sean Brennan Amy Clouter Joseph Sawyer Patrick Collins Katie Crockett Sean Brennan Maureen Henry Katie Crockett Sean Brennan

MEMO OF PROGRAMMING MEETING
STUDENT SUPPORT SERVICES

13 November 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	• The Special Education Administration will need an office for the Site Coordinator and a conference room large enough for 12 people.	
11.13.17.04	**SUBSTANTIALLY SEPARATE SPECIAL EDUCATION** • The majority of students that are part of this program are on the Autism Spectrum. There are also several students are physically & cognitively challenged. There are currently no medically fragile students served by the district. The District has very low incidences where they are not able to serve students and have typically involved students who are deaf or have severe behavioral issues. • There are currently no district wide programs for the substantially separate special education. The District's administration feels as though this could be part of future programming. District to report back on any programs/spaces that would help facilitate this type of programming. • Based on the needs of the new school there was consensus that at this time four full size classrooms with their own toilets and calming areas would serve the new school well. One of these spaces should be adjacent to the kindergarten classrooms. The toilet rooms should have space for a changing table. The calming areas furnishings/appointments will be discussed in greater detail as the design progresses These rooms should be located in such a way that egress from the building during emergency can occur expeditiously. Easy access to playground areas is also desirable.	Katie Crockett Sean Brennan Amy Clouter Joseph Sawyer Patrick Collins Katie Crockett Sean Brennan
11.13.17.05	**OTHER PROGRAM REQUIREMENTS** • Outdoor play areas and structure will be design to ensure it accommodates all students. • The group discussed the option of discrete drop off area for special education students. This area could be separate, adjacent, or integrated into the main bus loop. The idea behind this concept is to allow additional time for loading/unloading of students without impacting the main bus loop. The group did not come to any consensus on this item and currently does not have this feature at any of the other schools in the district.	Katie Crockett Sean Brennan Amy Clouter Joseph Sawyer Patrick Collins

Memo by: Sean Brennan, LPA
cc: Attendees

14 November 2017

AGENDA FOOD SERVICES

I. GENERAL
- For 790 K-4 student elementary school, full school program during the summer, strong extended learning program; 100% air conditioned
- Preliminary status of program development: Schematic Design will revisit in much greater detail
- MSBA Space Template (± 130,000 sf, similar in size to Sherwood Middle)

II. OVERALL ORGANIZATION
- Cafeteria to be used for assembly, extended learning (similar to Floral St.), meals
- Direct access outside to be developed
- Adjacency to main lobby

III. MSBA Space Summary Template Allotment
- Cafeteria (2 seatings) 5,925 sf [Sherwood: 5,500sf for 3 seatings]
- Stage: 1000 sf [Sherwood: 1600sf]
- Chair storage: 463 sf [Sherwood 500sf]
- Kitchen: 2,090sf [Sherwood 2,500sf]
- Staff Lunch Room: 298sf [Sherwood 325sf]

IV. CAFETERIA
- # seatings
- # serving lines/point of sale system
- Specialty dietary seating considerations
- Seating for assembly/types of assembly
- Projection requirements

V. KITCHEN
- menu
- meals served: breakfast, lunch, after school
- dishwash facility (confirm student drop off vs. kitchen only)
- office
- storage considerations (freezer/cooler/dry; government supply programs
- # staff: locker room requirements

VI. OTHER
- Delivery requirements (loading dock vs. grade access)
- Dumpster/trash compactor requirements
- Access to recess area

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

MEMO OF PROGRAMMING MEETING
FOOD SERVICES

14 November 2017

ATTENDANCE: Amy Clouter, Asst. Superintendent for Curriculum and Instruction, Administration
Patrick Collins, Asst. Superintendent for Finance & Operations
Chris Girardi, Principal, Beal Early Childhood Center
Beth Nichols, Food Service Director
Jen Potter, Food Service Manager, Beal Early Childhood center
Ed Arons, Food Service Design Consultant
Kathryn Crockett, LPA
Sean Brennan, LPA

ITEM:	DESCRIPTION:	RESPONSIBILITY:
11.14.17.01	**GENERAL OVERVIEW OF BUILDING** Katie gave quick overview of the status of the design and reported that the town is anticipating the new K-4 school [790 students] to be ±130,000 sq.ft. The three sites under consideration are all in the southern portion of the town. Given the year round use the new building is anticipated to be fully air conditioned. The project is in the preliminary stages of design and the meeting today will cover bigger picture items [adjacencies, locations, size, programs, etc.]. Later on in the design process space specific details will be discussed and recorded on "Room Data" sheets showing all the require fixtures, furnishings, equipment, etc. needed to support the space. Katie also touched upon the current overall configuration of the building that has come out of the previous programming meetings. The "shared common core spaces" [Gymnasium, Cafeteria, Media Center, Music, Art] are currently being planned on the "main"/grade level where student will access these space by traversing only one floor level. The stage will be located off of the cafeteria to allow for it to function as an assembly space. Katie reviewed the MSBA space summary in regards to spaces allocated for Food Services. The template assumes two seatings for lunch at the elementary grade level. This allows for there to be enough space for the cafeteria to also function as an assemble space large enough to house half of the school population.	
11.14.17.02	**CAFETERIA** • The space summary allows for a Cafeteria of ±6,000 sq.f.t. which is large enough to accommodate two seatings. The group discussed the different food service operations at the larger schools in town. For example at Floral Street the food service is handled from 11:00-1:00 via rolling waves of students, typically a cluster at a time [4-5 Classrooms], come in at intervals of 15 minutes. This allows the school to process the students through the servery in a timely fashion and not impeding on their time for recess. Each wave of students has lunch then proceeds to recess then back to class. This type of operation also allows for	Katie Crockett Sean Brennan

MEMO OF PROGRAMMING MEETING
FOOD SERVICES

14 November 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	less staffing as the load on the kitchen is kept to a minimum. The district does not know if this type of operation will be implemented at the new school and would like to given the district the greatest amount of flexibility when it comes to utilization of the cafeteria. • The Food Service Director reported that participation in the lunch program is ±50% and has been at that level for the past 20 years. Based on the proposed population, percentage of participation, desired food line configuration [u-Shaped] and industry standards, the servery is anticipated to have 3 serving lines with three double sided cashier stations. This will give the district flexibility in planning how the food services operations will be conducted. • Since the cafeteria will also be used as an assembly space, it is highly desirable to have a Kitchen/Servery that is self-contained. This can be achieved through the use of overhead coiling doors or other similar architectural strategies. • Based on previous programming meetings the cafeteria will help support the extended day program. Given this use and normal day to day use it is highly desirable to have direct access to an outdoor play area from the cafeteria. The extended day program will need some food storage [refrigerated & dry]. Size requirements of these items to be discussed in greater detail as the design progresses. • Kindergarten lunch service often requires special attention from faculty and staff to ensure smooth operation. This should kept in mind as features of the cafeteria and server are designed. • Cafeteria will need to be equipped with foam stations for sanitation and a water fountain with bottle filling capabilities.	Katie Crockett Sean Brennan
11.14.17.03	**FACULTY DINING** • There was consensus to keep this space at the size determined by the space summary template for a school of this size. The team will revisit this space in greater detail as the design progresses. • Faculty lunch spaces and availability vary widely among schools in the district. Some are utilized quite a bit while other are not and/or not available. This space is also often used as a green room/reception space for the cafeteria.	Katie Crockett Sean Brennan
11.14.17.04	**KITCHEN & SERVERY** • The MSBA space summary template for a school of this scale allots ±2,100 sq.ft. to the Kitchen. The space summary template does not recognize the Servery as a separate space.	

MEMO OF PROGRAMMING MEETING
FOOD SERVICES

14 November 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	• As previously mentioned the anticipated load on food service operations will require 3 U-shaped serving line with 3 doubled sided cashier stations. To get a sense of scale of the serving line the food director stated that each line should be redundant in their offerings, which should include 4-5 cold wells, 4-5 hot wells, refrigerated counter display unit, and 6 linear feet of flat counter. Floral street serving lines were mentioned as a very effective layout.	Katie Crockett Sean Brennan
	• The tray counter should be solid and not tubular and continuous right through to the cashier station. The cashiers need to have a visual of the serving line to help identify/aid student who may be struggling to get through the line. Tray slide height to be verified.	Katie Crockett Sean Brennan
	• The district currently utilizes disposable plates and utensils and anticipates continuing this practice. They are open to alternatives and have research some themselves over the years. The staffing, equipment, & maintenance will have significant influence on the viability of any alternatives.	
	• The district has implemented composting programs on a very limited scale at several of its schools. The district also once had contracts with local farms for food waste but the vendors ultimately failed to hold up their end and resulted in the district having to dispose of the food rotting that had piled up due to missed pickups themselves. A compactor and dumpster similar to Sherwood should be implemented at the new school. The group discussed several pieces of equipment that can help reduced the amount of waste via water extraction, accelerated composting, etc. The Food Service Design Consultant to provide cut sheets on the products discussed. The staffing, equipment, & maintenance will have significant influence on the viability of any alternatives.	Ed Arons
	• Since the student population at the new school will be between that at Floral [750] and Sherwood [900], the design team asked that the Food director review both those layouts/configurations and report back on what works well and what needs to be improved. The water filtration system at Sherwood was noting as a highly desirable feature. The dry storage on the other hand was noted as not being adequate in size.	Katie Crockett Sean Brennan Sean Brennan
	• LPA to provide digital floor plans of both spaces to the Food Service Director and the Food Service design Consultant.	
	• Kitchen Toilet Rooms & Lockers are a code requirement and cannot be eliminated. Development and positioning of toilet rooms could provide dual use of these facilities by either janitorial and/or teaching staff.	Katie Crockett Sean Brennan

Beal Early Childhood Center

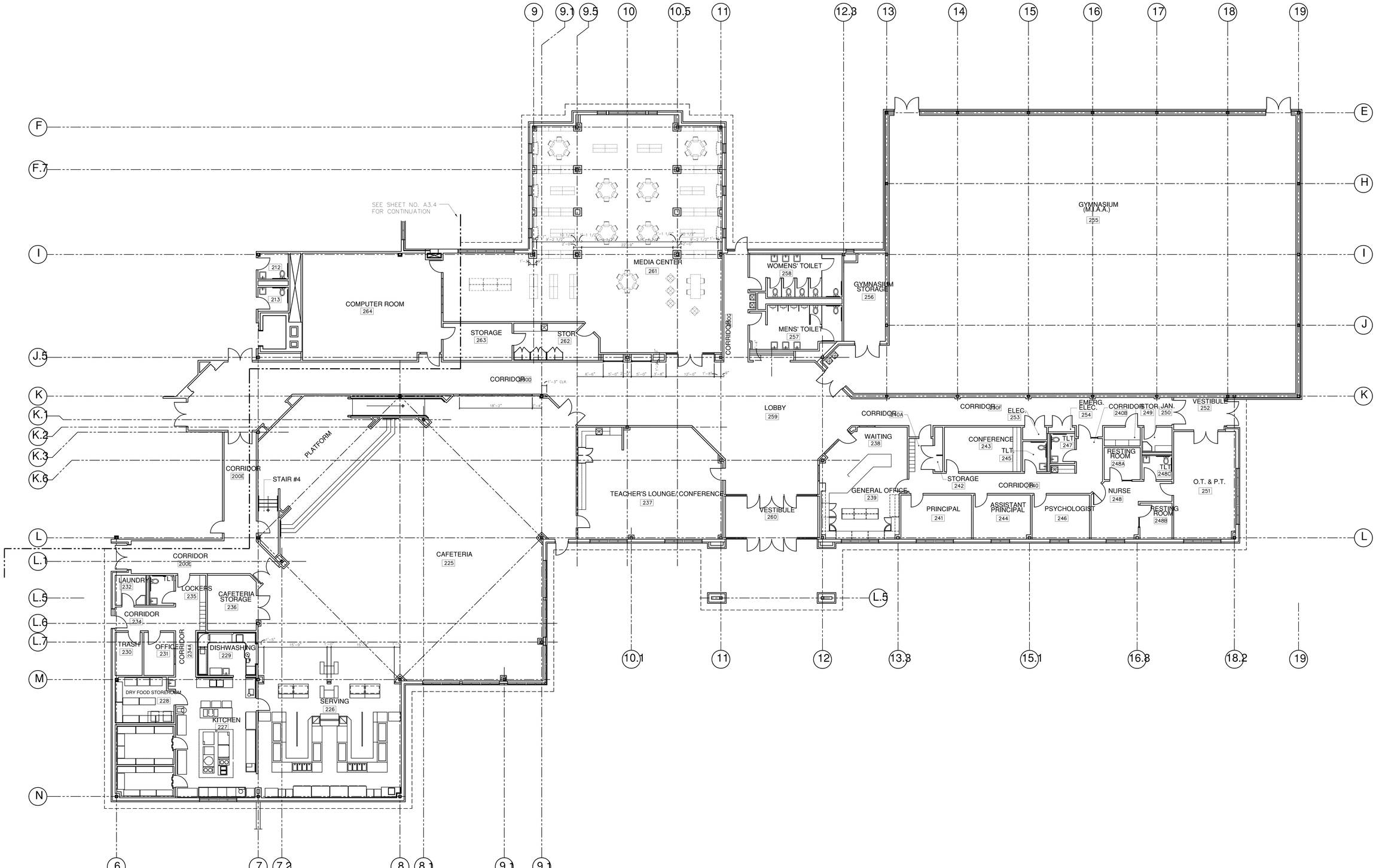
1 Maple Avenue, Shrewsbury, MA 01545

MEMO OF PROGRAMMING MEETING
FOOD SERVICES

14 November 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	• The district would like to see a loading dock for deliveries. Provide space for both a trash compactor and a dumpster. Direct communication between exterior loading dock and kitchen may be required depending on location to coordinate deliveries. • Food Services anticipates a staff of approximately 6 people. The menu includes a decent amount of fresh produce requiring prep and convection ovens do a majority of the cooking workload. Food Director to assemble equipment list.	Beth Nichols Jen Potter

Memo by: Sean Brennan, LPA
cc: Attendees



LAMOUREUX · PAGANO ASSOCIATES, ARCHITECTS
56 EAST WORCESTER STREET, WORCESTER, MA 01604

REGISTERED ARCHITECT No. 2637 WORCESTER MASS. COMMONWEALTH OF MASSACHUSETTS

REGISTERED ARCHITECT No. 6946 SHREWSBURY MASS. COMMONWEALTH OF MASSACHUSETTS

KEY PLAN: LEVEL TWO

PROJECT NORTH

PROJECT

FLORAL STREET ELEMENTARY SCHOOL

SHREWSBURY, MASSACHUSETTS

TITLE

LEVEL TWO FLOOR PLAN: SECTION A

REVISIONS

NO.	DESCRIPTION	DATE

FILE: 9418-A33/9418-PLA.PCP

DWN. BY: R.S./C.R.
CKD. BY: M.A.P./E.M.
JOB NO: 9418.00
SCALE: 1/8"=1'-0"
DATE: 1 AUG. 1995

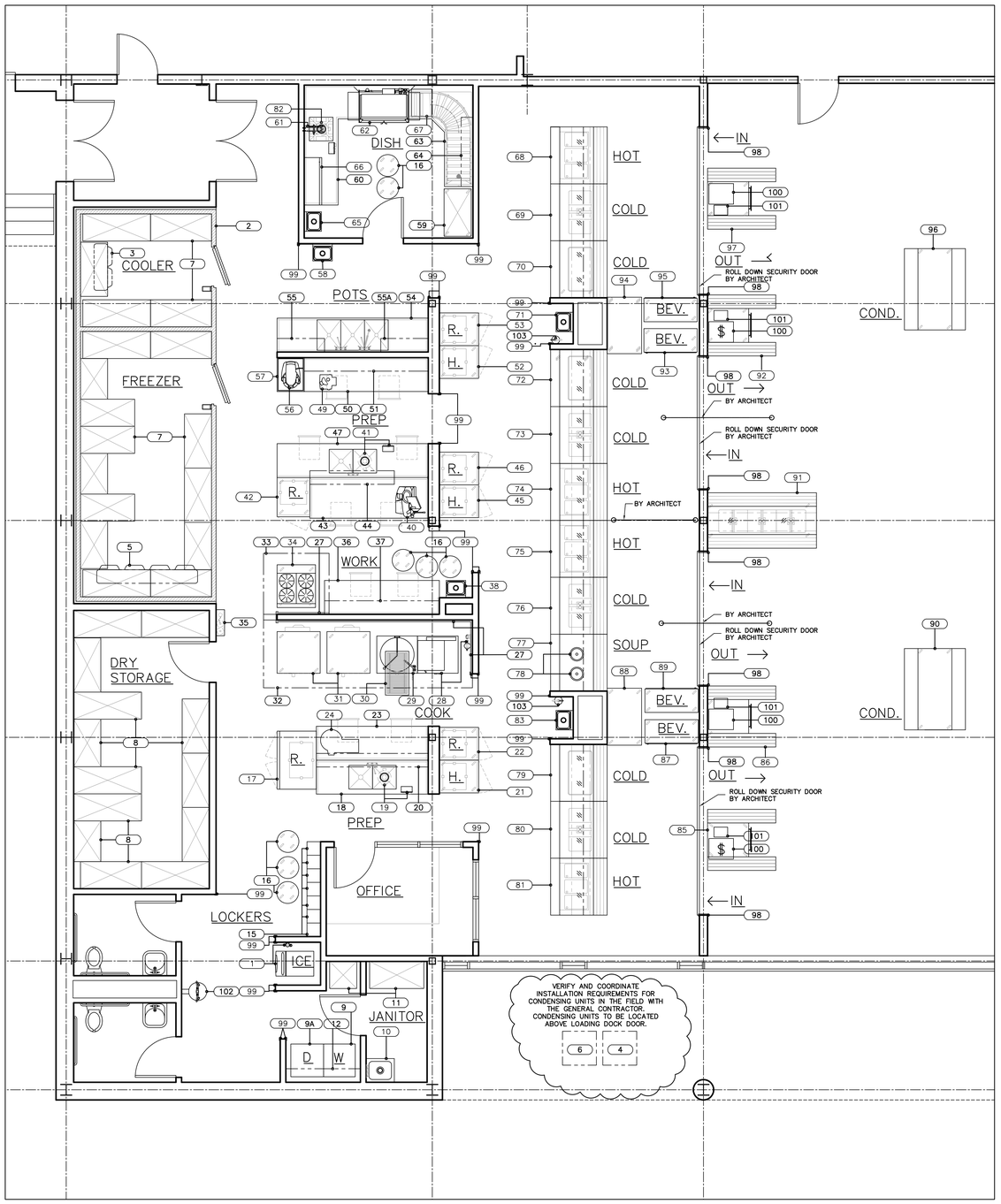
A 3.3

Jen potter and I visited Beal and Sherwood kitchens. We watched lunches and spoke with staff about pros and cons of each site.

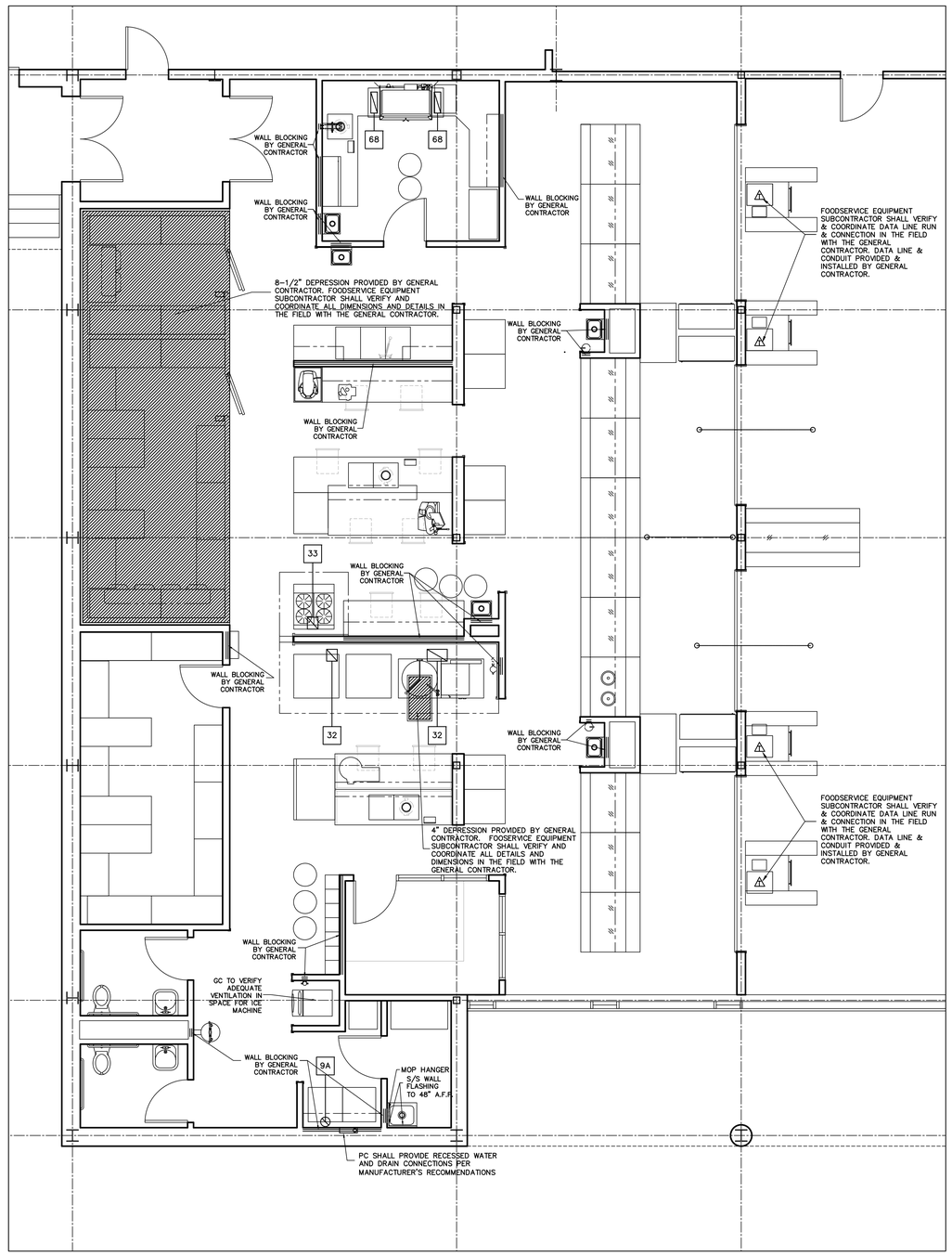
The set up at Floral seems to be the layout we feel will work best.

Floral :

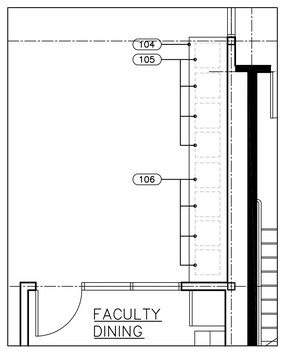
- Adequate Walk -In Freezer and Refrigerator space
- Adequate Dry room Storage
- Office should be positioned closer to kitchen
- Warmers and Refrigerators behind the line
- 4-5 Hot Wells per station
- 8 Cold Wells Needed- like Floral
- Line set up very functional
- Need condiment stations like Sherwood
- Soup well on line would be helpful
- open kitchen set up- easier to work in and manage
- merchandisers on line- useful

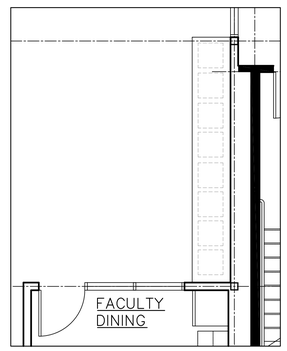


EQUIPMENT PLAN



BUILDING CONDITIONS PLAN





BUILDING CONDITIONS/HVAC SYMBOLS

- EXHAUST DUCT/GRILL
- EXHAUST DUCT/GRILL
- SUPPLY DUCT/GRILL
- STEAM SUPPLY
- STEAM CONDENSATE RETURN
- AUXILIARY STEAM SUPPLY
- FLOOR DEPRESSION
- WALL BLOCKING BY GENERAL CONTRACTOR.

GENERAL NOTES

1. FOODSERVICE EQUIPMENT SUBCONTRACTOR SHALL VERIFY AND COORDINATE ALL WALL BLOCKING LOCATIONS AND HEIGHTS WITH THE GENERAL CONTRACTOR.
2. FOODSERVICE EQUIPMENT SUBCONTRACTOR SHALL VERIFY AND COORDINATE FLOOR DEPRESSIONS FOR FOODSERVICE EQUIPMENT IN THE FIELD BY GENERAL CONTRACTOR.
3. FOODSERVICE EQUIPMENT SUBCONTRACTOR SHALL PROVIDE WALL FLASHING AS PER DETAIL F2-39.
4. FOODSERVICE EQUIPMENT SUBCONTRACTOR SHALL VERIFY AND COORDINATE REFRIGERATION LINE RUNS FOR WALK-IN COOLER AND FREEZER WITH GENERAL CONTRACTOR. VERIFY CONDENSING UNIT LOCATION WITH ARCHITECT AND GENERAL CONTRACTOR.
5. WHEN INSTALLING CONCRETE SUB-FLOOR IN WALK-IN BOX, FOODSERVICE EQUIPMENT SUBCONTRACTOR SHALL PROVIDE ADEQUATE VENTILATION PER MANUFACTURERS SPECIFICATION.

LAMOUREUX, PAGANO ASSOCIATES, ARCHITECTS
14 EAST WORCESTER STREET
WORCESTER, MASSACHUSETTS 01604

MEMBER OF
THE AMERICAN INSTITUTE OF ARCHITECTS

OWNER

SHREWSBURY SCHOOL DEPARTMENT

Town of Shrewsbury
Massachusetts
01545

Foodservice Designers & Consultants
201 Oak Street, Suite 12
Pembroke, MA 02359
Tel: (781) 826-5522
Fax: (781) 826-5523
Colburn & Guyette Consulting Partners, Inc.

project north

PROJECT

100% CD SUBMISSION

SHERWOOD MIDDLE SCHOOL

30 SHERWOOD AVE.
SHREWSBURY, MASSACHUSETTS

TITLE

Foodservice Equipment Layout & Building Conditions

REVISIONS

No.	DESCRIPTION	DATE

FILE: P3 - Sherwood Middle School

DWN. BY:	JJL
CKD. BY:	EA
JOB NO:	0914
SCALE:	1/4=1'-0"
DATE:	12-15-2010

K
2.1

16 November 2017

AGENDA Instructional Coaches

I. GENERAL
- For 790 K-4 student elementary school, full school program during the summer, strong extended learning program; 100% air conditioned
- Preliminary status of program development: Schematic Design will revisit in much greater detail
- MSBA Space Template (± 130,000 sf, similar in size to Sherwood Middle)

II. OVERALL ORGANIZATION
- Academic organization: by clusters of about 5- 6 classrooms including inclusion SPED; K distinguished, 1-4 developed for flexibility
- Common Room: option for pull out/meeting space
- 2 clusters sharing: toilets/common rooms/teacher planning
- Centralized administration
- Core facilities: gym, cafeteria, media center, art/music
- Media Center as centralized space vs. distributed

III. MSBA Space Summary Template Allotment
- None

IV. PROGRAM REQUIREMENTS/ADJACENCY
- Role of Instructional Coaches
- # coaches
- Requirements for space
- Adjacencies (Media Center/academic wings/main administration, etc.)
- Interface with staff/administrators/public

V. OTHER
- Student testing requirements
- Data assessment requirements
- Year round role

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

MEMO OF PROGRAMMING MEETING
INSTRUCTIONAL COACHES & TITLE-I

16 November 2017

ATTENDANCE: Amy Clouter, Asst. Superintendent for Curriculum and Instruction, Administration
Chris Girardi, Principal, Beal Early Childhood Center
Rebecca Dumphy, Curriculum Coordinator
Kathleen Camerato, Instructional Coach/Curriculum Coordinator
Maureen Henry, Director of Title-I
Kathryn Crockett, LPA
Sean Brennan, LPA

ITEM:	DESCRIPTION:	RESPONSIBILITY:
11.16.17.01	**GENERAL OVERVIEW OF BUILDING** Katie gave quick overview of the status of the design and reported that the town is anticipating the new K-4 school [790 students] to be ±130,000 sq.ft. The three sites under consideration are all in the southern portion of the town. Given the year round use the new building is anticipated to be fully air conditioned. The project is in the preliminary stages of design and the meeting today will cover bigger picture items [adjacencies, locations, size, programs, etc.]. Later on in the design process space specific details will be discussed and recorded on "Room Data" sheets showing all the require fixtures, furnishings, equipment, etc. needed to support the space. Katie also touched upon the current overall configuration of the building that has come out of the previous programming meetings. The "shared common core spaces" [Gymnasium, Cafeteria, Media Center, Music, Art] are currently being planned on the "main"/grade level where student will access these space by traversing only one floor level. Katie stated that the MSBA does not recognize Instructional Coach spaces in their base template. The base template is starting point for programming of a school with the end result looking quite different than the base template. The district is responsible for supporting any additions/modifications to the space summary template in their educational statement.	
11.16.17.02	**INSTRUCTIONAL COACHING/CURRICULUM COORDINATOR** The Instructional Coaches gave a brief overview of their role in the district and at their assigned schools. These staff members help support teachers and coordinate curriculum development through model lessons, co-teaching, setting curriculum priorities, assessment of testing data, and developing & purchasing curriculum materials. The district has Instructional Coaches assigned to each school and they have weekly coordination meetings to ensure curriculum delivery is being delivered consistently across the district.	
11.16.17.03	**INSTRUCTIONAL COACHING REQUIREMENTS** • There will need to be two Instructional Coaches assigned to the new school due the proposed enrollment.	

MEMO OF PROGRAMMING MEETING
INSTRUCTIONAL COACHES & TITLE-I

16 November 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	• Each position would need an office that is capable of meeting with ±2-3 people. A connecting door between the two offices is highly desirable as there is a significant amount of communication between the 2 positions.	Katie Crockett Sean Brennan
	• A conference room with curriculum material storage is required. Table and chairs for 12 people will be needed along with an interactive white board. There will need to secured and unsecured storage allocated to this space. District should quantify number of meetings in support of this space in their educational statement.	Amy Clouter
	• Given the nature of their work access to a work room or inclusion of a work area in the meeting room is required. This space should include paper storage, copier, and work table.	
	• The spaces should be located in the building so that they are easily accessible to the teachers. The media center was discussed as a possibility and could help pool resources such as a work room. It was stated that these spaces should not be included in the main administration space as they are not administrative positions and would not want to create any connotation that they are by placing them there. Access directly off a corridor is desirable to the frequency of meetings.	Katie Crockett Sean Brennan
	• Science Curriculum development is the top priority right now for the district. One initiative that came out of the science curriculum last year was the introduction of gardens at all of the schools throughout the district. The new school should have space allocated for this use. The location, type, and size will be work out in greater detail at a later date. In general it is desirable to have outdoor teaching spaces.	
	• The inclusion of a sink in the common rooms should be considered given project based learning initiatives. Also the introduction of a weather station and energy usage monitoring station in a central core space would help support the current initiatives of the science curriculum.	
	• The communicating doors between classrooms, possibly double doors like Floral Street, were discussed and are very desirable from an instructional coaching/curriculum development perspective.	
11.16.17.04	**TITLE-I REQUIREMENTS** • Title-I was discussed briefly during the Student Support Services Meeting and place holders were discussed until a meeting could be held with the Director. The Director of Title-I was available the day of this meeting and the following items came out of that discussion.	

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

MEMO OF PROGRAMMING MEETING
INSTRUCTIONAL COACHES & TITLE-I

16 November 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	• Title-I instructors teach all grade levels and are part-time employees. The instructors teach all grade levels. • Four room with the capacity for 4-6 students will be needed for a school of this scale. The current rooms utilize kidney shaped table and chairs. There should also be storage allocated to each room for of instructional materials not required to be held in the centralized storage. Sinks should also be included in these spaces.	Katie Crockett Sean Brennan
	• Separate storage for Title-I is mandated by regulations. This coupled with the fact that instructors teach all levels the storage should be centralized. Approximately 150 sq.ft. is required for the leveled book library. Instructors will utilize carts to pull material from the central storage similar to other schools in the district. • Office for the Title-I director possibly adjacent to the Instructional coaches or the other student support services.	Katie Crockett Sean Brennan

Memo by: Sean Brennan, LPA
cc: Attendees

1 December 2017

AGENDA Media Center Technology Program

I. GENERAL
- For 790 K-4 student elementary school, full school program during the summer, strong extended learning program
- Expected to be new construction on new site opening 2022
- Preliminary status of program development: Schematic Design will revisit in much greater detail
- MSBA Space Template (± 130,000 sf, similar in size to Sherwood Middle)
- Wireless fully throughout school, interactive projectors in each instructional space

II. OVERALL ORGANIZATION
- Academic organization: by clusters of 5-6 classrooms + distributed SPED Typical classrooms/SPED (inclusion and substantially separate)/toilets/common rooms/teacher planning
- Centralized administration
- Core facilities: gym, cafeteria, media center, art, music
- Stage at cafeteria
- Media Center as centralized space
- Other than extended learning, any district wide programs
- IT base line to at least meet Sherwood program

III. MEDIA CENTER

Discuss uses/scheduling of space including summer
- Anticipated to be used by extended learning after school hours
- Community Use
- Faculty meetings of 80

MSBA Space Summary Template Allotment [4225 sq.ft.]
- Instructional Coaches adjacency
- Title One adjacency
- Possible shared work room/conference room

Media Center
- # print materials: assumed 42" h stacks max.
- # desktops
- Maker space/Project based learning
- Lounge seating
- Display
- # staff (assumed stationed at circulation desk)
- Reading Circle
- Projection/interactive white board needs

Media Center Adjacent Spaces

- Computer Lab
- Possibly Art Rooms
- Leveled Book room
- Main Lobby if possible

IV. CLASSROOM IT

- Interactive whiteboard
- Hardwired vs. wireless computer connections
- Teacher station/Aide station
- Sound reinforcement system
- Telephone/intercom

V. OTHER

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

PRELIMINARY PROGRAMMING REVIEW MEETING OPEN ITEMS

01 December 2017

The following are open items that should be address before the PDP is submitted.

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	CORE ACADEMIC SPACES • Review requirements, see template	
	STUDENT SUPPORT SERVICES • Review requirements, see template • OT/PT Arrangement • Substantially Separate [includes calming area] • ESL/ELL projections 80-100 Students; District to verify accuracy	
	MUSIC PROGRAM • Future music program anticipates the use of a technology area. Area would include space for four 61-Key Electronic Keyboard units. Could be as simple as a counter wired with power.	
	GYMNASIUM • Review requirements, see template • Gymnasium similar in size to the Floral Street School [7,000sq.ft.], • Number of Teaching Stations [2 Estimated]; Adaptive P.E. ? Excerpt from MSBA policy memo on Gymnasiums: "The district may choose to build a gymnasium and related spaces in excess of MSBA guidelines, but in no event shall the gymnasium itself exceed 12,000 nsf. The MSBA will participate in a gymnasium up to no more than 6,000 nsf, unless adjusted by the MSBA to increase teaching stations for enrollment and/or the education plan."	
	HEALTH PROGRAM REQUIREMENTS • 4th Grade Health at the elementary level, how will it be implemented	
	MEDIA CENTER • Review requirements, see template	
	CAFETERIA • Review requirements, see template [Sherwod Kitsch/Servery Basis] • Verify stage size [200 Students] • Extended Day/Year spaces	
	NURSE'S SUITE • Review requirements, see template. Used Sherwood as a basis.	
	MAIN ADMINISTRATION • Review requirements, see template	
	CUSTODIAL • Review requirements, see template [Sherwood was ±1900sq.ft.]	

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

PRELIMINARY PROGRAMMING REVIEW MEETING OPEN ITEMS

01 December 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	EXTENDED DAY & EXTENDED YEAR • Review requirements, see template	
	OUTDOOR FEATURES • Flat, open play field [120'x180' lined field] • Number of tot lots and/or blacktop areas needed for recess. • Play structures	
	AUXILIARY SPACES/USES • PTO - two portable storage cabinets.	
	TRANSPORTATION/SITE CIRCULATION Current design loads for parking: • Staff: 75-100 Cars • Visitors: ±50 visitors a day; average at one time being around ±10 • Overflow: ±316 Cars; enough to accommodate two grade levels • Discrete drop off area for special education students?	
	SUSTAINABLE DESIGN • Base "green" option & Alternate enhanced "green" option	
	MISCELLANEOUS • Staff Surveys • School Tours	
	PROPRIETARY EQUIPMENT LIST & PREFERRED BUILDING COMPONENTS Below is a list of items that will be proprietary for the project: • Cleaver Brooks Clear Fire Boilers [Natural Gas Only] • Zurn Flushometers • Sargent Locksets [Jim Harper – Company Rep.] • Epson short throw projector [model to be provided] • Aerohive Wifi • Cisco Network • Rawlings with Telecenter lockdown security • Brivo Access Controls • Security Camera External Login Interface [Company to be provided] Below is a list of preferred building components to serve as a basis of design: • EFCO Windows & Doors • Redundant Domestic Hot Water System [Not PVI] • EPDM Roofing 75 or 90 Mil Thickness/Built-Up Roof • Carpeting: Tandus or C&A • Stair Treads: One piece tread and riser similar [Norament] • Stair Handrails: Stainless steel double height rails • Ceramic tile in Corridors, Lavatories, Cafeteria Flooring: Polished Concrete or Forbo Marmoleum	

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

PRELIMINARY PROGRAMMING REVIEW MEETING OPEN ITEMS

01 December 2017

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

MEMO OF PROGRAMMING MEETING
MEDIA CENTER & INSTRUCTIONAL IT

01 December 2017

ATTENDANCE: Amy Clouter, Asst. Superintendent for Curriculum and Instruction, Administration
Chris Girardi, Principal, Beal Early Childhood Center
Shawna Powers, Director, Instructional Technology & Media Services
Brian L'Heureux, Director, Information Technology
Kathryn Crockett, LPA
Sean Brennan, LPA

ITEM:	DESCRIPTION:	RESPONSIBILITY:
12.01.17.01	Katie gave quick overview of the status of the design and reported that the town is anticipating the new K-4 school. The sites being studied for the new school are all in the southern portion of the town. Given the year round use the new building is anticipated to be fully air conditioned. The project is in the preliminary stages of design and the meeting today will cover bigger picture items [adjacencies, locations, size, programs, etc.]. Later on in the design process space specific details will be discussed and recorded on "Room Data" sheets showing all the require fixtures, furnishings, equipment, etc. needed to support the space. Katie also touched upon the current overall configuration of the building that has come out of the previous programming meetings. These include academic clusters of 5-6 classrooms around a common room, a shared "knuckle" between pairs of clusters that will house teacher planning, toilets, and the "shared common core spaces" [Gymnasium, Cafeteria, Media Center, Music, Art] being located on the "main"/grade level with a centralized administration. This configuration may need to adjust depending on the site and that of all the major core spaces the media center would be one of the first to move to another level since it does not have strong requirements for exterior access like the Cafeteria & Gym	
12.01.17.02	**MEDIA CENTER REQUIREMENTS** • Flexibility is key in all aspects, i.e. furniture, stacks, meeting configurations, exhibition space, etc. The idea of collapsible tables was also discussed to make room for larger groups/functions • Tables & Chairs should be portable and at an appropriate scale for the varied uses. Age specific/playful furniture options are also desirable. Shrewsbury library furniture was mentioned several times. Seating that can also double as building blocks were also mentioned. All of the aforementioned furniture will be available for viewing when the Executive Committee tours Nelson Place and other schools. • Adjacency of Title-I, Instructional Coaches, and Leveled Library is desirable and would allow for shared resources, i.e. workroom • District to provide anticipated volumes of books, media, etc. to be housed in the media center. Shelving/stacks should be designed for flexible repurposing as the collection evolves.	Katie Crockett Sean Brennan Shawna Powers

MEMO OF PROGRAMMING MEETING
MEDIA CENTER & INSTRUCTIONAL IT

01 December 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	• Two interactive white boards with tables/chairs will be needed for two meeting/instructional areas. A larger screen & projector should also be integrated to facilitate larger meeting of ±80 people. • A carpeted reading area large enough to accommodate a single class. "Learning Carpets" were also mentioned, i.e. counting, alphabet. • Display areas for student work and revolving educational material • The media center will need two workstations that could both be housed at the circulation desk. • There is no need for a separate computer room. There are no computer courses provided in the district beside specialize electives at the upper grade levels. Integration of technology will be through portable devices, i.e. ipads, laptops, etc. At this juncture space for storage and power for two classrooms worth of devices. The typical student load in the media center will be one media class and another general classroom in doing research for a project. • Maker space should be a discrete area, possibly flexible in size/configuration through portable barriers/dividers is desirable. 3D printers have been implemented at some of the schools, possibility of housing it with the art kiln was discussed. District to decide if a 3D printer or other maker space device will be included as part of the media center. • Collaboration between Art and Media currently does not occur anywhere in the district due to space allocations/adjacencies. Proposed adjacencies at the new school will allow this opportunity to occur. Each space will need to have the ability to be scheduled individually so sharing of resources is not desirable. • Connection to the direct access to the exterior is desirable but not a necessity. Could be made in other ways, i.e. weather station, mini greenhouse windows, etc.	Katie Crockett Sean Brennan
12.01.17.03	**DISTRICT TECHNOLOGY IMPLEMENTATION** • The district wants the building to be wired to support 1:1 technology even though plans for implementation is in the early planning phase. State mandates for online testing for all Third Graders will take effect in 2019 and similar mandates for other grade levels appears to be only a matter of time.	

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

MEMO OF PROGRAMMING MEETING
MEDIA CENTER & INSTRUCTIONAL IT

01 December 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	• Group discussed learning management system "Schoology" which is utilized by the district for grades 5-12. The development of this platform for the elementary school level is still under at the industry level and if ever implemented/geared more towards parent use rather than students. • The district has a desire once technology allocation is closer to 1:1 to utilize software similar to "seesaw" to help students put together evidence of their learning growth in the form of a digital portfolio to help engage parents in their education. • Given that the media center functions heavily rely on the use of aides the best place for implementation of any new platform/system would be in the classroom rather than through the media center.	Katie Crockett Sean Brennan
	• The Director of Information Technology prepared and reviewed a district wide information technology standards document that is attached to these minutes. The basis of these standards is the technology utilized at the Sherwood Middle School with the exception that the data center will be located offsite.	Katie Crockett Sean Brennan
12.01.17.04	**MISCELLANEOUS** • District to provide spatial requirements needed for the leveled book library as a separate room. Given the scale of the school it is highly desirable to have them barcoded.	Amy Clouter

Memo by: Sean Brennan, LPA
cc: Attendees

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

MEMO OF PROGRAMMING MEETING
EXECUTIVE COMMITTEE PROGRAMMING REVIEW

01 December 2017

ATTENDANCE: Dr. Joseph Sawyer, Superintendent
Amy Clouter, Asst. Superintendent for Curriculum and Instruction, Administration
Patrick Collins, SPS, Asst. Superintendent for Finance & Operations
Chris Girardi, Principal, Beal Early Childhood Center
Meg Belsito, Director of Special Education & Pupil Services
Kathryn Crockett, LPA
Christina Bazelmans, LPA
Sean Brennan, LPA

ITEM:	DESCRIPTION:	RESPONSIBILITY:
12.01.17.01	The group met to review/discuss the overall programming for the building for presentation and approval by the School Building Committee for inclusion in the Preliminary Design Program submission to MSBA. The group reviewed open items and a draft space summary template showing all the programming efforts to date	
12.01.17.02	**GENERAL CLASSROOMS** • General classrooms as discussed early on in the programming process reflect the districts policies on teacher to student ratios. The district's ratios for the elementary grade levels is as follows: 17-19 per Kindergarten Classroom. 20-22 for First/Second Grade Classrooms, 22-24 for Third/Fourth Grade Classrooms. This resulted in a total for 40 classrooms with 8 classrooms per grade level at the request of the executive committee. Given that these revisions to the number of classrooms supports the district's education policies it is likely MSBA will participate in their reimbursement. • Group agreed that allocation of net additional space for the "Common Learning Spaces" and "Teacher Planning" is needed to support the educational model being utilized by the district. • English Language Learners & English Second Language are also part of the core academic spaces. These spaces are not reflected in the base template but are typically supported by MSBA if the district shows the need and support of such programs in their Educational Statement.	Katie Crockett Sean Brennan
12.01.17.03	**SPECIAL EDUCATION** • The Department of Elementary & Secondary Education (DESE) will review these spaces shown in this section and similar to MSBA will look to the Educational Statement prepared by the district for need and support of such services. MSBA typically relies on DESE's review and will participate if they agree with the town's program. • The group discussed the allocation and utilization of the inclusion classrooms. The consensus at this time is to carry two	Katie Crockett Sean Brennan

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	inclusion classrooms per cluster/neighborhood. These classrooms will be 375 sq.ft. • The district feels strongly that given the current needs of the district the school will qualify for Title-I, however, in the meantime would like to list the Title-I rooms simply as "Reading"	
12.01.17.04	**ART & MUSIC** • The music rooms were requested to be slightly larger than the MSBA space summary to support the Kodaly music program which incorporates movement and the 4th grade chorus program. The overall net increase is 225 sqft. for this section. The group agreed to keep these spaces as listed. • The opportunity to utilize the stage area to consolidate the music program was discussed. This was done at Sherwood Middle. The stage is to receive similar operable partition that will acoustically separate it from the cafeteria.	Katie Crockett Sean Brennan
12.01.17.05	**HEALTH & PHYSICAL EDUCATION** • During the programming it was stated that it would be highly desirable to have a space large enough for the entire school to meet for special events. The gymnasium was looked at and required additional space to meet this requirement resulting in a gymnasium of 7,000 sqft. This is the same size as the Floral Street School which has served a similar student population quite well. Group agreed to keep the space allocations in this section as they are listed. • Health will operate as it does in all the other school as a traveling position that will utilize general classrooms that would otherwise be "free periods" or other space in the school	Katie Crockett Sean Brennan
12.01.17.06	**MEDIA CENTER** • The Media Center Meeting occurred just before this meeting and it does not appear that any of the program requirements will cause an increase in square footage. LPA will report back if any revisions are needed	Katie Crockett Sean Brennan
12.01.17.07	**DINING & FOOD SERVICE** • Cafeteria will be utilized as the stage assembly area and the size of it couples well with the district's special programs, meeting, etc. in its capacity to accommodate approximately two grades level and their parents. • The Kitchen is larger than the base summary allotment and is quite typical if the kitchen is a full service kitchen. This space also include the serving lines in the square footage. Group agreed to space allocations.	Katie Crockett Sean Brennan

MEMO OF PROGRAMMING MEETING
EXECUTIVE COMMITTEE PROGRAMMING REVIEW

01 December 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
12.01.17.08	**MEDICAL** • Sherwood served as the basis for the spatial allocations for this section. There was consensus to carry the numbers shown.	Katie Crockett Sean Brennan
12.01.17.09	**ADMINISTRATION & GUIDANCE** • The group agreed that the allocations are appropriate to support a school of this scale.	Katie Crockett Sean Brennan
12.01.17.09	**CUSTODIAL & MAINTENANCE** • LPA stated that at Sherwood less space was used for this purpose and can be refined as the design progresses. The group agreed to carry what the base MSBA space summary template recommends.	Katie Crockett Sean Brennan
12.01.17.09	**OTHER** • Given how strong the extended day programs are in the district coupled with the fact that this school will be the new home of the extended year [summer/vacation] program for all the district's elementary schools, the committee agreed to allocate space for an office and storage to support these programs. • Discussion of additional storage space was discussed similar to the basement storage space at Floral Street School. Depending on the site conditions this type of space may be feasible at a relatively low cost.	Katie Crockett Sean Brennan
12.01.17.09	**MISCELLANEOUS** • Security protocol utilized at Sherwood should also be implemented here • Outdoor play area can be one large space similar to Coolidge. Should be able to accommodate ±200 students. Should be sited so access to can from the gymnasium and the cafeteria can be easily accomplished. • District to review parking requirements and report back • Sustainable Design Meeting still needs to occur. This will need to be handled/discussed at the Building Committee level first. • Wheelchair drop-off will need to be implemented in a creative way as to no segregate it from the rest of the drop-off area but also allow other buses to pass through if loading/unloading is taking additional time. • LPA will reach out to schedule a school tour of Nelson Place once they are provided with dates from the District that work for	Katie Crockett Sean Brennan

MEMO OF PROGRAMMING MEETING
EXECUTIVE COMMITTEE PROGRAMMING REVIEW

01 December 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
	their committee members. The town will also be reaching out to tour a recent MSBA Elementary school and will report back if it is something they intend to pursue. Each tour would take approximately a half day so either one full day to tour two schools or two half days.	

Memo by: Sean Brennan, LPA

cc: Attendees

Shrewsbury Public Schools
Information Technology Standards
DRAFT - December 8, 2017

In order to maintain consistency and reduced support costs, the following standards will be used when implementing technology in the Shrewsbury Public Schools. Exceptions to these standards must be approved by the Director of Information Technology or the Superintendent.

Computers
Computers purchased shall run the latest Apple macOS operating system.

Tablets
Tablets purchased shall run the latest Apple iOS operating system.

Applications
All applications intended for computer-based use shall run natively on macOS, or function fully via macOS-native HTML browsers without requiring the use of plugins (including Java, Flash, and Silverlight). All applications intended for tablet-based use shall run natively on iOS or function fully via the built-in Safari browser.

All systems that utilize student information shall interface with the district's PowerSchool SIS, preferably via API connectivity. All systems that require staff or student login shall support LDAP or Google-based Single Sign-On (SSO) logins. All systems that require parent login shall support PowerSchool Parent Portal-based SSO login. All systems that process staff or student information shall utilize encrypted/SSL-based network transport.

Servers
Where possible, server-based software shall run on a VMware virtualized guest in the district's existing VMware cluster. If this is not possible and physical servers are required, new servers purchased shall be Dell servers with iDRAC included, and shall include redundant/hot-swappable storage drives with hardware-based RAID, redundant/hot-swappable power supplies and redundant 10GbE SFP+ network ports. Production servers shall be installed in the SELCO Headend at 15 Parker Road. Backup servers shall be installed at Shrewsbury High School, 64 Holden Street.

Network Switches
Network switches purchased shall run the latest Cisco IOS or Cisco NX-OS operating system.

Wi-Fi Access Points
Wi-Fi access points purchased shall be Aerohive access points running the Aerohive HiveOS and configurable via Aerohive HiveManager Online. Access points purchased shall support the IEEE 802.11ac Wave 2 standard.

Ethernet Wiring & Connectivity
Network patch panels and wall jacks shall utilize standard, removable, non-proprietary keystone RJ-45 jacks. For buildings constructed before 2017, all components must be TIA Category 6 compliant and tested to pass Category 6 standards after installation. For buildings constructed after 2017, all components must be TIA Category 6A Compliant and tested to pass Category 6A standards after installation.

Printers
Printers purchased shall be PostScript-compatible HP laser printers, connected via Ethernet.

Telephones
Telephones purchased shall be NEC Digital or IP phones, compatible with district's NEC SV8300 switches. Each building shall have an NEC SV8300 or SV9300 phone switch that is a member of the High School SV8300 cluster, to allow for functionality in case of loss of connectivity with the district's main network.

Projection
All projectors shall have Ethernet, VGA, and HDMI connectivity. In grades PK-6, all classroom projectors shall be Epson interactive short-throw projectors and be capable of finger-based control (without the use of specialized pens). In grades 9-12, all classroom projectors shall be Epson short-throw projectors.

Security Cameras
Security cameras purchased shall be IP-based, connected via Cat5e, Cat6, or Cat6A Ethernet cabling, powered by Power over Ethernet (compliant with IEEE 802.3at), and the specific model purchased must be listed as "Passed" or "Supported" for video and motion on the ExacqVision IP Camera Integration compatibility website at https://exacq.com/integration/ipcams/. All cameras must be connected to and integrated with the district's existing ExacqVision servers.

Public Address
Public address systems purchased shall be Rauland Telecenter U-based systems that fully integrate with the district's existing Telecenter U system.

Physical Access Control
Physical/building access control components shall interface with the district's Brivo access control system and HID 26-bit cards and fobs.

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

MEMO OF PROGRAMMING MEETING
PROGRAMMING REVIEW FOLLOW-UP

20 December 2017

ATTENDANCE: Dr. Joseph Sawyer, Superintendent
Amy Clouter, Asst. Superintendent for Curriculum and Instruction, Administration
Patrick Collins, Asst. Superintendent for Finance & Operations
Chris Girardi, Principal, Beal Early Childhood Center
Meg Belsito, Director of Special Education & Pupil Services
Kathryn Crockett, LPA
Sean Brennan, LPA

ITEM:	DESCRIPTION:	RESPONSIBILITY:
12.20.17.01	The group met to continue discussions on the overall programming for the building for presentation and approval by the School Building Committee for inclusion in the Preliminary Design Program submission to MSBA. The group reviewed open items and discussed potential reductions in space summary template square footages	
12.20.17.02	**OPEN ITEMS** • "Budget Statement" is a requirement of the PSR phase and is often included in the PDP. The School department is responsible for producing the information needed for this document • "Educational Statement" was reported as being near completion. A draft will be sent to the Superintendent for review on Dec. 22 • Town stated that all pertinent data on "Grade Configuration Questionnaires" and copies of "Agendas & Meeting Minutes" can be downloaded off the town websites. Joe Sawyer forwarded links to the documents to LPA. LPA to download and file for inclusion in the PDP submission. • "Deed/Title" information on all the site included in the PDP will be made available through the Town Manager's Office. LPA to reach out and obtain copies for inclusion in PDP submission • "Utility Usage" and "AHERA Reports" on the existing Beal school can be obtained from the Bob Cox. LPA to reach out and obtain copies for inclusion in PDP submission. • LPA to send sample of narrative for "Preliminary Evaluation of Alternatives" to Patrick Collins for review and production of a narrative for the Beal Project in respect to School assignment practices, available space, tuitions agreements, and rental/acquisition of space for school use.	Patrick Collins Amy Clouter Sean Brennan Sean Brennan Sean Brennan Patrick Collins Sean Brennan
12.20.17.03	**OPTIONS FOR FURTHER DEVELOPMENT** • Base Repair • Existing Site Options [New Construction & Add/Reno] • New Construction on Alternative Sites	Katie Crockett Sean Brennan

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

MEMO OF PROGRAMMING MEETING
PROGRAMMING REVIEW FOLLOW-UP

20 December 2017

ITEM:	DESCRIPTION:	RESPONSIBILITY:
12.20.17.04	**SPACE SUMMARY TEMPLATE REDUCTIONS** • General Classrooms to be reduced by 25 sq.ft. each • Kindergarten Classrooms to be reduced by 50 sq.ft. each • E.L.L. Rooms to be reduced by 50 sq.ft. each • Music to be reduced by 225 sq.ft. to match the space summary template allocation. Resulting in two Music rooms; one at 1,500 sq.ft. and the other at 1,275 sq.ft. • Cafeteria will be reduced to 5,000 sq.ft. • General Office/Waiting Room to be reduced to match space summary allocation. • Extended Day space allocations to be eliminated • Self-Contained SPED [Substantially Separate] to be reduced to 925 sq.ft. to reflect the same size as a General Classroom • LPA revised the space summary to reflect these revisions; see attached. The reductions resulted in proposed gross square footage of 146,201 sq.ft.	Katie Crockett Sean Brennan
12.20.17.05	**MISCELLANEOUS** • A greeter station was discussed and there was consensus that it should be thoughtfully incorporated at the main entrance for after hour use rather than relying on portable furniture. • There should be a dedicated entrance for the Extended day program where parents can be buzzed in for parent pick-up • [1] Hard copy of the PDP and digital file shall be provided to MSBA, Town Manager, School Department, PMA, and LPA	Katie Crockett Sean Brennan

Memo by: Sean Brennan, LPA

cc: Attendees

Proposed Space Summary- Beal K-4 Elementary School

FILL IN SCHOOL NAME HERE	Existing Conditions			New			MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
CORE ACADEMIC SPACES		**13**	**9,272**			**47,100**		**34**	**33,800**	
(List classrooms of different sizes separately)										
Pre-Kindergarten w/ toilet						0	1,200		-	1,100 SF min - 1,300 SF max
Kindergarten w/ toilet				1,150	8	9,200	1,200	6	7,200	1,100 SF min - 1,300 SF max
Kindergarten without toilet		**10**	7,185			0				
General Classrooms - Grade 1-6		**3**	2,087	925	32	29,600	950	28	26,600	900 SF min - 1,000 SF max
Commons				650	8	5,200				
ESL/ELL				450	4	1,800				
Teacher Planning				325	4	1,300				
SPECIAL EDUCATION		**4**	**2,753**			**14,160**			**9,060**	
(List rooms of different sizes separately)										
Self-Contained SPED [Substantially Separate]		2	2,248	925	4	3,700	950	6	5,700	8% of pop. in self-contained SPED
Self-Contained SPED - toilet				80	4	320	60	6	360	
Resource Room [Inclusion]				375	16	6,000	500	4	2,000	1/2 size Genl. Clrm.
Small Group Room / Reading				250	4	1,000	500	2	1,000	1/2 size Genl. Clrm.
Reading Office				120	1	120				
Reading Storage				120	1	120				
Speech	285	1	285	250	2	500				
OT/PT	220	1	220	950	2	1,900				
Special Education Site Coordinator Office				150	1	150				
Special Education Conference Room				350	1	350				
Observation Rooms						0				
ART & MUSIC		**1**	**332**			**5,075**			**5,075**	
Art Classroom - 25 seats		1	332	1,000	2	2,000	1,000	2	2,000	assumed schedule 2 times / week / student
Art Workroom w/ Storage & kiln				150	2	300	150	2	300	
Music Classroom / Large Group - 25-50 seats				1,250	1	1,250	1,200	2	2,400	assumed schedule 2 times / week / student
Music Practice / Ensemble				75	0	0	75	5	375	
Instrument Storage						0				
				1,500	1	1,500				
HEALTH & PHYSICAL EDUCATION		**4**	**3,269**			**7,650**			**6,300**	
Gymnasium	3,126	1	3,126	7,000	1	7,000	6,000	1	6,000	6000 SF Min. Size
Gym Storeroom [Includes Recreation Storage]		**3**	143	500	1	500	150	1	150	
Health Instructor's Office w/ Shower & Toilet				150	1	150	150	1	150	
MEDIA CENTER		**1**	**691**			**4,225**			**4,225**	
Media Center / Reading Room	691	1	691	3,025	1	3,025	4,225	1	4,225	
Meeting Area [80 People]				1,200	1	1,200				
Office						0				
Workroom						0				
Storage						0				
Computers						0				
Maker Space						0				
Books						0				
Health						0				
IT Offfice										
DINING & FOOD SERVICE		**3**	**2,175**			**10,461**			**9,776**	
Cafeteria / Dining	954	1	954	5,000	1	5,000	5,925	1	5,925	2 seatings - 15SF per seat
Stage				1,500	1	1,500	1,000	1	1,000	
Chair / Table / Equipment Storage				463	1	463	463	1	463	
Kitchen	650	1	650	3,200	1	3,200	2,090	1	2,090	1600 SF for first 300 + 1 SF/student Add'l
Staff Lunch Room	571	1	571	298	1	298	298	1	298	20 SF/Occupant
MEDICAL		**2**	**172**			**950**			**710**	
Medical Suite Toilet with Shower	54	1	54	100	1	100	60	1	60	
Nurses' Office / Waiting Room				350	1	350	250	1	250	
Examination Room / Resting	118	1	118	100	5	500	100	4	400	
ADMINISTRATION & GUIDANCE		**6**	**1,026**			**2,925**			**2,925**	
General Office / Waiting Room / Toilet	192	**2**	384	590	1	590	545	1	545	
Teachers' Mail and Time Room				100	1	100	100	1	100	
Duplicating Room				150	1	150	150	1	150	
Records Room				110	1	110	110	1	110	
Principal's Office w/ Conference Area	168	1	168	200	1	200	375	1	375	
Principal's Secretary / Waiting						0	125	1	125	
Assistant Principal's Office				150	1	150	120	1	120	
Supervisory / Spare Office				150	1	150	120	1	120	
Conference Room				400	1	400	250	1	250	
Guidance Office [Psychologist/Counselor]				150	3	450	150	3	450	
Guidance Storeroom				35	1	35	35	1	35	
Teachers' Work Room	208	1	208			0	545	1	545	
Instructional Coaches/Curriculum Coordinator	133	1	133	120	2	240				
Instructional/Curriculum Conference Room	133	1	133	350	1	350				
CUSTODIAL & MAINTENANCE		**4**	**531**			**2,390**			**2,390**	
Custodian's Office	445	1	445	150	1	150	150	1	150	
Custodian's Workshop				375	1	375	375	1	375	
Custodian's Storage		**2**	38	375	1	375	375	1	375	
Recycling Room / Trash				400	1	400	400	1	400	
Receiving and General Supply				363	1	363	363	1	363	
Storeroom				527	1	527	527	1	527	
Network / Telecom Room	48	1	48	200	1	200	200	1	200	
OTHER			**0**			**0**			**0**	
Other *(specify)*										
Extended Day Office					1					
Extended Day storage					1					Floral ±200sqft - Sherwood 230sqft
Total Building Net Floor Area (NFA)			**20,221**			**94,936**			**74,261**	
Proposed Student Capacity / Enrollment						790			**790**	
Total Building Gross Floor Area (GFA)[2]			**33,779**			**146,201**			**114,550**	
Grossing factor (GFA/NFA)			**1.67**			**1.54**			**1.54**	

[1] **Individual Room Net Floor Area (NFA)** Includes the net square footage measured from the inside face of the perimeter walls and includes all specific spaces assigned to a particular program area including such spaces as

[2] **Total Building Gross Floor Area (GFA)** Includes the entire building gross square footage measured from the outside face of exterior walls

Architect Certification

I hereby certify that all of the information provided in this "Proposed Space Summary" is true, complete and accurate and, except as agreed to in writing by the Massachusetts School Building Authority, in accordance with the guidelines, rules, regulations and policies of the Massachusetts School Building Authority to the best of my knowledge and belief. A

Name of Architect Firm: _____

Name of Principal Architect: _____

Signature of Principal Architect: _____

Date: _____

School Tour Note 21 December 2017

ATTENDANCE: Amy Clouter, Asst. Superintendent for Curriculum and Instruction, Administration
Chris Girardi, Principal, Beal Early Childhood Center
Meg Belsito, Director of Special Education & Pupil Services
Kathryn Crockett, LPA
Sean Brennan, LPA

The group toured Nelson Place Elementary School in Worcester, MA and Woodland Elementary School in Milford, MA on December 21, 2017. The following is an overview of those tours and items that were of interest to the Shrewsbury School Department Representatives.

NELSON PLACE ELEMENTARY SCHOOL

- Architect: Lamoureux Pagano Associates
- Completion Date: 2017; Fall start
- Type: New Construction
- Delivery Method: CM at Risk
- General Contractor: Fontaine Bros.
- Grades: PK-6
- Enrollment: 600 students
- Area: 111,700 gsf

GENERAL:

- Visitor security is achieved by directing visitors to the main office via the vestibule and then through the main office prior to entering Lobby.
- Visitor Sign-in/out is handled digitally through an application on an iPad. Allowing staff to quickly identify who and how many visitors are in the building.
- School supports 50% of the City's PK-6 Autism program
- Media Center was developed with direct access off of the vestibule to support potential future development as a neighborhood branch library during the off hours
- Common Rooms were utilized in the design of the school to aid in the delivery of project based learning and pull out space for small group/individual instruction.
- The color selections for the interior finishes and the furniture color selections were coordinated. The end result being that each wing has a readily identifiable color associated with it that helps reinforce wayfinding through color.
- Common areas designed to feel like "neighborhood"; made larger building feel small
- Modular furniture encourages reconfiguration; not stagnant
- Library and computer room adjacent to each other
- School utilizes cart based electronics charging stations
- Cafeteria has direct access to the exterior.
- Call assist buttons are strategically placed around the school as a secondary fail safe.
- Nursing Suite has direct access to the exterior, shower, and quarantine room.
- Gymnasium, Cafetorium, & Media Center are all accessible form the Main Lobby.

Comments:

- Family Learning Center utilized as a flexible space for different groups including outside groups is very desirable space to have.
- No closets for Principal & Assistant Principal; only item current principal stated she would change in hindsight.
- Interior colors warm and welcoming; not overly stimulating
- Secure Mailbox feature on the Special Education office door desirable for any position that need to have secure transmissions of information
- Furniture is engaging and age appropriate
- Lost and Found is handled via portable enclosed clothing rack. Good portable storage option.
- Change in material and furniture appointments in the common rooms make them very inviting.
- Speech reinforcement system has greatly affected and enhanced the utilization of the common room areas and classroom instruction.
- Common Rooms are very welcoming and visual connection to exterior is highly desirable
- Windows to the exterior at the end of corridors helps break up monotony often felt in larger building corridors.
- Lockdown of classroom areas allowed for afterhours use of the gymnasium, cafeteria, and media center simultaneously without interrupting each other.
- Principal recommended that training be scheduled to ensure those that need to be there can make it and are properly trained
- Standing height desks popular with older students

PHOTOS:

Digital Sign-in/out

Main Lobby

Portable Storage

Cafetorium

Secure Mailbox

Principal's Office Furniture

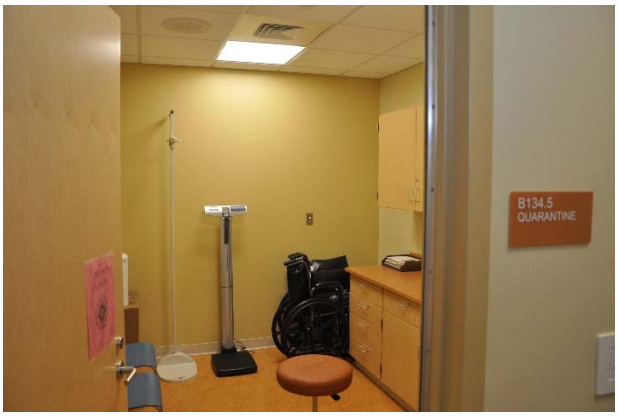
Media Center

Speech Reinforcement System

Common Room

Typical Classroom

Mobile Furniture



Nurse Suite Quarantine Room

FEASIBILITY STUDY

WOODLAND ELEMENTARY SCHOOL

- Architect: HMFH Architects
- Completion Date: 2016; Fall start
- Type: New Construction
- Delivery Method: CM at Risk
- General Contractor: Shawmut Construction
- Grades: 3-5
- Enrollment: 975 students
- Area: 132,500 gsf

GENERAL:

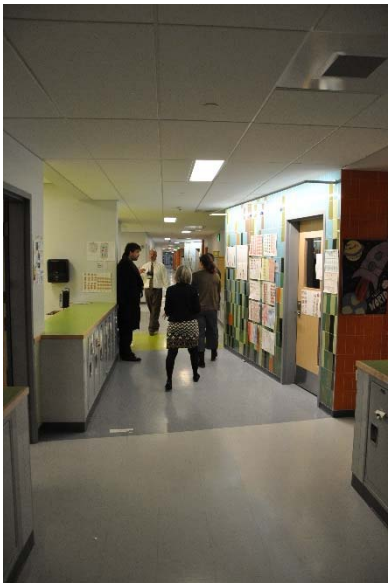
- Visitor security is achieved by directing visitors to the main office via the vestibule and then through the main office prior to entering Lobby.
- Site Circulation is kept completely separate from each other. Faculty/staff & Buses, are separate from the visitor parking and parent pick-up.
- Building is organized on three stories
- Media Center was kept to minimum as technology and space typically allocated for this space was dispersed throughout the school
- There are 27 Small Instruction/Inclusion Classrooms serving the school which is approximately a 2:1 ratio in respect to the number of typical classrooms
- School required 3 teaching stations for Physical Education. Third teaching station was kept separate from the gymnasium resulting in a secondary “fitness space”
- School utilized vibrant colors throughout. The theme for the color palate is based off a “tree/forest” with more earth tones and greens on the lower levels and blue tones representing the “sky” at the highest level
- Many physical connections between the floors filter light down into the building through the use of skylights
- Substantial playground on the backside of the building with direct access off of the cafeteria
- Design incorporated dedicated STEAM classrooms
- Common Areas were carved out from interior space off of the main corridors. The spaces were “corralled/defined” by low lockers with a counter on top. Physical connections to other levels were made at these junctions.
- Cafetorium had a full size stage and fly system. Lunch tables that converted to bench seating were selected for utilization when performances are held.
- Several special reading/multimedia spaces were incorporated throughout the school

Comments:
• Idea of colors being for the students rather than the faculty/staff interesting premise. • Visual and physical connections between floors difficult to experience given their size and scale • Secondary Physical Education space is highly advantageous feature • Dedicated STEAM rooms/areas would be something that would be great to incorporate in the design of the new school for Shrewsbury • Media center was very small and so were the Small Instruction/Inclusion rooms • Visual connections via borrowed lights were often blocked • Special Education furniture is in line with what the district would want to utilize at the new school. Particularly a system that can anchor to a wall • Principal reported that synthetic material used at the playground limits the rate at which snow melts and is often the last place to melt and results in ice forming • Corridors felt narrow and long. • Tile murals were playful and age appropriate • Furniture selections were age appropriate and engaging • Need places for display of student work

PHOTOS:

Common Area Defined by Lockers

Common Area



Typical Hallway

Cafetorium

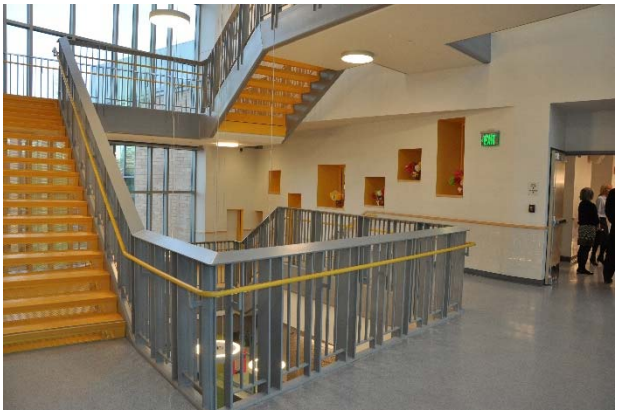
STEAM Room

STEAM Room Display

Small Instruction/Inclusion Rooms

Special Education Furniture

Media Center


Main Lobby Stair

Secondary Physical Education Space

Playground

1. Grade Configuration Survey Data 10/11/17
2. Grade Configuration Parent Survey
3. Grade Configuration Staff Survey
4. Grade Configuration SPS Transportation Report 10/18/17
5. Grade Configuration SPS Grade Level Report 10/2017
6. Grade Configuration SPS Recommendation 10/20/17
7. Grade Configuration SPS Recommendation Presentation 10/25/17
8. Grade Configuration Classrooms Needed
9. Grade Configuration District Enrollment Capacities

Beal Building Project
Grade Configuration Survey Data

Presented to the Shrewsbury School Committee

October 11, 2017

Survey Information

- Surveys sent out via email list serv and website on 9/20/17; reminder also sent via email list serv

- Surveys were active through 10/3/17

- Parent & Community Survey:
  - 922 respondents
    - 495 parents & caretakers – oldest child in preschool/elementary school
    - 186 parents & caretakers – oldest child in middle school
    - 103 parents & caretakers – oldest child in high school
    - 134 community members who are not parents or caretakers of current students
    - 4 unidentified

- Staff Survey:
  - 245 respondents
    - 89 classroom teachers
    - 68 support staff (paraprofessionals, secretaries, etc.)
    - 44 special educators
    - 23 special subject teachers
    - 19 administrators
    - 2 unidentified

Kindergarten & Grade 1 Configuration: Benefits & Drawbacks

All or almost all Kindergarten & Grade 1 students in town would attend Beal for those two years.

	Benefit or Significant Benefit	Neutral	Drawback or Significant Drawback
Parents & Community	39%	18%	42%
Staff	34%	21%	45%

Kindergarten & Grade 1 Configuration: Benefits & Drawbacks

Coolidge, Floral Street, Paton, & Spring Street would primarily house Grades 2, 3 & 4.

	Benefit or Significant Benefit	Neutral	Drawback or Significant Drawback
Parents & Community	38%	24%	38%
Staff	34%	26%	41%

Kindergarten & Grade 1 Configuration: Benefits & Drawbacks

Students would experience attending two different schools, one for Grades K and 1 and one for Grades 2 through 4.

	Benefit or Significant Benefit	Neutral	Drawback or Significant Drawback
Parents & Community	23%	25%	53%
Staff	16%	19%	66%

Kindergarten & Grade 1 Configuration: Benefits & Drawbacks

All or almost all families with a child in Grades K-1 and another child in Grades 2-4 would have the children attending two different schools.

	Benefit or Significant Benefit	Neutral	Drawback or Significant Drawback
Parents & Community	7%	24%	69%
Staff	4%	18%	79%

Kindergarten & Grade 1 Configuration: Benefits & Drawbacks

The span of curriculum will be focused on a smaller number of grade levels in the same school (Grades K-1 early childhood center for one school and a Grades 2, 3, & 4 elementary school for the other)

	Benefit or Significant Benefit	Neutral	Drawback or Significant Drawback
Parents & Community	52%	29%	19%
Staff	54%	23%	23%

Kindergarten & Grade 1 Configuration: Benefits & Drawbacks

Potential need to transport students from the same neighborhood on separate buses to two different schools (Grades K-1 and Grades 2, 3, & 4) at approximately the same time.

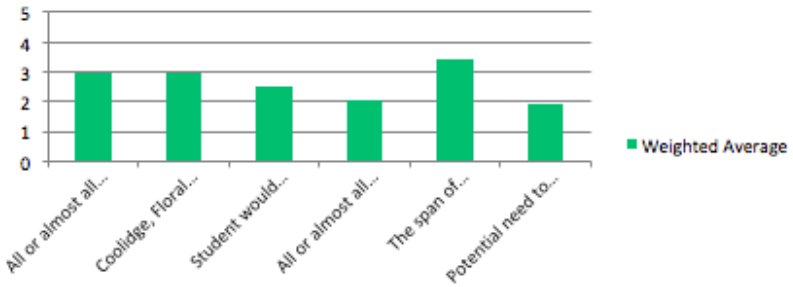
	Benefit or Significant Benefit	Neutral	Drawback or Significant Drawback
Parents & Community	6%	19%	76%
Staff	3%	14%	83%

Kindergarten & Grade 1 Configuration: Benefits & Drawbacks

Weighted averages of almost all <u>K-1 considerations</u> are in "drawbacks" category (<3)

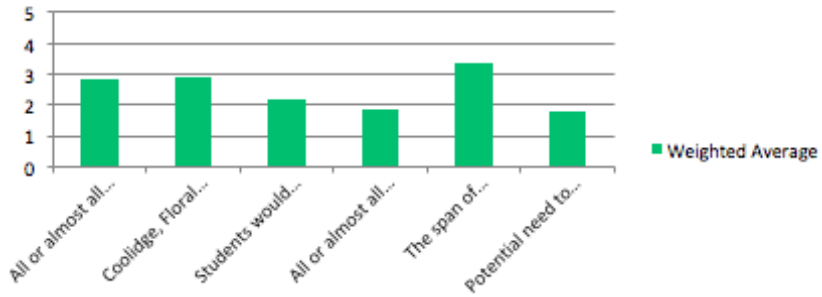
Parents & Community:

Please indicate whether you think the following considerations related to a Grades K & 1 configuration would be a drawback or a benefit:



Staff:

Please indicate whether you think the following considerations related to a Grades K & 1 configuration would be a drawback or a benefit:



5 = Significant Benefit 4 = Benefit 3 = Neutral 2 = Drawback 1 = Significant Drawback

Kindergarten – Grade 4 Configuration: Benefits & Drawbacks

All students in Grades K through 4 would attend a neighborhood elementary school.

	Benefit or Significant Benefit	Neutral	Drawback or Significant Drawback
Parents & Community	80%	13%	8%
Staff	83%	10%	7%

Kindergarten – Grade 4 Configuration: Benefits & Drawbacks

Kindergartens would be included in all neighborhood elementary schools rather than having an early childhood center model.

	Benefit or Significant Benefit	Neutral	Drawback or Significant Drawback
Parents & Community	65%	18%	17%
Staff	67%	15%	18%

Kindergarten – Grade 4 Configuration: Benefits & Drawbacks

Students would experience attending one school for the five years of Grades K through 4.

	Benefit or Significant Benefit	Neutral	Drawback or Significant Drawback
Parents & Community	79%	16%	6%
Staff	81%	13%	5%

Kindergarten – Grade 4 Configuration: Benefits & Drawbacks

Families with children in Grades K-4 would have their children attending the same school.

	Benefit or Significant Benefit	Neutral	Drawback or Significant Drawback
Parents & Community	90%	9%	2%
Staff	88%	11%	2%

Kindergarten – Grade 4 Configuration: Benefits & Drawbacks

The span of curriculum will be focused on a larger number of grade levels in the same school (Grades K-4 elementary school)

	Benefit or Significant Benefit	Neutral	Drawback or Significant Drawback
Parents & Community	38%	41%	22%
Staff	34%	39%	28%

Kindergarten – Grade 4 Configuration: Benefits & Drawbacks

Students in Grades K-4 from the same neighborhood would be transported to the same school.

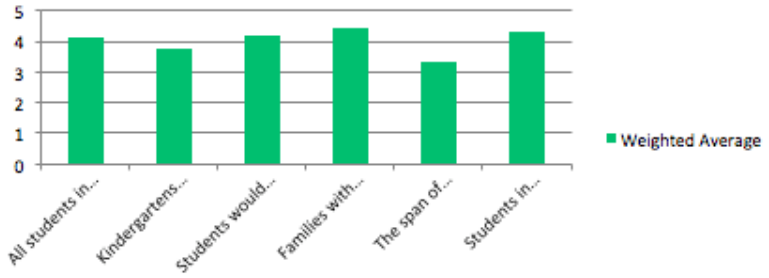
	Benefit or Significant Benefit	Neutral	Drawback or Significant Drawback
Parents & Community	87%	10%	3%
Staff	86%	12%	2%

Kindergarten – Grade 4 Configuration: Benefits & Drawbacks

Weighted averages of all <u>K-4 considerations</u> are in "benefits" category (>3)

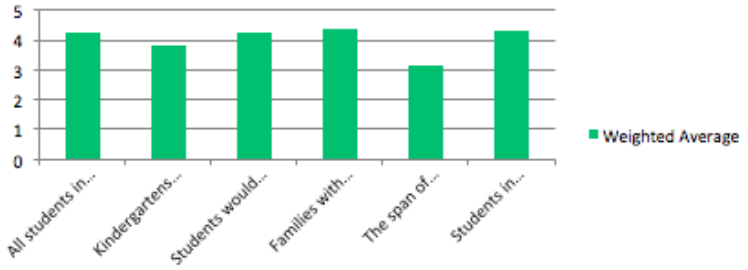
Parents & Community:

Please indicate whether you think the following considerations related to a Grades K through 4 configuration would be a drawback or a benefit:



Staff:

Please indicate whether you think the following considerations related to a Grades K through 4 configuration would be a drawback or a benefit:



5 = Significant Benefit 4 = Benefit 3 = Neutral 2 = Drawback 1 = Significant Drawback

Sample Parent Quotes in Support of K-1 Configuration

- Being an elementary school teacher and parent, I'm in favor of the K-1 model at Beal. Having all of the teachers planning curriculum together with unified goals and common assessment measures creates a solid foundation for future success as students continue on in their neighborhood schools for their grades 2-4 experience. The idea that they would all have a common experience is a significant benefit in my opinion.

- I loved Beal and feel it being an early childhood center feels like a safe, wonderful place for children to start their schooling! Those qualities make it worth the inconvenience of having kids in 2 different schools!

- I like the idea of kindergarten and grade one being in one school. All three of my kids went to Beal and I like that they can do things like sing along together as a grade. They don't do that in schools where there is one kindergarten. When looking back at their time in Beal going to sing along is still such a fun memory to look back on. Would more buses need to be added if the school is K-4? How would that affect the budget?

Sample Staff Quotes in Support of K-1 Configuration

- I hope that the committee will consider the importance of the early childhood building environment on the academic and social development of 5 and 6 year old students. Having an early childhood center does make a difference in the school's ability to focus on that particularly important beginning stage of learning. It also provides for a solid working environment for staff who are committed to the issues of developmental appropriateness in education. I cannot overstate the importance of developmental appropriateness for our youngest students. Including K/1 students in the elementary schools will water down developmentally appropriate practice as it does not provide the same experiences for either staff or students.
- I am very much in favor of a k-1 model for early childhood education. I believe this model would best provide our earliest learners with a strong educational and social/emotional foundation. Keeping K-1 students together as they start on their educational journey and having them reconnect years later when they come back together as middle-schoolers and high-schoolers just feels right. Professionals can provide a higher level of attention for curriculum in all areas when the grade-level focus of a school is smaller. As a parent in town, I have had several years with my three children being at 2 or 3 separate schools and on 2 or 3 different buses. It has not been an inconvenience and has allowed our children to claim their school as their own. Being pulled in multiple directions whether for school, sports or extra-curricular activities is something you sign on for when you have multiple children. We need to focus on doing what is right for our youngest learners rather than what is convenient.
- As a teacher at Beal, I strongly feel that a K to 1 model would have such a positive impact on our youngest learners! The children would be receiving support from teachers and staff that are truly specializing in their grade levels. We could provide learning spaces that are highly beneficial for such young learners - playground equipment, gym equipment, etc. Being part of a team that focuses their knowledge on our youngest learners will ensure that we're truly focusing on what is developmentally appropriate! Key points: - Eliminating half-day kindergarten would be essential in making sure each student is receiving the same educational experiences. - Fine tuning the bus situation will be a challenge; but it's imperative that we are thinking about what is best for their educational experience and not the convenience of busing.

Sample Parent Quotes in Support of K-4 Configuration

- I have been conflicted about the best option for our students and I see benefits to both models. While I love the benefits of having all K and 1 students in the same building as one focused Early Childhood Center, those benefits aren't as strong as having a consistent community and curriculum work for the first 5 years. There would be such greater continuity by having students in the same learning community for those 5 years. As a parent with children in K-4 this year (in 2 different schools), I would prefer to have my children have the experience of being in the same school for all five years for the common language, building culture and same teaching/learning expectations.
- My son currently attends Floral and I have a preschooler who will attend in a couple of years. The class sizes are large at Floral and with constant construction of apartments and housing in Shrewsbury, the amount of children is increasing. Shrewsbury is a wonderfully diverse town with a great community and wonderful schools, so naturally it is attractive to families. With Beal becoming a K-4 School, it could create the opportunity for reconfiguration in current schools which could decrease class sizes allowing for an optimal educational experience. This also allows for less transitions between schools for our children. They already transition from K to elementary, elementary to middle, middle to middle and finally to high school. That is a lot of shifting schools for our children as they grow. Please consider all of these extremely important issues as you make this decision. Thank you!!
- I think it would be best if a new building housing K-4 is created. There are already too many schools the children have to attend throughout their schooling in Shrewsbury- K school, 1-4, a 5-6 a 7-8 and then HS. It would be great if students could start in K in one building and continue through 4th grade, they would become more part of the community, more comfortable and settled and have similar friends throughout the 5 years rather than jumping from school to school so many times.

Sample Staff Quotes in Support of K-4 Configuration

- I think that having the consistency of going to one school from K-4 would help the students immensely. The students would learn school wide expectations that would transfer well year to year. I also think that this would allow teachers who loop to continue to do that work. As a first grade teacher, having a second grade class next door is a huge benefit to my students and myself. The children get to see role model students and it helps me to see the foundational skills I teach in action the next year.
- I think the fewer transitions students have between schools, the better it is for them. When at a school for several years, students are able to build relationships across grade levels and faculty get to know families more closely.
- I think that having younger children together with older students in the same school is a definite benefit. Not only does this provide the younger students with older role models, but it also provides more opportunities for cross grade level activities. From a teaching perspective, it is incredibly helpful to have the grade above you in the same building so that you can learn more about where your students need to be by the end of the year and tailor your instruction accordingly.

K & Grade 1 Configuration: Themes

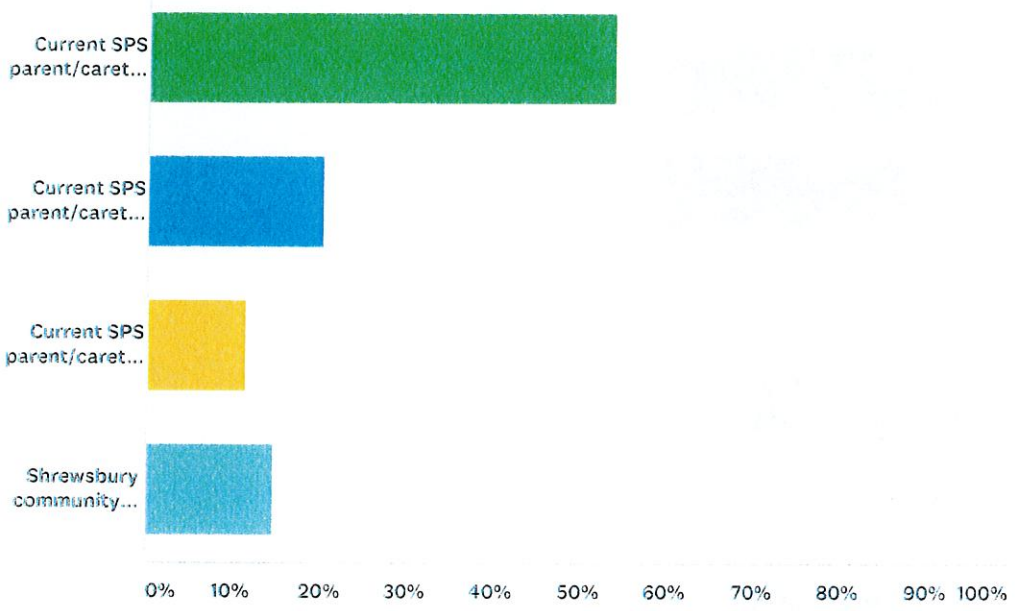
Perceived Strengths	Perceived Challenges
• Focus on early childhood and developmentally appropriate practices • Smaller range of ages (social aspect; school design) • Most K-1 students in town together in one place (equity) • Educators with similar focus/expertise • Horizontal alignment of curriculum • “Feel” of early childhood climate	• More transitions between schools • Most/all students in town together in one place, then dispersed to neighborhood schools • Less vertical curriculum alignment • Less time for school personnel to get to know students and families, and vice versa • Large population of young students (750 K & 1 students) • Logistics (siblings split across multiple schools; transportation; can’t fit all K-1 students in new school; etc.)

K through Grade 4 Configuration: Themes

Perceived Strengths	Perceived Challenges
• Fewer transitions, more stability and consistency over five year period • More time for school personnel to get to know students and families, and vice versa • Greater ability to even out population across schools (equity) • Vertical alignment of curriculum • “Feel” of neighborhood school climate (older kids models for younger kids) • Logistics for siblings, transportation, etc.	• Less focus on early childhood developmental level • Curriculum focused on a wider range of grades • Students divided in separate schools across town rather than most at same grade levels in one place (equity) • Design of school not entirely focused on early childhood • Older kids could be intimidating to younger kids

Q1 I am a:

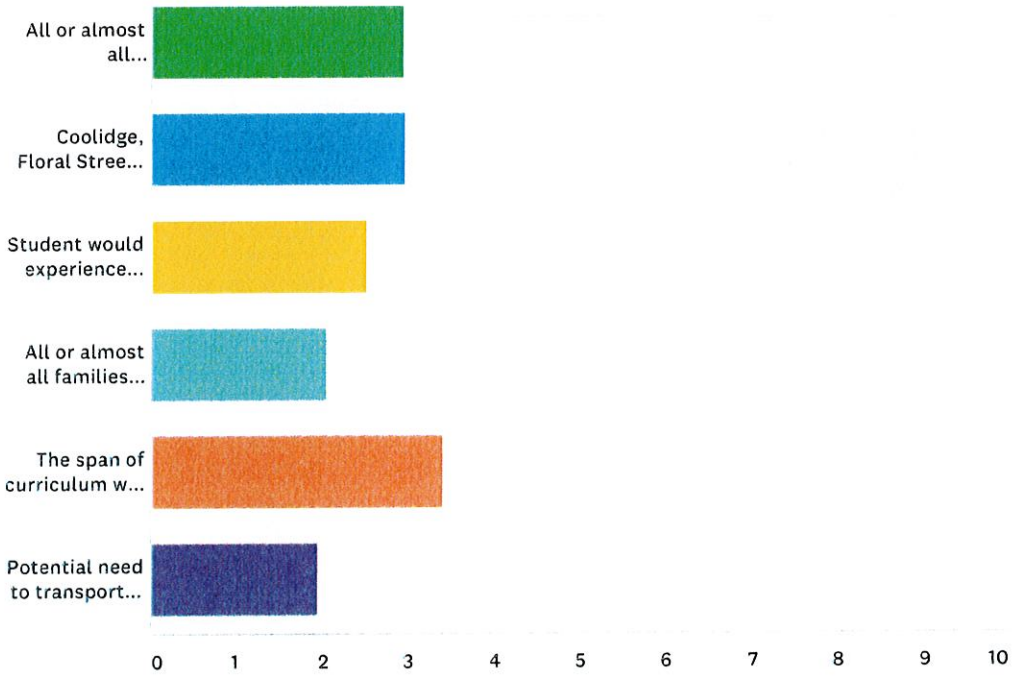
Answered: 918 Skipped: 4



ANSWER CHOICES	RESPONSES	
Current SPS parent/caretaker – youngest child is in early childhood/elementary school (Preschool-Grade 4)	53.92%	495
Current SPS parent/caretaker – youngest child is in middle school (Grades 5-8)	20.26%	186
Current SPS parent/caretaker – youngest child is in high school (Grades 9-12)	11.22%	103
Shrewsbury community member (not a current SPS parent/caretaker)	14.60%	134
TOTAL		918

Q2 Please indicate whether you think the following considerations related to a Grades K & 1 configuration would be a drawback or a benefit:

Answered: 805 Skipped: 117

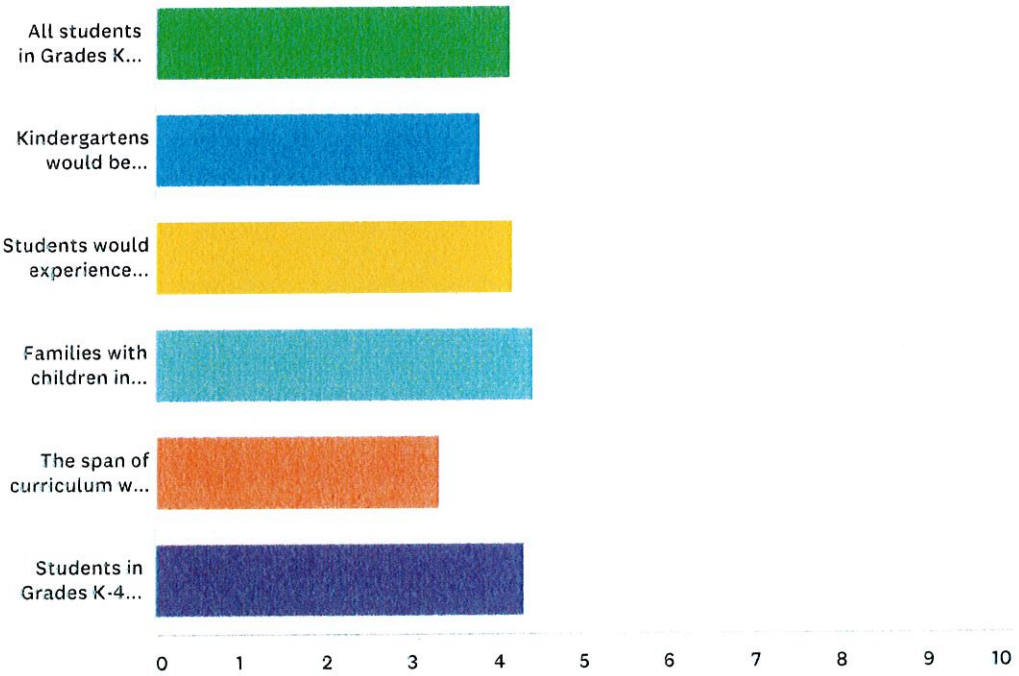


	SIGNIFICANT DRAWBACK	DRAWBACK	NEUTRAL	BENEFIT	SIGNIFICANT BENEFIT	TOTAL	WEIGHTED AVERAGE
All or almost all Kindergarten & Grade 1 students in town would attend Beal for those two years.	17.54% 141	24.75% 199	18.41% 148	24.00% 193	15.30% 123	804	2.95
Coolidge, Floral Street, Paton, & Spring Street would primarily house Grades 2, 3 & 4.	14.93% 120	23.51% 189	23.63% 190	24.75% 199	13.18% 106	804	2.98
Student would experience attending two different schools, one for Grades K and 1 and one for Grades 2 through 4.	25.47% 205	27.08% 218	24.60% 198	17.14% 138	5.71% 46	805	2.51
All or almost all families with a child in Grades K-1 and another child in Grades 2-4 would have the children attending two different schools.	34.83% 280	33.83% 272	24.13% 194	4.60% 37	2.61% 21	804	2.06
The span of curriculum will be focused on a smaller number of grade levels in the same school (Grades K-1 early childhood center for one school and a Grades 2, 3, & 4 elementary school for the other)	8.21% 66	11.07% 89	28.73% 231	34.70% 279	17.29% 139	804	3.42

Potential need to transport students from the same neighborhood on separate buses to two different schools (Grades K-1 and Grades 2, 3, & 4) at approximately the same time.	37.02% 298	38.76% 312	18.63% 150	3.23% 26	2.36% 19	805	1.95

Q3 Please indicate whether you think the following considerations related to a Grades K through 4 configuration would be a drawback or a benefit:

Answered: 774 Skipped: 148



	SIGNIFICANT DRAWBACK	DRAWBACK	NEUTRAL	BENEFIT	SIGNIFICANT BENEFIT	TOTAL	WEIGHTED AVERAGE
All students in Grades K through 4 would attend a neighborhood elementary school.	1.81% 14	5.70% 44	12.56% 97	35.88% 277	44.04% 340	772	4.15
Kindergartens would be included in all neighborhood elementary schools rather than having an early childhood center model.	3.36% 26	14.08% 109	17.70% 137	30.75% 238	34.11% 264	774	3.78
Students would experience attending one school for the five years of Grades K through 4.	1.56% 12	4.02% 31	15.82% 122	32.68% 252	45.91% 354	771	4.17
Families with children in Grades K-4 would have their children attending the same school.	0.90% 7	1.03% 8	8.53% 66	34.24% 265	55.30% 428	774	4.42
The span of curriculum will be focused on a larger number of grade levels in the same school (Grades K-4 elementary school)	3.63% 28	17.75% 137	40.67% 314	20.21% 156	17.75% 137	772	3.31
Students in Grades K-4 from the same neighborhood would be transported to the same school.	1.68% 13	1.68% 13	9.82% 76	37.60% 291	49.22% 381	774	4.31

Q4 Please share any feedback or questions you have regarding the choice of grade configuration for the Beal building project. Thank you!

Answered: 284 Skipped: 638

#	RESPONSES	DATE
1	I liked my children starting school with all the students being young. I found when they went to Coolidge they started having some injuries on the playground. I didn't want the exposure of the older students right away when they started school. My children were in a family daycare setting until school. I understand the teachers that are in a K setting in the elementary school would like to have other K teachers to collaborate with so they would like to have more than one classroom of K in the elementary setting. I also found that the having K-1 together the students meet other students in town. When they get to middle school and high school they will know other students than the neighborhood friends. Keeping siblings together sounds good but they will be apart when transition to middle school and high school and there will be different start times then.	10/3/2017 8:51 AM
2	I think continuity is important to elementary school kids. It's better for them to "grow up" in the same school. I think a wider age range, K-4, creates positive social opportunities. Younger kids learn from older and older kids can be encouraged to be protective of and mentor the younger kids.	10/2/2017 8:56 PM
3	We need a new school. Beal served its purpose, but we're trying to put a square peg in a round hole now. Move on.	9/29/2017 5:08 AM
4	The K-1 model is better because of the special focus on younger students.	9/28/2017 8:55 PM
5	I feel Beal should stay as a K and grade 1 school and NOT become another neighborhood school it is the best option as it has the least amount of reconfiguring and changes to the districts.	9/28/2017 8:35 PM
6	Neighborhood schools k through 4 is most desired solution.	9/28/2017 6:37 PM
7	Realizing the options I think the schools should be K - 4. Thank you.	9/28/2017 12:48 PM
8	As a future SPS parent, I would prefer my children to attend one school from K-4 where the staff can get to know my students better over a longer period of time. As an educator I like the thought of the teachers being able to more easily be able to vertically align with other teachers in the building. For me, it is a no brainer, a K-4 school would be much better than a K-1 school.	9/28/2017 10:49 AM
9	Beal School need lot of renovations and space to accommodate students for K - 4th. The school is sub standard compared to other Shrewsbury schools and children doesn't get enough encouragement to attend the School. Also the board should inspect the school to determine the hygiene level for continuity. Please renovate the school to match up standard with other Shrewsbury schools	9/28/2017 10:21 AM
10	Too much dividing up of elementary school locations already: first, you moved 5th grade out & then all/part KG & now want to move 1st. Better for the child all in one local elementary school. KISS (keep it simple).	9/28/2017 6:33 AM
11	A huge concern for Beal school is the small footprint and the exponential amount of traffic that this would add to the area. Please take that into consideration.	9/28/2017 6:07 AM
12	nothing special	9/28/2017 1:07 AM
13	Very strongly feel that staying at the same school for 5 years is a significant benefit for the children and families.	9/27/2017 8:46 PM
14	With the Shrewood/Oak split the town does not need another school for K+1. Let's go with the neighborhood school idea.	9/27/2017 8:28 PM

15	My son currently attends Floral and I have a preschooler who will attend in a couple of years. The class sizes are large at Floral and with constant construction of apartments and housing in Shrewsbury, the amount of children is increasing. Shrewsbury is a wonderfully diverse town with a great community and wonderful schools, so naturally it is attractive to families. With Beal becoming a K-4 School, it could create the opportunity for reconfiguration in current schools which could decrease class sizes allowing for an optimal educational experience. This also allows for less transitions between schools for our children. They already transition from K to elementary, elementary to middle, middle to middle and finally to high school. That is a lot of shifting schools for our children as they grow. Please consider all of these extremely important issues as you make this decision. Thank you!!	9/27/2017 6:45 PM
16	I think it makes it easier for parents to put two kids (say one in K and one in 3rd) on the same bus going to the same school. I also think it benefits the small child by having a familiar face when they first start going to school.	9/27/2017 5:37 PM
17	A huge undertaking this project. It is absolutely needed for the education and health of the students, staff and faculty. There will be difficult decisions to make however the best situation is to build another neighborhood school and then redistrict. Of course redistricting is very tricky and will not please everyone but it has veen done before. Previously had been in a district that did redistrict. They grandfathered families to the school they were currently in if they were actually due to change schools. This was the parent's choice. However they did not receive transportation to the grandfathered/non neighborhood school. Will be following the process. Thank you for your efforts.	9/27/2017 3:50 PM
18	Keeping neighborhood children together is most likely the best solution. It would greatly benefit anyone with anxiety issues. Switching schools could be traumatizing to some students.	9/27/2017 12:47 PM
19	It will be useful if the kid goes to the same school from K to 4th. It would also benefit in sharing town resources with all schools like transporting kids from a neighborhood to the same school (instead of use separate buses). I would like my kids within K-4 to go to same school for lots of scheduling reasons.	9/27/2017 12:34 PM
20	Why is Beal not being made into a preschool and kindergarten? Putting preschool with kindergarten seems to make the most academic sense.	9/27/2017 12:09 PM
21	I think it would have more negative impact to redistrict than to have to move kids more often.	9/27/2017 11:47 AM
22	I think there are pros and cons with both configurations. I think the district needs to choose what works best.	9/27/2017 11:38 AM
23	Beal and Paton schools are relatively close in proximity. How would redistricting of students affect families at those schools?	9/27/2017 11:22 AM
24	Transitions to new schools are difficult. Reducing the number of transitions is a benefit. This assumes full day kindergarten? Will the Town lose revenue? Busing would be simplified and the potential of older siblings on the bus with kindergarten is also a plus.	9/27/2017 11:12 AM
25	I support whichever decision that would allow the town to offer full day kindergarten experience to all Shrewsbury children.	9/27/2017 10:53 AM
26	Expanding Beal will increase traffic in an already congested area of town. Combined with Paton traffic on Grafton St (140), existing traffic on Maple and Main would increase even more. Getting to the library is already difficult enough, and semi trucks are often passing through the intersection. Any development would increase traffic to the area. Splitting grades and running Beal at lower grade levels for the entire district would just create a disastrous traffic situation everywhere, in addition to confusing young children, making it harder for them to learn school routines (crucial in K & 1st), and making transportation (bus and parent) a nightmare.	9/27/2017 10:32 AM
27	I think for Beal they need lots of improvements	9/27/2017 10:00 AM
28	Having all or most of Kindergarten children in one school is an opportunity for children from different neighborhoods to get to know each other, before middle school. But I think transportation arrangements and children from the same family going to the same school, if possible, is more important. So I lean towards a K-4 neighborhood school.	9/27/2017 9:56 AM
29	I think having siblings in the same school at an early age and taking the same bus is a huge benefit to working families.	9/27/2017 9:55 AM

30	As a community member and teacher in the district, I have found that having the kindergarten classes in the building is a distinct advantage. They get to know the building and the people in it. The teachers are aware of what the expectations are for all grades and as such all grades are working to support the other grades. I have found many positives to having the k-4 neighborhood school.	9/27/2017 9:38 AM
31	Given our school budget, and the recent need to override prop 2.5, the financial implications of these two choices should be a major factor in this decision.	9/27/2017 8:53 AM
32	I think K-4 in one elementary school is best for working families. It also, allows siblings to watch out for one another in the same school	9/27/2017 8:50 AM
33	If given the opportunity to share my opinion, I would voice my vote for a K-4 building.	9/27/2017 8:48 AM
34	Why did you make the survey so difficult. It could be 1 question and be done.	9/27/2017 8:46 AM
35	Both configurations have benefits and drawbacks. As long as the developmental and curricular needs are well thought out, both are viable options.	9/27/2017 8:36 AM
36	What would be the cost?	9/27/2017 8:32 AM
37	This is a difficult decision. Growing up in Stamford Connecticut I am only familiar having a elementary school for myself that was k-5. I enjoyed going to school with my siblings and having them around as needed. I remember being intimated by the older children on the bus when I was smaller and might have a less traumatic childhood experience if there was a separate early childhood school and a elementary school. Also as a child with a diagnosed learning disability I would have benefited from smaller class size and lower student to teacher ratio. This is one of my biggest concerns. Which model will have a lower student to teacher ratio as I feel this is my biggest concern. Thank you. I can be reached at [redacted]	9/27/2017 8:29 AM
38	Quality of education should be at the forefront. It is more efficient to implement best practices when same grade teachers/students are in the same building. This being such an important habit forming time in kids lives, I believe an early thru 1st grade building will give these students the best start.	9/27/2017 7:34 AM
39	I feel that having a new school that the whole school age population can utilize from is a benefit. The other elementary schools are declining and this would make it equitable for those ages. From experience, my children never had transition problems going from one school to another. In fact, they looked forward to it. I do feel a draw back could be the busing of the children at the same time. I also feel that the k-1 age group work really well together and there are many benefits for keeping them together. Even from the standpoint of the ESC program. It makes for better programming and concentrating on the needs and growth of those ages.	9/27/2017 7:30 AM
40	I have been conflicted about the best option for our students and I see benefits to both models. While I love the benefits of having all K and 1 students in the same building as one focused Early Childhood Center, those benefits aren't as strong as having a consistent community and curriculum work for the first 5 years. There would be such greater continuity by having students in the same learning community for those 5 years. As a parent with children in K-4 this year (in 2 different schools), I would prefer to have my children have the experience of being in the same school for all five years for the common language, building culture and same teaching/learning expectations.	9/27/2017 6:59 AM
41	As much as I would love for all the town to enjoy the benefit of a new school, the logistics of families needing to run to two different schools to pick up their children, or wait at the bus stop for two buses is unfair and illogical. Also, I think it's a huge benefit to the younger students to see and look up to the older students, which is lost at separate schools.	9/27/2017 6:57 AM
42	Currently the longest tenure of a student in a building would be 4 years in the HS, then 3 years in the local elementary. K-1, 5-6, 7-8 are 2 year buildings. Unfair use of each building. If the district continued full day K, K-4 elementarys. If half day K is still used, Beal should be PreK, K, 1. Regardless, plan to build a larger school than planned, the seams will again be bursting. The HS is already close to overcapacity...	9/27/2017 6:52 AM
43	K-4 would be fabulous. Especially considering the studies SPs has done regarding PBL and expeditiary learning. We learn from each other. This way the older kids can help the younger ones and vice versa, because everyone is in the same building.	9/27/2017 6:51 AM
44	Concerned about how long children would be in the bus for a central K-1 school. I don't think more than 20 minutes or so is appropriate at that age. However I like a central K-1 if this concern is addressed.	9/27/2017 6:49 AM

45	Being an elementary school teacher and parent, I'm in favor of the K-1 model at Beal. Having all of the teachers planning curriculum together with unified goals and common assessment measures creates a solid foundation for future success as students continue on in their neighborhood schools for their grades 2-4 experience. The idea that they would all have a common experience is a significant benefit in my opinion.	9/27/2017 1:23 AM
46	I think it's best to build Beal school as a full K-4th grade school instead of just for K-1st grade .	9/27/2017 12:23 AM
47	The early childhood center model is appealing when you have a new kindergartner and it feels like such a big step to send them off to school. But overall, I think it is more beneficial to incorporate kindergartners into their respective elementary schools. It may take a bit more adjustment for the students at the beginning of kindergarten, but then they are not changing schools later. It's also sweet for the rest of the school community to take care of the kindergartners. I think it will be nicer and less complicated for families to have their elementary age children at the same school as well. One thing that will be a little strange if the new Beal is built on the old Beal site is having Paton and Beal so close to one another.	9/26/2017 11:56 PM
48	If Beal would follow K-4 then Floral would need to have an additional class for "K"	9/26/2017 11:53 PM
49	I feel that the best solution is to reconfigure the school districts and add a new district ("Beal") with strong consideration of the Glavin location as a new construction site. Floral will continue to be overcrowded based on the development trajectory of the town, regardless of how many grades the school building itself will encompass. Redistricting provides a longer term solution for this problem. I would also prefer my children to stay in a smaller neighborhood school, either K-4 or even 1-4. Parents in Coolidge would be at a significant disadvantage trying to get to the center of town and back to Coolidge for multiple pickups from extended day, etc.	9/26/2017 11:28 PM
50	Build for the future. 20 years from now, what will Shrewsbury be ? How many school kids will we have to accommodate ? Having a focused curriculum at a young age will provide Shrewsbury kids with a significant advantage in their later school years.	9/26/2017 10:47 PM
51	Beal school can be expanded and full day kindergarten programs can be given to all rather than the lottery system where the option of getting is merely based on luck	9/26/2017 10:26 PM
52	Three of my children attended Beal for Kindergarten and then transitioned to their neighborhood school for 2-4 grade. I can honestly say that it was a good experience. It would probably also be a good experience for a student to attend all 5 years in a neighborhood school but attending Beal for the K years only was certainly not a drawback	9/26/2017 10:17 PM
53	While the K-1 model of early childhood education is attractive and supports children's adjustment to elementary school, I am concerned that there would end up being "satellite" first grade classes at other schools. I would be inclined to vote for a K-4 model, to limit the number of transitions kids need to go through and to maximize the capacity (790 vs. 750 students).	9/26/2017 10:13 PM
54	I feel that there should be another elementary school to take the overcrowding in the other schools. Having it a K-4 will have more continuity within the school as opposed to 2 school. The teacher communication between grades will be easier than between schools. Siblings will be in the same school longer. It will be easier for parents and may get a better response from parents with volunteerism and PTO. [redacted]	9/26/2017 10:03 PM
55	If the configuration was K-4 and there 5 schools where would the boundaries be in terms of attending one school vs another ? Also if we have a children that will be currently at a school ie Spring in 2022 as a 2nd grader or third grader will they be able to remain at that school thru graduation or will they get pulled out of that school and put into another one? I think kids who are already in a particular district and school system should NOT be pulled out of that school come 2022. This is a huge concern that many parents have with this new proposal.	9/26/2017 9:58 PM
56	I absolutely think a K-4 school for each neighborhood would be fantastic for all families. Less transitions, more streamlined. Easier on the kids and the families.	9/26/2017 9:55 PM
57	It is essential to keep K separate from the upper grades. Putting K-1 together would be a great benefit to all of the grades.	9/26/2017 9:55 PM
58	I believe if the town of Shrewsbury is going to put money into changes in our current school districts it should be based around every neighborhood having their own K through four elementary school.	9/26/2017 9:52 PM
59	I believe the K/1 model makes the most sense. It will allow for a more focused building and grounds design, eliminate the need to modify existing schools in order to accommodate Kindergarten students, and most closely resemble our current system model.	9/26/2017 9:27 PM

60	I think it would be best if a new building housing K-4 is created. There are already too many schools the children have to attend throughout there schooling in Shrewsbury- K school, 1-4, a 5-6 a 7-8 and then HS. It would be great if students could start in K in one building and continue through 4th grade, they would become more part of the community, more comfortable and settled and have similar friends throughout the 5 years rather than jumping from school to school so many times.	9/26/2017 9:26 PM
61	When children start going to school in kindergarten, they are a bit anxious. I feel that going to school with higher grade kids in the same bus and same school could add to this anxiety. They should be with kids of same age group only in the initial years to help them better adjust in school environment and also to lessen the possibilities of bullying and other issues.	9/26/2017 9:25 PM
62	Really enjoying the early childcare model that allows my daughter to build confidence prior to transitioning to a school with older children.	9/26/2017 9:23 PM
63	both options have positives and negatives. The most positive for option one is that small kids grades K-1 would be only around. While the most positive for option two is that there won't be transitions in between which is a challenge I currently experience with my first grader at Floral transferred from Beal.	9/26/2017 9:20 PM
64	my son was at Patonin his first kindergarten year and I had my other two children that year at Paton and that was wonderful. I felt great knowing they were togetger and he would have fewer transitions. Being confortable helps growth and security allows for the child to focus on learning sooner. It would be great to house full day kindergarten for every student in town.	9/26/2017 9:12 PM
65	Kids learn by looking up to elder siblings at home and higher grade students at school. K-1 configuration will not provide that learning experience from their higher grade siblings or their friends.	9/26/2017 9:05 PM
66	If you have more than one child there are benefits to staying in one school. Creates consistency during that young age . They will be moving 3 other times for middle and High school years	9/26/2017 9:01 PM
67	It will be more convenient for the parents to keep their children at the same elementary schools. It also will help to form long term relationships between children and will help the school staff to know strength and challenges of the each particular student.	9/26/2017 9:01 PM
68	I think having a new k-4 school would be more beneficial to the students as they would have less transition and build friendships that they don't get with so many transfers at the current time.	9/26/2017 9:00 PM
69	I would hope we can keep an early childhood center.	9/26/2017 8:53 PM
70	I like the idea of having all the pre-k/k teachers in the same building so they can all collaborate and share resources. I think this will create a more equitable experience for the students. I am still concerned about all the transitions for students and logistical issues for parents with multiple children. For the k-4 option I like how teachers can follow students and more easily talk to their previous teachers. I'm concerned about equity between schools with regards to resources and student diversity. I want my son to be exposed to lots of people and I would hate for him to be in a classroom with everyone who looks, speaks, and thinks like him.	9/26/2017 8:53 PM
71	Too many transitions for young students isn't a benefit at all. Most young children don't transition well at all, never mind having to do it 4times before reaching high school.	9/26/2017 8:40 PM
72	We really loved Beal when our 2 kids were there. We found it to be a special experience because it was almost all Kindergartners (all little kids!)	9/26/2017 8:40 PM
73	With the growing number of students in town it's important to have another elementary school. Thanks .	9/26/2017 8:30 PM
74	The toughest problem in shrewsbury is the drop off and pick logisitics. Minimizing conflicting traffic and timings is in everyones best interest.	9/26/2017 8:30 PM
75	My son's experience in K at Spring was much better than my daughter's experience at Beal. Tessa will tell you things would have been different if she'd started at Spring.	9/26/2017 8:24 PM
76	I felt like a k-1 school would be nice at first until the bussing issue was mentioned & thinking about a family who could possibly have two or more elementary aged children at two different schools. Once the questions were focused on k-4 neighborhood schools, that seemed to make much more sense.	9/26/2017 8:21 PM
77	I think an additional K-4 school is a better choice for our town.	9/26/2017 8:14 PM

78	Needs to be one school for grades K-4th. Children are already split between Sherwood and Oak. Would be terrible to have children attend 5 different schools if Beal is turned into a K-1st school (Beal, one of the elementary schools, Sherwood, Oak and then the high school. Kids should stay in as few schools as possible.	9/26/2017 8:11 PM
79	-	9/26/2017 8:05 PM
80	As we take the social-emotional learning of our students into consideration and understand the value and importance of building relationships with students, having them in one school for five years allows true, long-term relationships to grow and develop. Moving to a different school every two to three years in from early childhood to elementary to middle school does not allow students/teachers and staff member to forge those critical relationships.	9/26/2017 8:04 PM
81	For those of us townies we attended local schools and separate schools - ward, Beal etc... kids are flexible and change is part of life. A good life lesson	9/26/2017 7:54 PM
82	It seems that the only drawback to having k-5 in one school would be curriculum planning. I think the benefits outweigh this one drawback.	9/26/2017 7:41 PM
83	I loved Beal and feel it being an early childhood center feels like a safe, wonderful place for children to start their schooling! Those qualities make it worth the inconvience of having kids in 2 different schools!	9/26/2017 7:33 PM
84	I think Beal would be best as a k-1 school for 2 reasons. 1- the academic focus would be the same for all students and in 1 building, and 2- because the buses are already way too crowded for our school and it would lead to children not having seats if they combined k-4	9/26/2017 7:30 PM
85	I think having K-1 separate is good. The children are really young and having them mixed with older kids/4th grade is not always great for the children, even though it's more convenient for the parents.	9/26/2017 7:30 PM
86	Space is very limited at and around Beal school, even if you build a new multi-story (4 floors?) building. Where is the space for teacher parking, where is the outdoor space for a school with that number of students?	9/26/2017 7:21 PM
87	My only son attends Coolidge and while it may seem selfish since I do not need to deal with the logistics of chaffuering children to different schools at the same time. I do think a universal K-1 will elevate schools that have already been expanded to accommodate the ever growing population. This especially concerns the Coolidge area that will be housing all the children of the new spags apartment complex.	9/26/2017 7:19 PM
88	I like the idea of kindergarten and grade one being in one school. All three of my kids went to Beal and I like that they can do things like sing along together as a grade. They don't do that in schools where there is one kindergarten. When looking back at their time in Beal going to sing along is still such a fun memory to look back on. Would more buses need to be added if the school is K-4? How would that affect the budget?	9/26/2017 7:19 PM
89	How would the town be re divided .. what neighborhoods go where??	9/26/2017 6:55 PM
90	Good survey !	9/26/2017 6:53 PM
91	I think an early childhood configuration is the best model. Having the same age children in the building and on the buses is a positive as well as the collaboration of all the teachers in the same building would be a huge benefit.	9/26/2017 6:53 PM
92	I LOVE the idea of a kindergarten and first grade classes being separate from 2-4	9/26/2017 6:50 PM
93	Beal's current set-up as a K-1 school is antiquated. Having another K-4 school where neighborhood kids can all go to the same school makes more sense to families and their children.	9/26/2017 6:49 PM
94	Keep the k to 4 model. It is why we moved to town. My spouse went through the system and we love SPS. Also, the only bad thing is you do not have free K for all. This project should include that. Shame on central admin for not making that a priority. Again that is my only complaint.	9/26/2017 6:48 PM
95	I think it's most important to have as few school changes as possible,son new K-4 school is the best choice.	9/26/2017 6:45 PM
96	None	9/26/2017 6:32 PM

97	The beal early childhood center is a unique offering that Shrewsbury provides that is rarely found in other towns. Teachers and specialists have in depth expertise on early childhood learning and development, and their knowledge and ability to provide early interventions where needed is invaluable. The same level of care is not commonly found in a more traditional k-4 school where specialists are less specialized due to their focus across 5 grades. Early interventions provide students with critical tools that enable them to be strong, life-long learners, and can decrease the total cost of education over the life-cycle of a student by addressing challenges in early formative years. I don't believe the convenience of multiple children in one school outweighs the exceptional attention, care, and expertise that our young learners experience in a specialized early childhood center. It really is a gem that separates Shrewsbury from neighboring towns. For what it's worth, my mother is a math interventionist in the Westboro elementary school system, and she believes that the services provided at Beal blow Westboro away!	9/26/2017 6:32 PM
98	We moved here from a school district the did not have neighborhood schools but instead had schools divided by grade. It made the bussing difficult for both the district (in terms of scheduling) and for the parents who had multiple children who could spend the morning going between different bus stops. It also made it difficult if you were a drop offf/pick up family. It was also difficult for families with children in the after care programs who had to pick up at different schools. We were very happy to move to a district with neighborhood schools.	9/26/2017 6:28 PM
99	Attending different schools helps children learn to socialize with other groups when they get to high school	9/26/2017 6:23 PM
100	My daughter loved going to the same school for 5 years.	9/26/2017 6:22 PM
101	I think having a K-4 school could help with some overcrowding of the other elementary schools.	9/26/2017 6:18 PM
102	It would be my desire to see our elementary schools utilize a K-4 model, which is more traditional, especially in this area. I'd rather see a fifth elementary school and some redistricting put into place, to make neighborhoods more cohesive with the elementary school "attached" to it.	9/26/2017 6:16 PM
103	I would prefer to see all elementary schools house K-6 students. I see little advantage to the various K-1 or K-4 configurations	9/26/2017 6:15 PM
104	K-4 Bring back neighborhood schools.	9/26/2017 6:13 PM
105	It would be great for students to attend same school from k-4	9/26/2017 6:12 PM
106	Decreasing the number of transitions that students experience would be a significant benefit of the K-4 model. There would also be more time to develop the feeling of community for children in families at the elementary level.	9/26/2017 6:11 PM
107	K-4 in one school	9/26/2017 6:10 PM
108	I have three children two of whom when to K and 1st at beal and transition to Floral. It was difficult because most of kids already knew the rules of the new school vs my kid which to transition and learn a new school and only being there for two years and transitioning middle school. The one child who was at Floral since the beginning had much easier time with transition and consistency of being at one school for 4 years. It would greatly benefit many children have one building for k-4 less transitions for kids at such a young age.	9/26/2017 1:41 PM
109	I have 3 children who never attended the same school at the same time which I felt was unfortunate for them. First child attended Beal for K&1; and second child attended private K; Beal for 1st; then Floral. Lots of transition for young children.	9/26/2017 9:51 AM
110	Different grade levels is definitely not age appropriate. Hence the reasoning for not placing 7 & 8 with High School levels. History speaks loud and clear. Follow the patterns from our history's past if you are in fact expecting superior classroom behavior. This will eliminate the domino effect. Let's do the right thing for our children verses hind sight.	9/26/2017 9:15 AM
111	Because many families have more than one child, having to send the kindergartener and seconder, for example, to different schools would be difficult for parents. Mornings before school are short and can be challenging. However, I also chose significant benefit for having all SPS K and 1 same school for building community. Those students would know and remember each other when getting to middle school and hopefully promote more friendship and sense of community and belonging. Practically speaking, I'm in favor of a K-4 school, even though this will not affect my family. I appreciate the district asking for parent input. Shrewsbury schools are why we moved to the town!	9/26/2017 9:04 AM

112	No questions. I'm sure no matter what option is chosen there will be no benefits to the town. Any chance for smaller classrooms would probably be offset by the town voting for school choice. If more teachers are needed there will be even less incentive to fire the incompetent 25% that hide behind tenure. Add this to the list of school failures.....	9/25/2017 11:40 PM
113	having all parts of town come to Beal for K+1, could be an issue for already crowded traffic conditions in the center of town. Keeping K-4 neighborhood schools can help keep the traffic decentralized.	9/25/2017 10:12 PM
114	Good luck determining a configuration to best suit the entire school system.	9/25/2017 9:23 PM
115	Whatever it is, but has to have an efficient loop line.	9/25/2017 4:09 PM
116	I think we are missing 2 critical pieces to help parents better understand the impact of both options. 1) Right now we struggle with Full Day K placement. How do you envision the classroom structure changing in the existing community schools? For ex: Paton has 1 K class. How many Full Day K rooms would they have vs. 1/2 Day rooms? 2) What would the redistricting look like? I wouldn't like to see my children redistricted from Paton. For a child that went to Beal for Kindergarten, then to Paton for a few grades - I would not want them uprooted to another school for Grade 3 and 4, and then onto Sherwood, Oak and SHS. That is far too many changes. What does that plan look like?	9/25/2017 4:04 PM
117	By having Beal house PreK, K and 1 for the whole town, then separate students to neighborhood schools for grades 2,3, and 4 to all be together again in 5-12 ... it doesn't make sense for fostering relationships and a sense of neighborhood community. I like the K-4 for all the neighborhood schools, that way parents are not dealing with different schedules altogether. The kids are all in one place. Make Beal a K-4 neighborhood school, and make all the kindergarten full day. It's really hard on the parents that work - which most of us in town work.	9/25/2017 3:17 PM
118	I do not believe the K age children should be in the same school a 4th grade students. Not good to have kids separated by zoning - creates socio economic challenges. Better for kids same age to be together when younger.	9/25/2017 12:23 PM
119	I'd imagine that as long as you can finally offer full-day kindergarten to families, most people won't care which configuration you go with.	9/25/2017 12:01 PM
120	I feel a K-4 building would be more beneficial than a K-1 building.	9/25/2017 11:53 AM
121	Considering that Beal is being rebuilt/renovated it makes much more sense to add a "full service" elementary school to the district rather than another "kindergarten/lower grade" center. I know a complete redistricting would occur and some parents would probably protest but regardless of which scenario is employed, some type of restructuring would inevitably occur. We must also consider the logistics of the bus routes and how inefficient and less cost effective that would be if yet another bus for another school navigated through all the neighborhoods. From my experience it is better and more convenient to have all elementary age children in the same building.	9/25/2017 11:00 AM
122	My oldest is currently in kindergarten at Beal. While I was initially disappointed that she would not be in her neighborhood school, I have been very impressed with the teachers, communication and welcoming atmosphere at Beal. However, I would still prefer not having to make multiple school transitions in such a short time at such a young age. Compounded by the fact that her younger sister will be in kindergarten next year, I would much prefer the creation of an additional neighborhood elementary school and making Spring, Floral, etc all K-4.	9/25/2017 9:46 AM
123	just when you decide to build another school and the kids get in it - you state that it's too small. ridiculous. I am a product of the Shrewsbury School system, and a college graduate with honors. We went to school in trailers and had big class sizes. It was FINE! Also, start looking at kids from neighboring cities using grandparents addresses or other addresses to get into Shrewsbury. I knew at least ONE doing that.	9/25/2017 6:25 AM
124	I loved the small kid feel of Beal. I worry about kindergarteners and 4th graders being on the same bus and little ones being exposed to inappropriate language and behaviors.	9/24/2017 9:46 PM
125	I think there is a huge benefit to having a dedicated early childhood center in town. This gives the youngest of our students a sheltered place to learn and grow before they are shuffled into the "big kid" schools. While having students at multiple schools is a challenge (I have 3 in 3 different schools now) the benefits to my anxious 5 year old in this safe and sheltered environment are immeasurable.	9/24/2017 7:56 PM

126	Both solutions have similar levels of benefits, but adding a new K-4 school would require heavier redistricting of the elementary schools. I expect that process would be more contentious and problematic than adding Beal as simply a K-1 school.	9/24/2017 7:37 PM
127	I support another elementary school that is K-4. It would relieve crowding at Floral Street School in the classrooms. Also, having a new accessible elementary school built from "Green" materials would save the district money all year round. The new school can be used for programs for outside agencies to come in to use the facilities to raise money for the school district.	9/24/2017 5:10 PM
128	I think that continuity and community are important. Every time my middle schooler has changed schools it has been more traumatic than in this years where he was familiar with the school, rules, teachers etc ..	9/24/2017 4:58 PM
129	I think a K-1 model would be wonderful for this community.	9/24/2017 3:25 PM
130	Dear Dr. Sawyer and School Committee Members, As a parent of the Shrewsbury community and as a teacher in Shrewsbury, I am strongly in favor of building a "Beal Early Childhood Center" as originally brought forth. As first designed, Beal continues to be a place for our young K-1 children to feel socially and emotional secure with their same age peers (and not be influenced by older children-on the bus or in the halls). As such, an early childhood center is designed to allow the necessary time and space for K-1 children to learn and grow at their own pace. An Early Childhood Center like Beal, also provides a diverse population; children from different neighborhoods -the opportunity to come together and learn. As a former Full Day Kindergarten parent, I witnessed what the research shows. A school focused on Full Day Kindergarten (vs.1/2 day), yields improvement in children's overall social-emotional and academic success (which ultimately produces powerful returns on investment), and is preferred by both teachers and parents. An Early Childhood Center, configured with two grade levels by design, places emphasis on coordinating resources and personnel solely for the purpose of providing the highest quality, developmentally apporopriate education for our unique Kindergarten and First Grade children. I am strongly in favor of putting the needs of our young children first, and building another "Beal Early Childhood Center" and opposed to another K-4 Building. Respectfully Submitted, A Shrewsbury Parent and Teacher	9/24/2017 8:04 AM
131	While I don't think there are any huge drawbacks to have a specific K-1 school, it feels like it would be easier for families across the town to add a 5th elementary school K-5.	9/24/2017 7:12 AM
132	Given the continued building of residential housing in shrewsbury and subsequent steady flow of new students enrolled in SPS, it appears an additional school would provide the necessary space for this, even distribute student population across each of the neighborhood schools, and provide more continuity with the neighborhood school model.	9/24/2017 7:05 AM
133	I am very much in favor of an early childhood center. I feel that any "drawbacks" with regard to bussing and having children at different schools are minor inconveniences compared to the significant benefit that an early childhood model provides. To be able to start young children out on their educational journey in a developmentally appropriate setting is much more beneficial.	9/24/2017 7:01 AM
134	Although it would be nice to have Beal as an early childhood center (curriculum), the idea that some of the other schools might need to house k or grade 1 students causes me concern. Families that want all their children at the same school will want to try to move their children over making it difficult to create equity. Having a new elementary K-4 seems to provide the most equity and ease for parents with multiple kids in school.	9/23/2017 8:51 AM
135	I am strongly in favor of neighborhood K-4 schools rather than a town-wide K-1 school.	9/22/2017 10:11 PM
136	My daughter attended Beal for K, and started at Floral on 1st grade. This was a good change for her at that time. My son is 2 years old and I would prefer to have one school K-1 and another 2-4 so kids in different stages have different schools.	9/22/2017 8:45 PM
137	Parents with young children, i.e. PreK moved to specific streets in shrewsbury recently to have their children attend specific elementary schools. Creating a non-grandfathered rule would create redistricting of students and poor community relationships due to housing investments.	9/22/2017 3:46 PM
138	Do only one school. Hope there is enuf land on. East. Main. St across from the old. Bonnie. Dell farm next to. Ward. Hill for this project. Not across. Rt 20 and not along. Rt 140. Memorial dr	9/22/2017 3:40 PM
139	If Beal becomes K-4, would it free up spaces for every school to have full-day K?	9/22/2017 2:12 PM
140	I like the idea of an early childhood center because it helps kids transition from preschool. I think Kindergartners might be overwhelmed attending such a large school like Floral.	9/22/2017 12:51 PM

141	Hope this school build includes air conditioning and a proper ventilation system in the design. Research shows temperature for optimal learning is apx. 70 degrees. Current temperatures in our schools are well over this in the fall, late spring and summer programs. It's dreadful for the teachers and children to spend 6 plus hours in those conditions. Would also love to see green products used in this build. The school will off gas for years. Exposing developing children to a multitude of VOC's is harmful. Please consider and invest in these options! People in Shrewsbury will support this.	9/22/2017 9:17 AM
142	I feel when children are new to starting school for the very first time (especially children who have never been in child care) need specific focus and attention with lots of good hearted focused teachers. Without the interruptions or intimidating older students of those in 3rd or 4th grade. They need a calm atmosphere to get acclimated to their new journey.	9/22/2017 12:18 AM
143	Proud of your efforts to enhance the early childhood experience and optimize facilities and resources. Keep up the good work.	9/21/2017 10:55 PM
144	Keep the little ones in their own community at beal for their first two years.	9/21/2017 10:47 PM
145	I appreciate that SPS is collecting feedback from families. Our family already had the experience of having to seek kindergarten placement outside of our neighborhood school. Switching schools is so disruptive--at the middle school level, only the fact that both schools are on essentially the same campus mitigates the disruption. Neighborhood schools build the community around them--SPS should do everything possible to maximize the amount of time students stay in the same building.	9/21/2017 6:03 PM
146	All day kindergarten is necessary for town as so many parents are now working and not all can afford a private kindergarten. I plan to attend one of the school committee meetings to learn more.	9/21/2017 3:31 PM
147	Where is the money going to come from? Instead of spending $2M on artificial turf and charging our town sports teams to use the very fields and facilities we've already paid for, maybe we should learn to "live within our means" as many of us in town are doing.	9/21/2017 3:25 PM
148	Since essentially all K students currently attend Beal (and some 1st graders), a K-1 configuration does not seem very different. Although a K-4 configuration might be more convenient for "some" parents, there are also benefits to mixing students from all parts of town. Seems like the "early childhood" focus at 1 location would be a significant positive benefit, and the more focused grades 2-4 age group focus would be as well. I attended a K-6 school as a child, and can recall no benefit whatsoever to having the wider age range of students together - it was more problematic than beneficial. While transportation considerations might be simplified in the K-4 scenario, matters of "convenience" should be secondary to the impact on the students themselves.	9/21/2017 3:07 PM
149	I love living in Shrewsbury and know that my children are receiving a superb education. However, the size of the town is a definite challenge and it always troubled me that my children had to attend 5 different schools throughout their SPS education. I believe making Beal and all other elementary schools K-4 would be a significant improvement. It is often difficult for children to make lasting friendships in this town when they are young, since they may be in different schools from one year to the next!	9/21/2017 2:29 PM
150	floral parents never knew where there student would attend 1st grade until summer. that was hard to wait for that info	9/21/2017 1:58 PM
151	Not sure why we wouldn't consider building a school to accommodate Grades 3&4 for all town students and use the existing neighborhood elementary schools for grades K-2 since they are already fitting for students of that age/size. Seems more age bracket appropriate to me. We could call it the upper elementary. Then the students would move on to Sherwood, then Oak, then SHS.	9/21/2017 12:47 PM
152	I would be curious to see how many sections of each grade level would be at Spring, Coolidge, and Paton versus Floral and a new Beal if that was the configuration.	9/21/2017 12:41 PM
153	I think the age difference between K and 4 is too large to be on the same bus and in the same school. Grade 1 kids with K in a separate school is a more nurturing environment. All kids in K across town will meet at a younger age and help with social and relationship building.	9/21/2017 12:37 PM
154	I think the benefits of having a k-4 school as opposed to a k-1 school far out weigh any drawbacks.	9/21/2017 12:27 PM
155	Regardless of which project design goes forward, we want the overarching justification to be focused on the needs of the students with a particular focus on Universal Design principles and for disabled students to be in the least restrictive environment possible.	9/21/2017 12:20 PM

156	With children who are younger kept together, challenges involving bullying and role models will be minimized as children in KG and grade 1 are mostly the same size but after this there is a big jump in most kids growth wise and mental abilities which makes them a potential danger to younger kids. Keeping the older kids in a different school may help in the concerns I mentioned above. Problems involving transporting students from the same home to different schools on different bus routes will exist and families will need to come up with some solutions to them, but either model will have its own set of concerns.	9/21/2017 11:53 AM
157	Current beal building should be turned into restaurant, shop and office space with much needed public parking options for town center.	9/21/2017 11:37 AM
158	I think all the elementary schools should be K-4 if possible. This minimizes the number of school transitions children must go through, and will be easier for families who have children in both grade levels. I also would guess it would make busing more efficient, thus saving money.	9/21/2017 10:42 AM
159	I originally like the model of every elementary school becoming a neighborhood school. Then after thought 750 kids vs 790 is not a huge difference to solve rapid population growth. The k-4 would require a lot of reconfiguring and possibly cost more. The K-1 model expands the model already in place.	9/21/2017 10:32 AM
160	As much as I like the concept of a school just for the little ones, I think long term we are not doing ourselves any favors. I think we need another full K-4 school to off set the growing population of the town and some of the elementary schools. One issue that would need to be discussed with the kindergarten and first grade model is how would that impact the elementary schools? Would that mean there would be more classes of second third and fourth graders with a smaller number of kids in the class? And how does that differ from having a K through fourth school? Having an additional school will help cut down on transitions for little kids. Having an additional school will also really help out working parents, which are probably a majority of this population, to better manage pick ups from afterschool care. And additional school is really the forward thinking decision to make. Let's think about our community 10 years from now. What answers and solutions do we need.	9/21/2017 10:26 AM
161	Coolidge is pretty worn out. Any plans to improve that building?	9/21/2017 10:20 AM
162	I think having Beal become a neighborhood school would be great. As a parent with a half day kindergartener who spends an hour on a bus a day. I would much rather him be at Coolidge which is 5 mins down the road with his sister.	9/21/2017 10:20 AM
163	It would be a benefit for a lot of students to go to the same school for K & 1st grade. It would cut down their anxiety of going to a new school and trying to integrate that at 6 or 7 years old. Option 1 would be the best benefit for the kids.	9/21/2017 10:15 AM
164	Although I see benefits to both models, transportation, the convenience of having kids in the family attend only 1 school, and one less school transition for the kids outweighs the benefits of an early childhood center model in my opinion. Whichever model is adopted will be a huge improvement to our town!	9/21/2017 9:45 AM
165	Our town would benefit by adding k-4 school as the town is growing tremendously and the classrooms are increasing with the number of children	9/21/2017 9:42 AM
166	I feel strongly that having kids attend two different schools for K-4 is a drawback, given that they already have to switch schools twice more before high school.	9/21/2017 9:31 AM
167	Thank you	9/21/2017 9:26 AM
168	I think the K-4 is the better option as it helps kids get used to only one school and settle into a school once. While my daughter liked her time at Beal and especially Mrs. Biadasz she felt a bit nervous going into first grade having a whole new school to get used to.	9/21/2017 9:25 AM
169	I would be a proponent of K-1 model so that the new building could be designed around the developmental needs of this age group and there are many benefits of this. However, looking at the large number...almost 800 in one building at this age makes me uncomfortable. In this regard, I feel that the community of a multi-age school is better in the long run for them.There are benefits of building that kind of community for all of the students in the school.This also allows for flexibility for future building needs.	9/21/2017 9:23 AM
170	I think offering more full day kindergarten classes in either scenario would be a significant benefit. Having more buses take small children on longer bus rides greatly decreases experience. Some of the most cohesive neighborhoods in town are those where kids and parents walked kids to elementary school or carpooling to after school activities.	9/21/2017 9:19 AM

171	The movement from school-to-school in this district is a significant drawback. Students are not with siblings, those who experience challenges with transitions suffer and teachers and leaders in a building do not get to know their students well.	9/21/2017 9:05 AM
172	Re-districting is always unpopular to start, but it is in the best interest of families and children at the end of the day to be in neighborhood elementary schools for more than 2 years. I hope Beal becomes another K-4 school.	9/21/2017 9:00 AM
173	As a Floral Street district student, my son benefitted from the early education focus on K-1 at Beal, and I believe our youngest learners attending one school would be a good model. Also, our early education teachers would be working together and supporting each other and their students in a shared space. Collaboration and team work between classrooms and school wide would bring a great sense of community and togetherness for our young students and their families.	9/21/2017 8:56 AM
174	While a new neighborhood K-4 might require more operational resources, Shrewsbury's size demands another neighborhood elementary school which will benefit the children and families considerably.	9/21/2017 7:36 AM
175	Having had younger children at Beal while my eldest was at The neighborhood school was fine. The bus situation was no problem. I was concerned about the separation for the curriculum, bussing and other reasons head of time then but it quickly became of no concern at all.	9/21/2017 7:31 AM
176	Unfortunately, no matter what we do, it will be undersized in a few years. The town is growing too much and all of our schools are over crowded. The town needs to put a stop on housing projects and building of homes to stop the increased population growth.	9/21/2017 5:59 AM
177	share as much info with taxpayers as possible. We are sick of never ending overrides.	9/21/2017 4:08 AM
178	Any building and school improvement is good for the town.	9/21/2017 12:19 AM
179	Im worried about all of these kids entering middle school and high school later on- are Sherwood, Oak and high school capable of handling that? I dont hear any discussions regarding expanding either one of them - hence concerned.	9/20/2017 11:37 PM
180	Any new school should be located to the South of Rt. 9 to cover the new developments and lack of parks and any other town facilities.	9/20/2017 11:27 PM
181	It is a better idea to have K-4 schools than to break 1st grade off from the neighborhood schools.	9/20/2017 10:41 PM
182	If Beal was K- 1 school, I feel there would be too many transitions for the students. They would be changing schools too many times. Also, they would make friends in K and 1 grades and then potentially may have to make all friends in 2nd grade. That can be very difficult especially for a child who might have a hard time making friends. Personally I am in favor of a new school K-4.	9/20/2017 10:13 PM
183	Have locations been identified for the enlarged Beal? The current site is too small.	9/20/2017 10:03 PM
184	I think it is better to have K-4 at one school, especially for families with multiple children, it is good to have them attend the same school. Changing schools is hard for kids and the less they have to change schools, the better. One school for K-4 gives them more security.	9/20/2017 9:54 PM
185	I am pleased that this will allow for full day kindergarten for all- it's time for Shrewsbury to offer this. This will actually have a minimal impact on my family due to age of my child. I trust that our school leadership will collaborate to make the best decision for our town.	9/20/2017 9:22 PM
186	It sounds as though whatever choice is made both options are for large schools. This is an unfortunate choice--especially for early childhood programs.	9/20/2017 9:19 PM
187	The Biggest Challenge to Different School will be for the families with Multiple Children in the Family. It be Better if all can go to the same school then going to different schools when possible.	9/20/2017 9:15 PM
188	The less transitions a student has to make from school to school the better they will adjust and perform.	9/20/2017 9:14 PM
189	Currently we have one child at coolidge in 4th grade & one at Beal in kindergarten. That alone is so difficult have children going to 2 different schools at this age. Not to mention we only got 1/2 day which is so hard on working parents to then pay for afternoon school/care. We chose to live in Shrewsbury mainly because of the school system 15 yrs ago. The children would best benefit by going to 1 school K-4 as they foster relationships & build upon these. it is in the best interest for the children to have a full experience in the same school. You can see the children thrive each year in the comfort of their school environment.	9/20/2017 9:12 PM

190	Every option has its benefits, I think at younger ages the children are more comfortable in a smaller building, not one large one like the middle schools.	9/20/2017 9:11 PM
191	My daughter attended Beal for K-1 and had a very difficult transition to Floral during 2nd grade. I would strongly recommend the k-4 configuration being discussed. Thanks for the opportunity to weigh in.	9/20/2017 9:07 PM
192	Too late for our family, but think the K-4 configuration would have been best for us.	9/20/2017 9:06 PM
193	Smaller neighborhood schools can be more "family-oriented" for students and families.	9/20/2017 9:05 PM
194	I think it is obvious to me that families benefit from another K-4 neighborhood school.	9/20/2017 9:05 PM
195	I am very much in favor of creating a new K-4 elementary school. I think there is a significant benefit to this model. I know redistricting will be painful, but I feel the Floral community has suffered from the current system.	9/20/2017 9:00 PM
196	Not knowing what school my child would be attending was very frustrating. Waiting to see if the got full K, wondering if they would be at beal or floral for 1st! Very frustrating! Please make neighborhood schools! K-4	9/20/2017 8:52 PM
197	I like the model where students would attend the same school K-4. My children did not and the transportation at two different schools was very difficult. Students change schools every two years in middle school. I do not like the idea of transitioning multiple times in elementary school	9/20/2017 8:50 PM
198	It is a no brainer decision to gave 5 schools with k to 4. There are huge transportation issues if have the K plus 1 configuration. It is better for younger siblings to have older siblings at that age in same building. It is better for parents to have one bus to deal with if have kids in K to 4. In short it must be a brand new K to 4 building and have all 5 schools be K to 4. Bob Ryan 8 Colonial Drive	9/20/2017 8:50 PM
199	My preference is definitely to have all grades in one school. The other benefit that was not discussed is introverted kids being able to keep the friends they made in the early years. It has been a challenge for my current third grader to make new friends. He is still very friendly with someone he became good friends with in kindergarten. I do have a preschooler who will eventually be going to an elementary school and I do care!	9/20/2017 8:45 PM
200	The K-4 model makes more sense for families and each student. Students will be more successful academically and socially. I am a parent and a teacher, this model will benefit our students the most.	9/20/2017 8:40 PM
201	Is there a significant difference in tax increase, if any, to support either project?	9/20/2017 8:31 PM
202	As someone who has worked both at Beal and at a couple of the elementary schools in town, I see a significant benefit to having less grades in a building. All staff understands the expectation and the abilities of a K and 1st grader. I see this also being a benefit if the elementary schools were 2nd through 4th instead of K through 4th. I also realize that as a parent who had 4 children in the district at one time, having your children on different buses, I had mine on three different buses at one time, can be difficult. Also, if Shrewsbury was to create a K to 1 building, considering the amount of time a young child may be on the bus to get home is a matter to take into account as well.	9/20/2017 8:30 PM
203	Could we benchmark with any towns that have similar schools to the ones discussed?	9/20/2017 8:23 PM
204	I had one of my daughters go to Spring Street for K and one of my daughters at Beal. Having had the direct comparison in my own family, I believe it was much better to do K-4 at the local school. And this is still the case after considering that my other daughter had a very positive experience at Beal. It was just tough on the family, and added an additional transition.	9/20/2017 8:19 PM
205	I think it makes sense to build another elementary school, k-4. We'll have to do some re-districting, but I think that will make sense in the long run.	9/20/2017 8:13 PM
206	Would either option allow for the implementation of full day K in Shrewsbury as the standard?	9/20/2017 8:12 PM
207	Concerned about the traffic for the Beal neighborhood though i don't live in it. Having 750 students seems like a lot for drop off pick up etc	9/20/2017 8:11 PM
208	As a parent of a child that has significant learning issues and anxiety with transitions I would see another transition of schools as detrimental to students receiving special education services. Our town model of having two middle schools was very tough for one of my children. In general I wonder if our town model creates more anxiety for the younger middle school population.	9/20/2017 8:09 PM

209	As a former Shrewsbury early childhood educator, I believe both students and teachers would benefit by keeping the current early childhood model. The emphasis of this model is on the educational and social needs of young children. The curriculum and methods of instruction focuses specifically on the grade level of the age group. There is an increased opportunity for shared resources, collaboration, and curriculum planning for the staff. Special education and support staff members servicing young children would be located in one building. The results would be a more consistent K-1 district program. Consideration would be given to developing an age-appropriate learning environment for young students. Children in an early childhood program need both indoor and outdoor furnishings and equipment that is appropriate to their height and their activities. They engage in many different activities and there is significantly more space needed in classrooms. I strongly support and believe that the advantages of an early childhood center outweigh those of a K-4 model. After extensive research and recommendations from early childhood educators in the mid 1980's, the early childhood center was developed in Shrewsbury. Things have not changed in the world of educating young children and I continue to support this model. The decision should be based on what is the best educational program and school configuration for the children of Shrewsbury.	9/20/2017 8:05 PM
210	I feel that have an additional school to transition from would be a drawback for sure. I think the focus should be to keep as many grades together in the neighborhood school. Less transitions and siblings attending school together should be the goal. The curriculum can be altered and I don't think there is a need for a separate early childhood school, especially since 3 out of the 4 elementary schools already host kindergarten.	9/20/2017 8:04 PM
211	I have a son who will be 5, turning six in 2022. This project would directly impact my family. Would love full day kindergarten at the same school he would attend for 5 years.	9/20/2017 7:55 PM
212	An early childhood center housing k-1 will introduce the children to the diversity the town offers early on. There are too many inequities to the neighborhood school plan.	9/20/2017 7:50 PM
213	K through 1 model seems to be a better plan for the individual student	9/20/2017 7:48 PM
214	Decreasing the student population at the current elementary schools would be a benefit. A new Beal with K thru 4 would help this....but It was also good to keep all the Kindergardeners together.	9/20/2017 7:46 PM
215	I would like to see all KG - 1 in one school , so that teachers will have focused curriculum.	9/20/2017 7:40 PM
216	I have twins entering kindergarten in 2019 and I feel the less transition to different schools would be beneficial for both children and parents.	9/20/2017 7:34 PM
217	Could we have one elementary school were all the children attend? I think it would level the curriculum across the different elementary schools.	9/20/2017 7:27 PM
218	I think adding one more school transition, particularly at such a young age, is not in the best interest of the students.	9/20/2017 7:23 PM
219	A new beal should be located at parker road and combine preschool, beal and beal west. Given Parker road is so much newer it would only require an addition and no new purchase of land saving the tax payers yet another cost increase for a total of 5 million dollars. I know there are many draw backs to this approach but the financial benefit makes the most sense given on line education at all levels is sweeping the country and will be coming here when we become the next Hartford or Detroit	9/20/2017 7:23 PM
220	Maintaining a sense of community is important and could be lost if kids are being moved from school to school	9/20/2017 7:20 PM
221	As a parent who had 3 children attending elementary school simultaneously, it was odd having to wait for 2 different buses, (Beal 1st & Floral). It just didn't make sense to me at the time that although my oldest was attending Floral (4), my other 2 attended Beal (1). We waited for 2 buses every morning. Given that there are many 2-parent work schedules, wouldn't it make sense to streamline waiting for a bus for young families with all the morning chaos into just 1 bus and one location? I know I for one would have appreciated this option years ago. In addition, if someone misses a bus waiting for 2 different buses, more stress is added trying to get children on a bus knowing another child(ren) need to be driven to school. Just something to consider...	9/20/2017 7:16 PM
222	I think it would be in the best interest of the kids to stay in one building as long as possible. There is already a lot of moving from school to school at the middle school level. I believe this makes it more difficult to make life long friendships with nearby community. We have met neighbors through children. They look out for each other because they trust and bond with each other in these stressful early childhood years at a new school.	9/20/2017 7:07 PM

223	Send them to one school K-4 and be done with it.	9/20/2017 7:02 PM
224	Other districts have k-5 without issues.. my kids have handled many different schools without issues	9/20/2017 6:54 PM
225	With the population explosion in Shrewsbury area I don't think that this size will be sufficient for the incoming students. If we are building something new then it really need to be big enough keeping no. Of students coming in future instead of running into same problem after few years.	9/20/2017 6:51 PM
226	K-4 neighborhood school makes the most sense for our community going forward	9/20/2017 6:45 PM
227	I am strongly in favor of a Kindergarten and Grade 1 school designed for 750 students. Thank you for soliciting my opinion.	9/20/2017 6:41 PM
228	As a parent of 4 children, presently grades 10, 8, 5, & 2, (Spring Street district), the possibility of the splitting of elementary grades led us to educate our children in a k-8 school. We feel it is helpful & important for siblings to make connections in their school communities simultaneously. Also,separate schools increase the stress & inconvenience for parents.	9/20/2017 6:38 PM
229	Do what is best for kids K-4	9/20/2017 6:37 PM
230	I am curious about the zoning for each elementary school. Paton and Beal are very close to one another. What zone or area would students reside in order to attend Beal as well as the rest of the elementary schools? Will the school department share research that supports both models? Thank you	9/20/2017 6:37 PM
231	At the onset of the 2017-2018 school year, there was discussion (and probably execution) of staff reductions in the Shrewsbury Public School system. In either scenario presented here, based on the lack of appetite for another override and the inability to accurately predict state aid, how is the town going to be able to meet the needs of a growing primary school population without a 30-1 student to teacher ratio?	9/20/2017 6:23 PM
232	I'm surprised that housing 790 5 and 6 year old children is a good idea at all.	9/20/2017 6:22 PM
233	Strong support of new Beal to be grades k-4 makes the most sense all around !	9/20/2017 6:15 PM
234	Even though this would not benefit my older children....I definately thinking keeping kids in 1 school for k-4 is great. No one likes driving up to Beal if you don't live up there. Less change for younger kids is good. Reconfigure the neighborhoods to keep everyone together.	9/20/2017 6:14 PM
235	Neighborhood K - 4 schools give our youngest students (5 and 6 year olds) the psychological benefits of attending school with older siblings and/or being part of the same school community for all 5 years (not have the worry hanging over their head of transitioning to a new school when they are 7 years old).	9/20/2017 6:08 PM
236	Too many transitions to schools in the beal k/1 configuration.	9/20/2017 6:06 PM
237	Find any location other than the current Beal location. Traffic is unsolvable. Since there seem to be no commercial interests off South Street. Build over there.	9/20/2017 6:05 PM
238	There are pros and cons to all plans. One worry I have is that the history of Shrewsbury is quickly being washed away. Beal needs modifications but it's loss can never be made up. In our zeal to race to the future we should be respectful to the past.	9/20/2017 6:04 PM
239	There are both pros and cons. I think it would be great to have all K-1 in 1 school. The benefit would be that the elementary schools would be smaller. This would greatly benefit Floral which is so big. However, Floral is run extremely well for such a large school.	9/20/2017 6:03 PM
240	I strongly support the need for a new school but believe it should be K-4 and not create a split between K-1 and 2-4.	9/20/2017 5:57 PM
241	Kids with anxiety experience significant distress changing schools to a new environment. 6 schools from PreK to High School is excessive. Multiple children in multiple schools is hard for parents to manage. I like my kids new teachers to know them and the kids to know the teachers before moving to their class. This means less continuity. Shrewsbury schools are disjointed enough already. Think of kids with IEPs. I have a kid who is academically advanced and benefits from being around older kids. That will be lost.	9/20/2017 5:56 PM
242	Having young kids in multiple schools is a major logististical issue. The increased curriculum is a negligible benefit.	9/20/2017 5:49 PM
243	Community building with the same neighborhood families in grades K-4 offers us the leverage of truly being "the village" that supports students to succeed. I	9/20/2017 5:39 PM

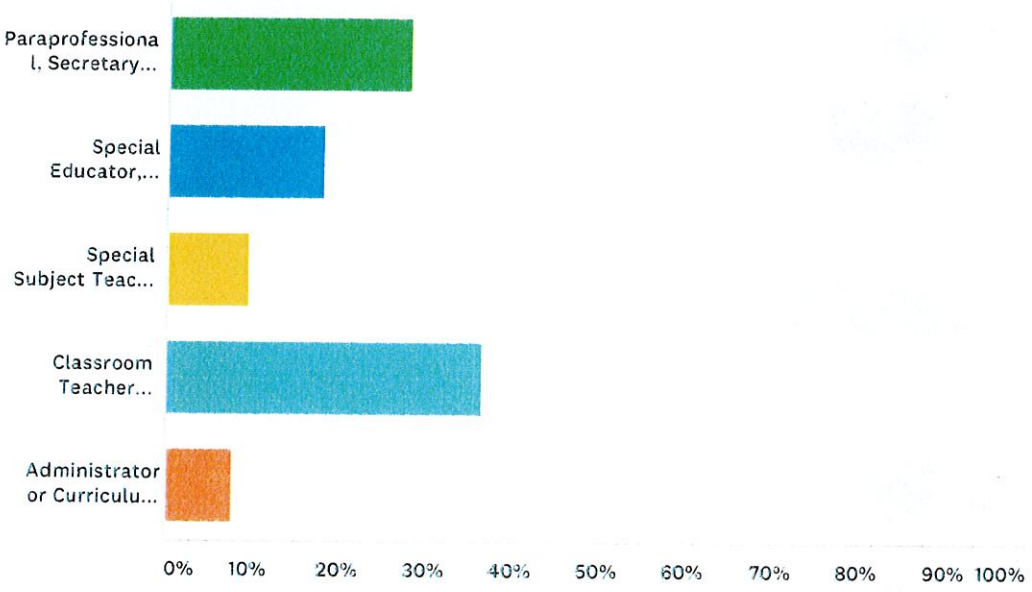
244	I feel that having k-1 in a school on their own would encourage the 1 grade to stay closer to the kindergarten level in emotional and structural development. Having the k-4 model would encourage the k-1 students to emulate the older students and create less of a kindergarten school model.	9/20/2017 5:38 PM
245	The difference in development of k-1 and 2-4 is so significant I only see benefits for students and teachers with ability to concentrate on their specific stage of development. My children benefited so greatly at big and little beal I feel a 2nd year there would have been so beneficial fir then to finish this critical stage of development without having to adjust to a school full of bigger kids they can not yet relate too instead.	9/20/2017 5:36 PM
246	My son loved to be in Beal, the teachers and the ESL education was amazing there,too. My son having had zero english when started the school, and he was able to communicate after 3-4 months. We were greatful for that very professional care!	9/20/2017 5:33 PM
247	Less buses for transportation means less money Young Children should feel comfortable in a school for 5 years	9/20/2017 5:32 PM
248	Thanks for doing what you do for our students!	9/20/2017 5:30 PM
249	Mostly I think the K-4 schools would be beneficial because it would lessen the number of transitions for students to different schools across the 13 years. I also think there will a benefit to the k/1 teachers teaching alongside the teachers in other grades to ensure student readiness as students move from grade to grade.	9/20/2017 5:28 PM
250	I think it's a great idea to have Beal be a k-1 school. It allows kids from all parts of town to be together regardless of their district school, and to be more accepting of economic differences early instead of waiting when they're all in Sherwood together again	9/20/2017 5:25 PM
251	It is a significant challenge to have children in multiple schools. Larger schools also mean more sections of each grade so it's difficult to maintain friendships from year to year. Because of the multiple schools we spend a fair amount of time waiting for multiple buses or driving around town for pickup and drop off.	9/20/2017 5:24 PM
252	The biggest drawback that I see if you make Beal K-4 is the redistricting of neighborhoods to new schools.	9/20/2017 5:21 PM
253	When my son was 4 years old, I was shocked and disappointed to learn he would not be going to our neighborhood school for kindergarten. Instead he would be far from home in a location that is not very accessible. Let's fix this situation for future generations of students!	9/20/2017 5:19 PM
254	Changing grade schools twice means a lot of transition for the youngest learners. Being in one school for 5 years at that early age makes sense for kids. My kids attended K/1 at Beal and I didn't see a benefit to that model at all. I would have rathered they be able to attend my neighborhood school (Floral) the whole time.	9/20/2017 5:18 PM
255	Build a new school. It will be for the next 100 years and you won't have a 200 year old renovated school. Take a lesson from the major sports teams! Out with the old in with the new.	9/20/2017 5:08 PM
256	I believe it should be an elementary school it's important for the children to feel like a community in their school so staying with a school for 5 years will give them that.	9/20/2017 5:08 PM
257	It's good to have one school for grades k-4	9/20/2017 5:08 PM
258	With the growth of the town, the number of children, we have to do this. Beal has lived a long life and needs to be replaced.	9/20/2017 5:06 PM
259	Was there a consideration to have a prek to grade1 school?	9/20/2017 5:04 PM
260	strongly support a K-4 school. I believe having one less transition and attending 1 school for 5 years would benefit students.	9/20/2017 5:04 PM
261	I feel that my children benefit(ed) from attending and in-town kindergarten before the district school. My eldest now has two great friends in another district we still see frequently. He also has friends in our "neighborhood" district that he sees daily. I feel this has helped him integrate into town activities. He still recognizes kids from kindergarten in sports and scouts. They aren't strangers he will know for the first time in 5th grade. I know some want a "uniform" K-4 experience, but I do think skills learned making friends across the community early are beneficial.	9/20/2017 5:03 PM
262	Feel too many transitions already.	9/20/2017 5:02 PM

263	Several k-4 grade schools will create food fights amongst parents for improvements at their neighbor school to the detriment of other schools. Comparisons of which good deals each school would get would be very divisive. Baselining of all schools would have to be done to level playing field. The one new school would end up being built in newer area of town as no school there yet, resulting in disenfranchisement of rest of communities feeling they lost out.	9/20/2017 5:01 PM
264	Pre k to 4	9/20/2017 5:01 PM
265	The students in K-1 will have two years of solid foundation building...plus they can get more use to transitions as they have to do it three more times in their school life anyhow. It keeps the younger kids young as there is a lot of difference emotionally between a K and 4th grader	9/20/2017 4:58 PM
266	In general and irrespective of K-4 or K-1 configurations (and assuming the student count goes up with whatever new configuration is decided), there might be need to ensure the school related vehicular traffic pattern does not get hindered or hinder the regular public traffic flow, given that the school is located near the center of the town.	9/20/2017 4:57 PM
267	It would be nice to have less transitions from school to school. Having neighborhood schools from k-4 is one less transition since they have to transition to Sherwood, Oak and then the H.S as well.	9/20/2017 4:56 PM
268	It's a small area. I just don't know how you will squeeze all those students into one school. Traffic will be a nightmare, as well.	9/20/2017 4:56 PM
269	In my opinion a K-4 model, where all students attend their neighborhood school is the most beneficial. I think it gives students more time to feel part of a school community and there are fewer transitions. It would also be helpful to parents who take part in parent drop off and pick up to only have one school to go to.	9/20/2017 4:54 PM
270	Having a K-4 school so close to Paton just doesn't make sense. If this is the desire wouldn't make more sense to look at moving it south of route 9 to make it closer to the potential neighborhood it would serve? I see benefits to both types of schools but think the proximity to Paton doesn't make sense for it to be K-4 unless it's moved to another location.	9/20/2017 4:53 PM
271	Most parents have kids 2-3 year apart. Having to drive to multiple schools in different parts of town would be difficult for parents, increase traffic in morning and afternoon, and cause you to possible stagger the start time more than now. Kids should go to school in the neighborhood at a young age and then move to Sherwood/OAK when older. I feel this makes more sense for families.	9/20/2017 4:52 PM
272	My daughter went to Beal for kindergarten and Spring Street first through fourth grade. She did fine and it had no impact on her. My other three went to one school for K through four and did the same as my other daughter as far as making friends, curriculum, etc. it really had no impact either way	9/20/2017 4:50 PM
273	I believe that have kindergarten and grade 1 together is the right choice because exposing these little ones to older kids does more harm than good.	9/20/2017 4:50 PM
274	Nothing good to add. The town is simply growing at a pace that is not sustainable for the school system to support. I am thankful that my children will be out of the school system before it gets too out of hand. There is no good scenario for a town that has been incredibly too cavalier and thoughtless in allowing so much growth that is absolutely unsustainable.	9/20/2017 4:48 PM
275	As a parent and an early childhood educator (in a different district). I feel that there are too many transitions for young children in the Shrewsbury schools. In her first 4 years of public school my daughter has to change schools three times. Two years at Parker Rd, one at Beal, and then Coolidge. Each time she started at a new school she experienced significant stress. All three schools are wonderful and we have been very happy but the transitions were decidedly difficult. The public school I work at serves children in grades PreK-6. While this may be too large a range, it does cut down on the stress for younger children and provides a more nurturing, family type environment in which teachers and children can remain in contact over the years and staff can continue to provide emotional support and security for young children even after they have moved to a new grade.	9/20/2017 4:47 PM
276	Consolidation of learning programs are a benefit to the community in terms of cost and consistency of delivery. Under that model logistics becomes the primary challenge with already congested streets and the potential of families with children in multiple locations. Is a third option possible? Beal is very old and will require substantial upgrades. Is a greenfield project possible to consolidate the neighborhood schools and realize the positive benefits of consolidation to a single location?	9/20/2017 4:47 PM

277	I like to have less classroom counts and more grades in one school. Floral kids lose connections to our kids since it is just so big	9/20/2017 4:46 PM
278	The traffic in and around Beal during pick-up and drop off would add to an already congested center of town.	9/20/2017 4:45 PM
279	Our children already switch schools more than most towns due to having 2 separate middle schools. I think adding Beal for grades K-1 is more change than most young children are comfortable with	9/20/2017 4:43 PM
280	This year I was actually faced with the question that is being raised in this survey. My daughter, who is entering kindergarten, was given the option to attend either Beal or Paton. We chose Paton so that she would have not have to switch to another school after only one year, and so that she could ride the same bus with her older sister, who is already attending Paton. So given I was faced with this question already, and my family came to a decision rather easily, my preference would be to keep K-4 together in one school.	9/20/2017 4:43 PM
281	I firmly believe that the elementary schools should be K-4, especially since there are two middle schools and the movement is pretty extensive from grades 4 to 9. However, I will have a student in fourth grade when the building comes online and will NOT be a fan of having to move my child for one year before then moving into the middle school systems. If the K-4 model is approved, there should be consideration of the students who have attended the same school for the first three years of their elementary!	9/20/2017 4:41 PM
282	Kindergarten age is a lot different than a fourth grader. Both my children attended Beal for K only and then went to Paton for first grade. I thought this was a nice transition to have K alone.	9/20/2017 4:39 PM
283	I think it's important that kids have the least amount of transitions when they're younger. Therefore schools should all be K-4	9/20/2017 4:39 PM
284	when will it open?	9/20/2017 3:38 PM

Q1 I am a:

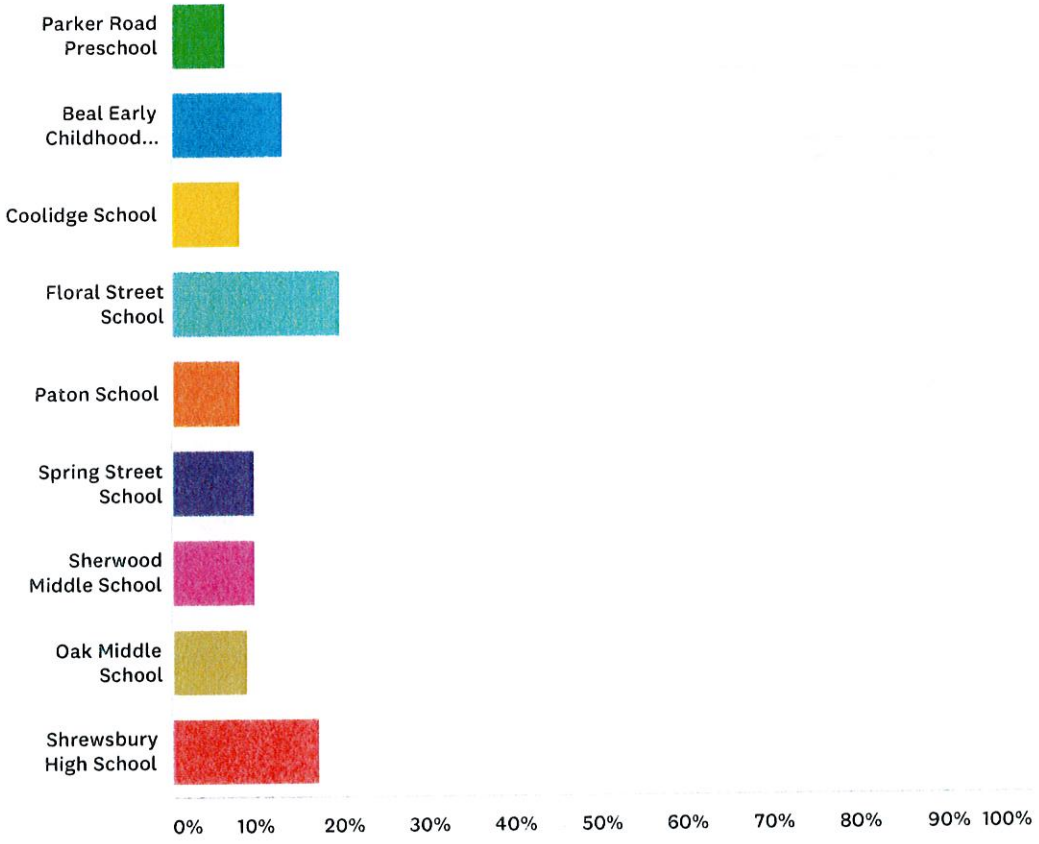
Answered: 243 Skipped: 2



ANSWER CHOICES	RESPONSES	
Paraprofessional, Secretary, or Other Support Staff	27.98%	68
Special Educator, Counselor, Psychologist	18.11%	44
Special Subject Teacher (i.e., K-12 Departments)	9.47%	23
Classroom Teacher (Science/Social Studies/Math/English)	36.63%	89
Administrator or Curriculum Leader (District Leadership Team)	7.82%	19
TOTAL		243

Q2 The school where I primarily work is:

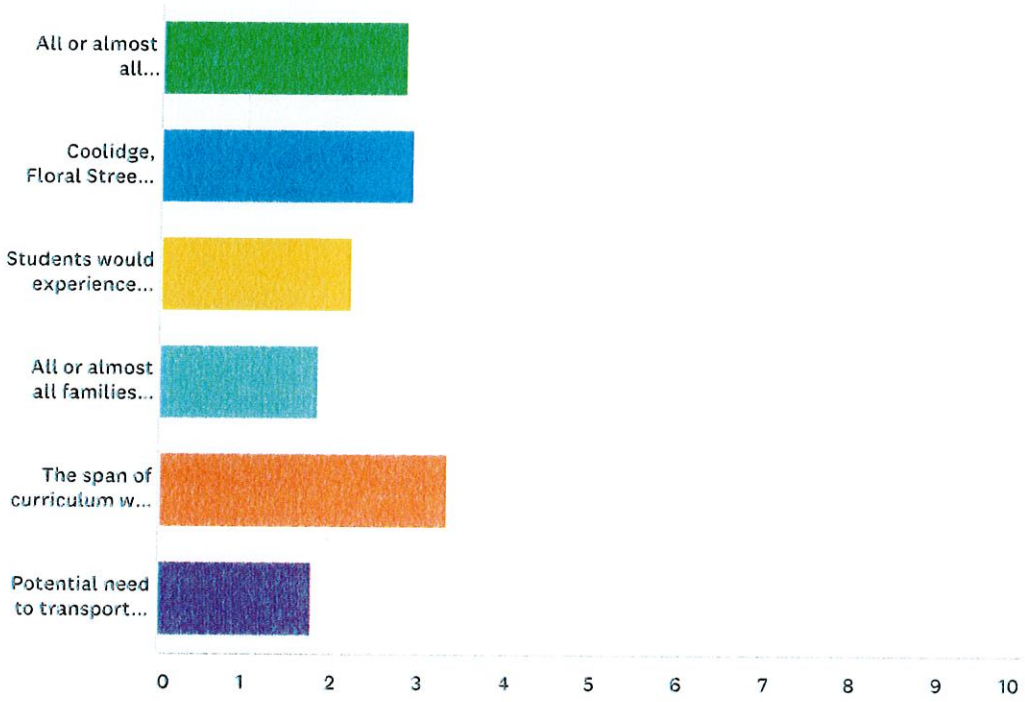
Answered: 239 Skipped: 6



ANSWER CHOICES	RESPONSES	
Parker Road Preschool	6.28%	15
Beal Early Childhood Center	12.97%	31
Coolidge School	7.95%	19
Floral Street School	19.67%	47
Paton School	7.95%	19
Spring Street School	9.62%	23
Sherwood Middle School	9.62%	23
Oak Middle School	8.79%	21
Shrewsbury High School	17.15%	41
TOTAL		239

Q3 Please indicate whether you think the following considerations related to a Grades K & 1 configuration would be a drawback or a benefit:

Answered: 214 Skipped: 31

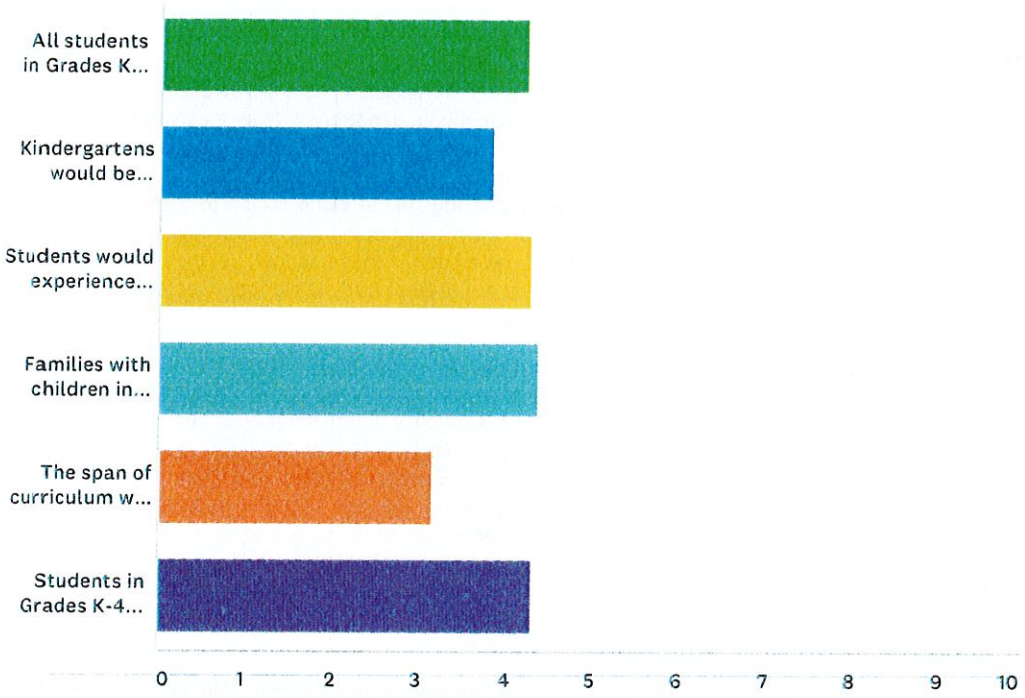


	SIGNIFICANT DRAWBACK	DRAWBACK	NEUTRAL	BENEFIT	SIGNIFICANT BENEFIT	TOTAL	WEIGHTED AVERAGE
All or almost all Kindergarten & Grade 1 students in town would attend Beal for those two years.	21.03% 45	23.83% 51	21.03% 45	19.63% 42	14.49% 31	214	2.83
Coolidge, Floral Street, Paton, & Spring Street would primarily house Grades 2, 3 & 4	16.82% 36	23.83% 51	25.70% 55	20.09% 43	13.55% 29	214	2.90
Students would experience attending two different schools, one for Grades K and 1 and one for Grades 2 through 4	34.74% 74	30.99% 66	18.78% 40	11.74% 25	3.76% 8	213	2.19
All or almost all families with a child in Grades K-1 and another child in Grades 2-4 would have the children attending two different schools.	41.59% 89	36.92% 79	17.76% 38	2.80% 6	0.93% 2	214	1.85
The span of curriculum will be focused on a smaller number of grade levels in the same school (Grades K-1 early childhood center for one school and a Grades 2, 3, & 4 elementary school for the other)	11.27% 24	11.74% 25	23.47% 50	39.44% 84	14.08% 30	213	3.33

Potential need to transport students from the same neighborhood on separate buses to two different schools (Grades K-1 and Grades 2, 3, & 4) at approximately the same time.	44.86% 96	38.32% 82	13.55% 29	1.87% 4	1.40% 3	214	1.77

Q4 Please indicate whether you think the following considerations related to a Grades K through 4 configuration would be a drawback or a benefit:

Answered: 209 Skipped: 36



	SIGNIFICANT DRAWBACK	DRAWBACK	NEUTRAL	BENEFIT	SIGNIFICANT BENEFIT	TOTAL	WEIGHTED AVERAGE
All students in Grades K through 4 would attend a neighborhood elementary school.	1.44% 3	5.74% 12	9.57% 20	33.01% 69	50.24% 105	209	4.25
Kindergartens would be included in all neighborhood elementary schools rather than having an early childhood center model.	5.29% 11	12.50% 26	15.38% 32	25.96% 54	40.87% 85	208	3.85
Students would experience attending one school for the five years of Grades K through 4.	0.48% 1	4.81% 10	13.46% 28	28.85% 60	52.40% 109	208	4.28
Families with children in Grades K-4 would have their children attending the same school.	0.00% 0	1.92% 4	10.58% 22	33.65% 70	53.85% 112	208	4.39
The span of curriculum will be focused on a larger number of grade levels in the same school (Grades K-4 elementary school)	7.66% 16	20.10% 42	38.76% 81	16.75% 35	16.75% 35	209	3.15
Students in Grades K-4 from the same neighborhood would be transported to the same school.	0.96% 2	1.44% 3	11.54% 24	34.62% 72	51.44% 107	208	4.34

Q5 Please share any feedback or questions you have regarding the choice of grade configuration for the Beal building project. Thank you!

Answered: 58 Skipped: 187

#	RESPONSES	DATE
1	I strongly believe that doing away with an early childhood center is a mistake. As a Shrewsbury parent I thought it was a great way for my children to start their school experience. Now as an staff member at Beal, I see so much development and growth occurring due to the environment and focused curriculum. I wish as a parent I had understood what happens at school more. I am saddened by the fact that the idea of fewer buses or keeping siblings in the same school to make it more convenient for parents, will outweigh the benefits of an early childhood center in our town. I know the schools are overcrowded, my children are in and have been in these school, yet they have and are receiving an amazing education that all started out at Beal Early Childhood Center. It would be a shame to take that away from future generations.	9/28/2017 7:47 AM
2	I would be in favor of the project that would provide the most full day kindergarten classrooms to the children in the district. The Half day kindergarten program is not appropriate for the demands of the Shrewsbury kindergarten curriculum. Would there be a possibility of providing a similar configuration of the current Beal/Floral school in which all the Kindergartens from the Floral district and the new school's district could be housed at the new school? Spring, Coolidge, and Paton would house their Kindergartens as K-4 schools; Floral would be 1-4; the new school would have a section for grades 1-4 and a section for the kindergarten students from both Floral and the new school district. This would provide a larger amount of kindergartens for integrating special needs and ELL students, as well as pooling resources for curriculum and early learning opportunities. This may be cost effective as the size of the new school would require 2 sets of specialists and support teachers to meet the needs of a large school population.	9/27/2017 9:39 PM
3	One of our major focuses as a district at this time is student's social-emotional learning. We know that students learn best when they have strong connections with the adults around them. If students jump to a different building every two to three years from grade K-8 there is not the time for the adults in the building to truly get to know ALL of the students. having students for 5 years allows them to make very strong connections that will have a very positive impact on how comfortable and safe students feel at school. I feel very strongly given the unstable state of our nation at this time, and I'm sure for a long time to come, having the stability of being in the same school for 5 years will have a prove to be most impactful for students social-emotional well-being.	9/27/2017 8:52 PM
4	K-4 neighborhood school is the way to go!!!! Makes sense for the community now and long term.	9/27/2017 6:53 PM
5	Too much moving schools, for students, if Beal becomes a K-1 building	9/27/2017 11:35 AM
6	I think that having the consistency of going to one school from K-4 would help the students immensely. The students would learn school wide expectations that would transfer well year to year. I also think that this would allow teachers who loop to continue to do that work. As a first grade teacher, having a second grade class next door is a huge benefit to my students and myself. The children get to see role model students and it helps me to see the foundational skills I teach in action the next year.	9/27/2017 11:34 AM
7	The greater number of years you can have one school influence a student's learning the more consistent you can make learning outcomes across the board. For example, if all students go to a K-1 school, some early interventions that may have started to work at that school may be lost in the transition to the new school. However, the main drawback to multiple K-4 schools as I see it would be that students are likely to experience all of the early part of their education in Shrewsbury with students who live in the same neighborhoods. While this might be convenient for transportation, it might lead to de facto segregation based on the demographics of those neighborhoods, and down the line, result in families with more resources choosing to live in certain parts of town to go to certain elementary schools.	9/27/2017 11:31 AM
8	I think the fewer transitions students have between schools, the better it is for them. When at a school for several years, students are able to build relationships across grade levels and faculty get to know families more closely.	9/27/2017 11:28 AM

9	I do like the idea of having a kindergarten/1st grade school however my hesitation is that it would be one extra school transition for students/parents. Going to 5 different schools in during your educational career seems like a lot for these ages.	9/27/2017 11:25 AM
10	It has been wonderful having the kindergartens back in our building. It truly makes us a complete family. The k teachers have a chance to work with all the rest of the grades and the goals for students in the upper grades are shared with those in the lower grades. The K teachers are able to see what the expectations are for the older grades and are able to begin that support in kindergarten. The older students enjoy supporting the younger ones and the younger ones have role models to look up to. Another plus is that when an older grade student is experiencing difficulty or is ELL, the teachers are able to share materials and have access to materials at a lower level to support their students. This also works in the opposite way if the k students are advanced in their skills, the teachers have access to enrichment materials.	9/27/2017 9:46 AM
11	The K-4 neighborhood school has many significant benefits. Students who start in Kindergarten are familiar with the school and faculty members for years. Teachers and staff get to know students and can track students as well as student progress for many years ultimately leading to higher student success, academic success as well as social/emotional success. Neighborhood schools create a great sense of community. K-4 schools can efficiently vertically align goals in grades K through 4, across all content areas.	9/26/2017 8:22 PM
12	It has been very difficult to have two different curriculums and grade level expectations due to half of our first graders being at Beal and then coming to Floral. The challenges we face are there is limited time to hear what our K and first graders need after spending time at Beal and then come over. There is a definite disconnect of the students coming from Beal in all areas of the curriculum compared to students who are at Floral already for first grade. Another challenge is Floral has a majority of the apartment complexes. This would help evenly distribute the number of transient students who often stay only for a year and then move on. Floral has 24-25 second grade students this year and Coolidge and Spring have 18 students. Floral is often overloaded and it needs to be more evenly distributed for every school between neighborhoods and apartment complexes ratios to meet the needs of students. Receiving students who have significant behavioral and educational learning needs after spending two years at Beal often lends to a difficult transition as we could have invested 2 years connecting and developing a relationship with these students to know what their significant needs are. I would hope the committee would seriously think how the teachers and students are impacted with problems and disconnect mentioned above. It is time to make every school a neighborhood school to have the same experience at every school where each child can feel comfortable attending one school for their K-5 experience. Having worked at Beal for 5 years in Kindergarten and 20 years in Grade 2 at Floral, I think this is what would be best for the town and its students seeing the progression through the past 25 years. The children of the future deserve to have one continuous learning experience. The early childhood experience was a great concept 25+ years ago but now due to how our town has grown it has made for many difficult transitions for students from Beal to Floral.	9/26/2017 7:10 AM
13	I feel it would be of great benefit for our youngest students in town to have each elementary school house k-4. The students would have fewer transitions at a young age and teachers would have the added benefit of being able to collaborate across all of the elementary grade levels. While this is happening a bit at some of the schools now and to a point across the district, Floral currently experiences many difficult adjustments as the students coming over from Beal into grades 1 & 2 get used to a new school culture, expectations and delivery of curriculum.	9/24/2017 8:50 PM
14	I would love to see a K-1 model and really focus on the early childhood curriculum. I think there would be great benefits to the community.	9/24/2017 3:30 PM
15	Although the idea of an early childhood center is a benefit, I'm afraid as Shrewsbury continues to grow, some first grades may need to move (as they have in the past). I think there is a significant benefit for neighborhood schools and it is easier for families too.	9/24/2017 3:30 PM
16	As a teacher at Beal, I strongly feel that a K to 1 model would have such a positive impact on our youngest learners! The children would be receiving support from teachers and staff that are truly specializing in their grade levels. We could provide learning spaces that are highly beneficial for such young learners - playground equipment, gym equipment, etc. Being part of a team that focuses their knowledge on our youngest learners will ensure that we're truly focusing on what is developmentally appropriate! Key points: - Eliminating half-day kindergarten would be essential in making sure each student is receiving the same educational experiences. - Fine tuning the bus situation will be a challenge; but it's imperative that we are thinking about what is best for their educational experience and not the convenience of bussing.	9/23/2017 8:06 PM

17	Now that Coolidge,Spring and Paton has had kindergarten for several years it would be nice to see the data from K students attending elementary vs a early childhood center in a full day setting not a half day setting. How much of a benefit is it for students? Does the additional transition for students out weigh the benefit? Most districts have a k-2, 3--5, 6-8, 9-12.	9/23/2017 3:00 PM
18	I hope there can be some sort of communication and discussion about how we can make a large school developmentally appropriate for young children.	9/23/2017 2:44 PM
19	Working st beal, I see there's still a big difference in the curriculum from class to class. I don't think having all the little kids in 1 building brings much cohesion to the teaching.	9/23/2017 1:17 PM
20	I am very much in favor of a k-1 model for early childhood eduction. I believe this model would best provide our earliest learners with a strong educational and social/emotional foundation. Keeping k-1 students together as they start on their educational journey and having them reconnect years later when they come back together as middle-schoolers and high-schoolers just feels right. Professionals can provide a higher level of attention for curriculum in all areas when the grade-level focus of a school is smaller. As a parent in town, I have had several years with my three children being at 2 or 3 separate schools and on 2 or 3 different buses. It has not been an inconvenience and has allowed our children to claim their school as their own. Being pulled in multiple directions whether for school, sports or extra-curricular activities is something you sign on for when you have multiple children. We need to focus on doing what is right for our youngest learners rather than what is convenient.	9/23/2017 10:24 AM
21	I hope that the committee will consider the importance of the early childhood building environment on the academic and social development of 5 and 6 year old students. Having an early childhood center does make a difference in the schools ability to focus on that particularly important beginning stage of learning. It also provides for a solid working environment for staff who are committed to the issues of developmental appropriateness in education. I cannot overstate the importance of developmental appropriateness for our youngest students. Including K/1 students in the elementary schools will water down developmentally appropriate practice as it does not provide the same experiences for either staff or students.	9/23/2017 8:50 AM
22	I love having a building with only younger students. It allows us to focus on their specific needs. When they are in with older students it muddies the waters for emotional and educational needs. We are able to have toys and equipment just for our younger students. They don't have to worry about dating or other topics the older students are involved in. We are able to stay young age appropriate as long as possible. For some of our students it is their first foray into the public school system. I had previously worked at Floral and Spring. My vote would be for a K/1 building. Thank You.	9/22/2017 1:53 PM
23	Hmm a tricky one. I feel that it may be challenging for some families to accept that some of their children went through one school while siblings may be relocated to the new school. Some families do relocate to certain parts of the town based on the school and may be against having to change their school choice because of new school zoning. I also think that looping line and bussing would be very challenging if all K and Grade 1 were to arrive at the same location at the same time. I am honestly sure that there will be conflict as to whatever decision is made and to be honest the loudest voices are going to be the ones who are not getting what they want!! Watch out Shrewsbury Facebook pages this will be a really heated topic!! I am a resident too and I know that there will be many thousands of hours and research put into this project, wishing everyone involved the best of luck and I know that the decision will be based on what is best for the children and the town	9/21/2017 10:57 PM
24	Having a k-4 nieghborhood school would save on busing and there will be less transitioning for students therefore decreasing anxieties in children who have a hard time with change.	9/21/2017 4:02 PM
25	If the decision is to make the configuration K-4, I would prefer that a new school be built in an area of town that could benefit from it (NW corner) as it seems silly to have four elementary schools near each other. Also, if the decision is to shutter Beal, I would like to see it repurposed instead of torn down.	9/21/2017 3:33 PM
26	Neighborhood schools would alleviate overcrowding in other schools.	9/21/2017 2:49 PM
27	I think it is important to have specialized programming for special education students (ELC/ILC) in every building with access to the same resources (i.e. separate room, equipment etc.) Right now we are in a position where the resources for students with significant profiles is not equitable which can cause students to have to be placed outside of their home schools or retained at schools due to a lack of availability. I feel as though when making these recommendations moving forward that this needs to be considered as a required use of space for all buildings.	9/21/2017 10:35 AM

28	Consistency is very important for children. Fewer transitions from one school building to another would increase students' comfort level and decrease their anxiety. I think it is also beneficial for students to continue to see past teachers as they move up in grades.	9/21/2017 10:14 AM
29	I feel the one school option will provide more continuity of services for our students throughout the K-4 experience through; 1. improved professional knowledge of the various grade level expectations 2. improved knowledge of student needs/growth over time 3. consistency of larger school expectations/culture 4. improved community building/ parent involvement as a result of 1-stop participation 5. less demand on families with children in multiple grades	9/21/2017 8:19 AM
30	Early childhood education is a strong foundation for future success. The idea of having them all together in one place seems to be the best choice. This will allow of educators to work much more efficiently together to ensure all students are provided with the same quality instruction that will given them a strong foundation for entering second grade.	9/21/2017 8:16 AM
31	Our elementary schools cannot handle the amount of students now. Just because you are building another elementary school will not solve future crowding problems with the amount of new homes and apartment complexes coming our way. Build the new Beal school large enough to handle all the kindergarten and 1st graders, not most. I feel like if we don't build it big enough it is setting us up for eventually having to put K & 1 back in the elementary schools down the road. Rebuild the current Beal for Half day Kindergarten and preschool and rebuild Parker Road back into an elementary school. Good Luck and thank you for all you do for our students.	9/21/2017 8:11 AM
32	Would love to know potential locations for school and the daily start and stop times.	9/21/2017 8:08 AM
33	K - 4 schools seem to be much more beneficial to the district at this point. Given the demands of the curriculum for children at the lower levels it would seem beneficial to have K-4 schools from a curriculum standpoint. K-4 provides opportunities for vertical teaming.	9/21/2017 8:07 AM
34	I think the age difference with K to 4 is not a good mix	9/21/2017 7:42 AM
35	In an era of trying to reduce childhood stress, why would we bring all the students together and then split them all up after two years. Never mind the stress on families potentially juggling two elementary schools. Are we thinking about the children, or are we just thinking about how easy it would be to have all the K-1 curricula in one place? Having raised 5 children, I know it is all about WHO their friends are in their classes. Don't bring them all together and then split them all up.	9/21/2017 7:41 AM
36	Having attended a neighborhood school myself, it is easier to visualize that model; however; I know that my colleagues at the lower elementary levels do excellent work and I have seen first-hand the product (the students) who come through the early-childhood education center and then move to the neighborhood school--they are still excellent students. I have no strong opinion on either model and I think we can make both work well.	9/21/2017 6:59 AM
37	I strongly support redistricting and maintaining neighborhood schools.	9/21/2017 6:36 AM
38	I think that making each school a neighborhood school would be easier on families ,cost less for bussing and makes more sense all around .	9/20/2017 9:37 PM
39	Transition is a very big deal ... we might not fully grasp just how important or the impact it has, but we see it with a transition from 6th to 7th grade ... kids going from smaller teams and pods to larger teams, more rooms, new layout ... it is overwhelming for them as tweens/teens. I can't imagine a child having to change schools multiple times, and at such a young age. I am looking forward to my children being in the same school. I think having them in separate schools often would be a nuisance / inconvenience. Especially when it comes to before school/after school care - you're bouncing around to different schools to drop off and pick up. I also think it helps the younger sibling when he/she sees their older sibling in school. It's a comfort. We want kids to feel comfortable, at ease, and school is essentially a second home to these kids. Why make the bounce around so much so, that they never feel like school is their "home away from home?" Do they ever get a true sense of community if moving after 1st and after 4th?Wouldn't seem like it ...	9/20/2017 9:13 PM
40	I think it would be great to have all students in a neighborhood school but one thing that I think would be extremely beneficial of all students starting in the same school is that there would be more consistency when starting special ed or intervention services for students in the younger grades.	9/20/2017 8:05 PM

41	I am the ELC coordinator at Beal and the students will "live" with me for only 1-2 years. This quick turnaround time is challenging. I love the Early Childhood model but also love the consistency grades K-4 would offer to students attending specialized programs. The ability to foster the development of a special needs child over the span of many years by a consistent educator is a huge plus for the K-4 model, as well as inclusion in a neighborhood school. Whatever is decided, let's build some really great spaces that meet the needs of our SPED population!	9/20/2017 7:47 PM
42	Having another elementary school built for close to 800 students would be a huge benefit. Having worked at Floral for a number of years, I have seen first-hand how non classroom space has been utilized as classroom space...a temporary fix that has become all too common and acceptable (in our building and others as well) is unacceptable for long term solutions. I just hope that once built, it is not 'over-enrolled' on day 1...	9/20/2017 7:43 PM
43	Minimizing the amount of transitions our youngest learners make will benefit their education. Having students from K to 4 also allows leaders and teachers to get to know students and families well, thus better able to meet the child's needs.	9/20/2017 7:38 PM
44	There is significant difference in the social and emotional development of a K student vs. a 4th grade student. A K/1 model allows for more focus on fostering the development of these essential skills in the early learning years.	9/20/2017 7:36 PM
45	Neighborhood schools make sense for kids. They can attend and ride the bus with siblings. They will have consistency and not need to transition as often which is tougher for younger kids. Just makes sense to go with K-5.	9/20/2017 7:35 PM
46	I personally feel that it is more beneficial for the buildings to all be K-4. I am currently at a K-4 building and can see the student benefits where you have older students to help mentor the younger students and build strong senses of community. I have witnessed students who have to transition from Beal to their "home" elementary school who have a very difficult time, specifically students with special needs. More time at one school can help their transition and provide them with a more streamlined education. Finally, as an educator, I find it very beneficial to have the opportunity to work with vertical teams and ensure that the vocabulary we use at all grades is similar thus making it smoother for kids to transition from grade to grade. It has also been beneficial when working in these vertical teams to have a better understanding of where students have come from and where they are going on the curriculum spectrum. Ultimately, I think the benefits of having K-4 models across the district will benefit more students, families, and staff.	9/20/2017 7:29 PM
47	I firmly believe that K-4 will foster an awesome schooling experience, involving fewer transitions for these youngsters. I live in Auburn, where the model is K-2, 3-5, 6-8, and then High School. With so much transition across the town, parents with multiple children are often running to pick-up times and activities that leave their heads spinning. Growing up in New York, I attended PS 114 for K-6, then moved on to Junior High and High School. Just three transitions was terrific, and much easier on my parents (who have 3 daughters, all two years apart). I wish you good luck in this endeavor.	9/20/2017 7:28 PM
48	There are pros and cons for both - easier for parents to have fewer schools if they have more than one child in the system. However, little kindergarteners with big 4th graders could be tricky on the buses and in the hallways and play spaces.	9/20/2017 7:24 PM
49	Philosophically, I believe an Early Childhood Center housing Grades K and 1 would be the best option for our young children.	9/20/2017 7:21 PM
50	The current elementary schools cannot hold any more students. Building a new elementary school is not going to solve the problem as long as the town keeps building more houses and more apartment complexes. Not sure what will solve the problem and I wish you all good luck in your decision and have confidence you will make the right choice.	9/20/2017 7:17 PM
51	K-4 neighborhood schools will enable us to community build with our social skills language and collective understanding of expected behaviors. Our students will have 5 years in the same learning environment where the teachers put their heads together to monitor progress in a PLC. The EIT process will stay the same. Expectations for parent involvement and opportunities to invest in school traditions will stay the same. Parents and students will build a rapport with faculty and our community will become "the village" that supports growth. Families will have the chance to have siblings in the same school for the longest stretch of time in their school careers. This continuity may even enable students to attend school for the regular school day and rather than needing the extended day hours, potentially having more time at home with their families as all elementary children head to school and return from school at the same time, on the same bus. It seems that this would be financially beneficiall, as we would eliminate one of the school start times. Finally, we work from constructivist frameworks. The shift to a K-4 building will allow children the opportunity to learn in that manner.	9/20/2017 6:55 PM

52	A focused K-1 curriculum would offer the opportunity to closely standardize the learning experiences for all students in the district. Additionally, it may be easier and quicker to identify students who may need special services since all centrally located.	9/20/2017 6:42 PM
53	How can each of these schools have a diversified population so that parents aren't upset that their home is on the border line and they are in a school that has a more homogenous community where the majority of the population are apartment dwellers. Diversity is key in making this equitable for parents, teachers and homeowners. There are preconceived ideas of the population of each school.	9/20/2017 6:32 PM
54	I think that having younger children together with older students in the same school is a definite benefit. Not only does this provide the younger students with older role models, but it also provides more opportunities for cross grade level activities. From a teaching perspective, it is incredibly helpful to have the grade above you in the same building so that you can learn more about where your students need to be by the end of the year and tailor your instruction accordingly. For example, this year for my ed eval plan, I am observing a teacher in the grade above me so I can learn more about how to best reach the above grade level readers at my own grade level. I wouldn't have that opportunity if we had a smaller configuration of grades.	9/20/2017 6:22 PM
55	Last year, our kindergartens had a mix of Coolidge and Floral students. At the end of the year, all students were completely comfortable in our building. They knew staff, their way around, etc. Students staying at Coolidge were very confident heading to first grade, and looking forward to continuing in a place that they knew well. Students transitioning to Floral for 1st grade did have some anxiety about starting all over again at a new school where everything was an "unknown". Even for older kids (4th graders transitioning to Sherwood) the move is somewhat anxiety producing. For a six year old 1st grader transitioning to a different school, it would be even more difficult. On the parent side, the logistics of 2 different schools vs. the same school for their elementary age children is important to look at.	9/20/2017 6:22 PM
56	K-4 would be the most effective and beneficial for the staff, students, and families!	9/20/2017 6:15 PM
57	I'm wondering if the numbers projected by the original design also take into consideration the amount of new housing coming into town - namely the 3 new developments that will include multi-bedroom units. It would be a shame to start a new school already at a deficit for space.	9/20/2017 6:13 PM
58	Transitions are so difficult for our kids, and as a 1st and 2nd grade special ed teacher, I get kids in 2nd grade from Beal in a totally different place than those who went to 1st at Floral. Consistency would be so nice!	9/20/2017 6:09 PM

Shrewsbury Public Schools

Patrick C. Collins, Assistant Superintendent for Finance & Operations

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18 October 2017

To: Dr. Sawyer

Subj: INPUT REGARDING SCHOOL TRANSPORTATION AND
FUTURE GRADE CONFIGURATION

Background

As part of the decision-making process regarding the district's future grade configuration, you have asked for input regarding the estimated impacts and differences in transportation costs and services if the "Beal 2.0 School" were a K-1 grade configuration versus a K-4 grade configuration.

Assumptions

It is assumed for this type of estimating that the district would retain the basic three-tier bus utilization system whereby the same bus has a high school route, a middle school route and an elementary school route so as to maximize cost and use efficiency of that asset. It is also assumed that "Beal 2.0" would be part of the elementary tier. Moreover, it is assumed that the district would shift into either offering or requiring full-day kindergarten for all students under either grade configuration. Finally, it is noted that actual bus routes and number of buses required are not part of this preliminary estimating process, which focuses simply on the differences that can be estimated at this point in the two different configuration options.

Current Statistics

One way to ascertain the differences in the proposed configurations is to look at current data as the district is actually operating in a hybrid grade configuration status now. After aggregating data from the 250+ bus routes we currently operate, one can see some relatively significant differences in efficient use of bus assets and average bus route times in the K-1 versus K-4 schools.

Beal currently operates as a K-1 school and has an average of 22 students per bus with an average route length of 13 miles and 41 minutes. However, busing for our K-4 schools operates more favorably with an average of 38-51 students per bus, an average route length of 7-9 miles, and an average ride time of 28 to 35 minutes. Obviously, the "neighborhood school" model lends itself to shorter bus rides as opposed to a centralized/district school for all students in the same grade.

All of this data is depicted in the table below.

	Grade Span	Avg. Riders/Bus	Avg. Route Length [Miles]	Avg. Route Time [Minutes]
Beal	K-1	22	13	41
High School	9-12	48	13	39
Spring	K-4	38	9	35
Paton	K-4	40	9	33
Sherwood/Oak	5-8	50	9	32
Floral	1-4	52	9	29
Coolidge	K-4	51	7	28

Estimating Bus Assets Required Under Each Model

The table on the following page is used to estimate and demonstrate the differences among our current model of service, a future K-1 model, and a future K-4 model for our elementary grades. Again, given the assumption of operating under a three- tier system with students for a given school/age level bused together, we would need significantly more bus assets if Beal 2.0 were a K-1 school. As a reference point, the current annual cost of a bus is $60,316. Under the K-1 model, it's estimated that an additional 10-15 more buses would be needed at a total incremental cost of $600,000 to $900,000 more on an annual basis.

		Current		
Tier 1	SHS	24		
	Special Education-SHS	2		
	Private School	2		

		Current		
Tier 2	Oak/Sherwood	33		
	Special Education-Middle	2		
	Private School	7		

Tier 3		Current	Estimated K-1 Model	Estimated K-4 Model
	Beal	9	25-30	15
	Spring	6	6	6
	Paton	5	5	5
	Floral	11	11	11
	Coolidge	5	5	5
	Special Education-Elem	6	6	6
	Private School	2	2	2
		44	60-65	50

Notes:

1. Given that *Beal 2.0* would operate on Tier 3 and be required to transport students from the entire geography of the town, we would need sufficient assets at the same time we are using a separate set of buses to collect students in grades 2-4.

2. Given that we plan to moderately reduce student population at elementary schools at the time of opening *Beal 2.0*, we may be able to re-allocate some bus assets to service *Beal 2.0.*

Summary Comments

The data strongly suggests that from a transportation perspective, the K-4 model would be significantly more cost effective and also lead to shorter rides times for students and more efficient use of bus assets.

Beal Early Childhood Center Feasibility Study

Grade Level Configuration Report: Educational Considerations

Submitted by Amy Clouter

Assistant Superintendent for Curriculum, Instruction & Assessment

Shrewsbury Public Schools

October, 2017

Introduction

The Massachusetts School Building Authority has provided two possible options for the future Beal Early Childhood Center possible renovation/expansion or new building project:

- a Kindergarten – Grade 1 school with a design enrollment of 750 students, or
- a Kindergarten – Grade 4 school with a design enrollment of 790 students.

As part of the feasibility study, the School Committee, in partnership with Dr. Sawyer and with input from community stakeholders, must thoughtfully consider the benefits and drawbacks to each model.

This report seeks to summarize the research on grade level configuration and the impact of various models on students and families with the goal of better informing the community.

Background Information

A 'Grade span' refers to the number of grade levels in a given school building. 'Grade level configuration' is a term that depicts which grades are grouped together. Currently Shrewsbury students in grades Kindergarten- Grade 4 learn in five different buildings with three different grade spans:

School	***Grade Span***	***Configuration***
Beal Early Childhood Center	2	K-1
Calvin Coolidge School	5	K-4
Floral Street School	4	1-4
Walter J. Paton School	5	K-4
Spring Street School	5	K-4

Given the uneven nature of school construction, this degree of variety is typical, not just in Massachusetts but across the country. As an early record review states, "The grade level organization of the American school is characterized not by a single uniform pattern but by a variety of grade level configurations. Each of these grade level configurations has its advantages and disadvantages which have varying weights and influences in local districts as a result of local circumstances…most researchers have concluded that decisions on grade level organization have

been for reasons that are more administrative than educational." (KY state report, 1981) The same variety can be found in schools today.

Research and Literature Findings

What is the impact of different grade configurations on student achievement? Most studies have sought to answer this question for children in middle and/or high school. Researchers studying the effects of grade spans on high school graduation rates, for example concluded that students in rural communities and/or students that were disadvantaged benefitted from remaining in one school over a long period of time. (Howley, 2000) Not until recently did policy makers consider the impact of grade level configuration on younger students.

More recent studies cited on this topic suggest that the link between grade level configuration and achievement is specious even for our youngest learners. A report commissioned by the Scituate Public Schools in anticipation of an elementary building project in in 2013 reads:

> The research reveals that grade level configurations have little impact on student achievement (Hooper, 2002; Howley, 2002; Klump, 2006; Renchler, 2000). In other words, it does not matter which grades are grouped together in a building. More important than the physical or structural set up is the appropriate selection and sequencing of curriculum, effective teaching practices and alignment of the written, taught and tested curriculum (Hooper, 2002) When these are done well throughout the district, it does not matter which grades are housed in which building; students will achieve.

This conclusion is supported by an analysis of common assessment data in Shrewsbury. Every one of our local elementary schools has a demonstrated record of success, and children in each of the current grade level configurations have grown both academically and socially. At the same time, a new building project provides an opportunity to ask: Is there evidence to support one option over the other for educational reasons?

A review of the literature suggests that rather than determining the ideal grade level configuration, districts should weigh the pros and cons of two key factors, namely school size and transitions.

School Size

The literature indicates that when parents are surveyed, they generally feel that the smaller the school the better, and there are some studies that support this belief. A 2006 study concluded that achievement gaps between boys and girls were narrower in small schools (Black, 2006) Smaller high schools tend to have better rates of attendance, behavior and achievement (Nathan and Thao, 2007) However, findings are inconclusive when it comes to students in the

lower grades. Most importantly, in Shrewsbury our educators have managed to achieve a small school feeling in their school communities despite increasing enrollment, and academic achievement and parent satisfaction are high across all of our schools, including the larger ones such as Floral Street School, the two middle schools, and the high school.

Although the size of the school does not determine the likelihood of student academic success at the elementary level, practical considerations would likely come into play in a K-1 school with 750 five and six year olds, particularly in common areas (restrooms, playground, lunchroom) and at transition times (arrival, dismissal). In a K-4 model older students make for positive role models, and there are fewer "new" students to orient to school routines. For this reason, in a K-4 model routines may be established sooner, freeing students and staff alike to focus on learning.

Transitions

Researchers claim that achievement declines when students transition from one level to another, regardless of the grade in which the transition occurred. Further, studies of students in the middle grades (6-8) conclude that the number of transitions a student makes is correlated to the likelihood that he or she will drop out of school (Pardini, 2002) For this reason, many educators advocate for schools with bigger grade spans, arguing that students and their families develop stronger relationships with teachers when they remain in one school over time. It's important to note, however that others refute this belief, claiming that the effects of a transition can be mitigated by thoughtful planning. (Cromwell, 2006)

The Kindergarten – Grade 4 option reduces by one the number of transitions future students in Shrewsbury will have to make. Further, when students and families remain in one school over time, there are several other advantages to consider:

- Siblings are more likely to attend the same school.
- Kindergarten and Grade 1 students have opportunities to interact with older "learning buddies" as role models.
- When part of a longer, continuous stay at a single school with the same administration, families may be more comfortable with grade-to-grade transitions and be better able to anticipate the particulars of the following grade, as compared to a transition to an entirely new school.
- Educators can come to know students better, and to plan proactively to meet student needs. For example, students that are reading on grade level by third grade are likely to maintain their reading skills for the long term. Thus, early intervention and monitoring from Kindergarten through second grade is vital. Close communication between educators at different grade levels is more likely when teams teach in

proximity, and individual teachers are better able to consult with colleagues at the grade level below in this model as well.

Conclusion

In his book *What Works in Schools,* educational researcher Robert Marzano states, "Any school in the United States can operate at advanced levels of effectiveness – if it is willing to implement what is known about effective schooling." (2003) We are fortunate indeed that in Shrewsbury educators at all levels and in all grade level configurations work hard to put best practices into place, to serve children and their families and to contribute to our community. Not surprisingly, our youngest students in Shrewsbury are well served by both of the proposed models presented as options.

This success makes for a dilemma; although there is strong consensus through parent, community and staff surveys that the K-4 configuration is seen as more beneficial, there are committed educators and contented families advocating respectfully for both options. The thoughtful support for each model makes the decision more difficult, and transparency in the process paramount. It's my hope that the findings in this report will help guide this important decision. Finding the right fit for "Beal 2.0" is more a matter of scrutinizing local needs and comparing the number of proposed benefits of each option than dismissing either option out of hand.

Last Words

Research suggests that the support of parents and guardians, thoughtful consideration of the needs of students as they learn and grow, the degree of collaboration among school staff, and the individual efforts on the part of the children matter most. For that reason, regardless of the decision made by the School Committee, and because under either configuration a "new" Beal will represent a significant change, it's important that we honor the efforts of the educators that have served Beal Early Childhood Center students and families so well for so long. The teachers that shaped the model currently in place at Beal pioneered important work that met the needs of our students at a critical time, and that success will live on in the memories of the countless students and families that first experienced school at Beal.

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Shrewsbury Public Schools

Joseph M. Sawyer, Ed.D.
Superintendent

October 20, 2017

To: School Committee
From: Joe Sawyer
Re: Beal Building Project: Recommendation for future elementary grade configuration

As the work to design a renovated/expanded or new Beal School moved into the Feasibility Study phase, it became necessary for the School Committee to determine which of the two grade configurations put forth by the Massachusetts School Building Authority for the project should be adopted by our school district. This decision is necessary at this time in order to inform the work of the architect, owner's project manager, and the Beal Building Committee so that the design process, site selection, and other elements can move forward with guidance as to exactly what kind of school "Beal 2.0" should be. Further, this decision will inform planning for how the other elementary schools will be configured, if and when a "new" Beal will come online, which we believe would be for the 2022-2023 school year at the earliest.

The two grade configurations put forth by the MSBA are:

1) A 750-student early childhood center with Kindergarten and Grade 1

<u>or</u>

2) A 790-student elementary school with Kindergarten through Grade 4

After carefully considering various factors related to these grade configurations, as well as the feedback from over 900 parents and community members and 275 staff members, **I recommend that the School Committee vote to establish a Kindergarten through Grade 4 grade configuration for all elementary schools in the Shrewsbury Public Schools**, to take effect <u>if</u> and <u>when</u> sufficient space is made available through construction of additional classrooms through the Beal building project.

Before outlining the factors that led me to this recommendation, it is important to note that both models are currently in place in different schools across the district, and both models are working well. In fact, the preference of staff for a K-1 or a K-4 model, respectively, is to continue the configuration in which they currently work. This indicates that they believe that their own respective configuration is successful, and based on our students' success in both configurations, the evidence is that both views are correct. This is a good thing, especially since we have several years in the immediate future where this hybrid configuration across the district will need to remain in place prior to a "new" Beal being built.

There are potential benefits and potential drawbacks to each model, and it will be very important to address the questions and concerns raised about both models regardless of

which configuration is adopted by the School Committee. I believe the K-4 model will be more beneficial for the following reasons:

1) A review of the educational research literature (see accompanying document) indicates that factors other than grade configuration are most important regarding student success and the quality of a school community; in other words, there is no evidence that a certain grade configuration is more effective than another educationally.

2) A review of the educational research literature indicates some concern that transitions between schools can compromise student achievement. Having fewer transitions was also seen by parents, community members, and staff as a strong benefit of the K-4 model.

3) Several other benefits are associated with the K-4 configuration regarding having fewer transitions, including:
    a) Students remaining in one school for five years allows families to be more familiar with the school and its staff, and vice versa, and for students to become familiar with a smaller group of classmates
    b) Vertical articulation of curriculum from grade to grade is stronger when educators from more grades are working together in the same building
    c) Knowledge of students' needs from year to year is more cohesive when remaining in the same building for more grades, and this is especially important for students who are experiencing difficulties or who have special learning needs

4) Logistically, a K-4 configuration provides several benefits that a significant majority of parents, community members, and staff found desirable, including:
    a) The climate of the school having a "neighborhood" feel, where older students serve as role models for younger students
    b) Siblings within the grade range are at the same school, facilitating both bus transportation for children in the same family as well as parent transportation to and from school and/or extended care
    c) Transportation on school buses will require fewer routes that are shorter in duration compared to the alternative; this is a logistical benefit as well as avoidance of significant additional cost that would require financial resources to be redirected from the educational program (see accompanying document)
    d) The student population of Kindergarten and Grade 1 students is projected to be significantly higher than what can be accommodated by a proposed new Beal School, meaning that there isn't a way to provide the same grade configuration model to all students (projection for 2022 is for approximately 900 students in Grades K and 1; if the "new" Beal were a 750 student K-1 school, 150 students would need to attend a *different* school for those two grades, creating an equity issue). A universal K-4 configuration across five elementary schools provides more flexibility to distribute students across the schools in an equitable manner.

Those educators, parents, and community members who promoted the K-1 configuration cited benefits and drawbacks as well, and it is very important that the district pay close attention to these if a K-4 configuration is adopted. I believe that many of these issues can be addressed effectively with the proper approaches. Examples include:

1) A benefit cited of a K-1 configuration was having a critical mass of early childhood educators working together in one school, as has been the case for the past 30 years at Beal, as well as being better able to have strong horizontal curriculum articulation across the the grade levels. If the "new" Beal were a K-1 building, there would be approximately 40 classroom teachers in Kindergarten and Grade 1, with about 20 in each grade. As we know from our experiences at Sherwood and Oak, it is very difficult to orchestrate certain kinds of collaboration among such large groups of teachers, and so these groups would need to be divided into smaller units even within the same building. It is interesting to note that if the "new" Beal is a K-4 building, there will be approximately 16 Kindergarten and Grade 1 teachers there, which is actually a *larger* team of early childhood educators than at the current Beal. A K-4 configuration will also provide teams of teachers at each grade level in each of the five schools, allowing for collaboration within that school. The district will need to ensure teachers in the same grade level at different schools are able to stay on the same page, which is something that we work to do in all of our grades K-4 in our current situation.

2) Another issue cited among K-1 supporters was ensuring that a proper early childhood environment be cultivated, and that this could be more challenging in a K-4 environment. It is important that the district commit to ensuring that Kindergarten and Grade 1 students have access to the proper furniture, equipment, and instructional materials for their age, regardless of which neighborhood school a student attends. Feedback from educators and parents, and my own observations over the several years during which our district has had Kindergarten and Grade 1 classes in K-4 schools, signal that we have been successfully meeting the needs of early learners within a K-4 configuration, in a manner that is developmentally sound. There are many successful school districts where Kindergarten and Grade 1 exist in grade configurations up to and including K-8 schools. The inclusion of higher grades in school with early childhood grades and having a successful early childhood program are not mutually exclusive, and it is incumbent upon the district and individual schools to ensure that the environment, the curriculum, and the approach to teaching are matched to the needs of our students. Along the same lines, the presence of upper elementary-aged students in the same environment as Kindergarten and Grade 1 students is something with which we have years of experience, and many see this as a benefit. While it is possible that younger students might have negative experiences with older students (some cited concerns about older students "intimidating" younger students), that is rare in our experience; of course, these same dynamics can and do happen among students in the same grade or only one grade apart.

In conclusion, after careful study and thoughtful feedback from stakeholders that represents a strong consensus, I believe that establishing a K-4 grade configuration across the district will be of greatest benefit to our students, educators, and families. I will be happy to answer any questions at our upcoming meeting on October 25.

BEAL PROJECT AND ELEMENTARY SCHOOLS FUTURE SPACE PLAN
K-4 GRADE CONFIGURATION- ALL ELEMENTARY SCHOOLS

CURRENT CONDITIONS				FUTURE PLAN				
School	Core Classrooms	Actual Enrollment 10/1/2017	Configuration	School	Core Classrooms	Target Enrollment 10/1/2025	K-4 Configuration	Enrollment Drawdown to Relieve Crowding
Coolidge	19	415	FDK-4, Sections vary	Coolidge	15	308	3 sections each, K-4	107
Paton	16	343	FDK-4, Sections vary	Paton	15	308	3 sections each, K-4	35
Spring	17	357	FDK-4, Sections vary	Spring	15	308	3 sections each, K-4	49
Floral	32	753	Gr. 1-4, Sections vary	Floral	30	608	6 sections each, K-4	145
		1868				1532		336
Beal ECC*	13	310	HDK, FDK & Gr. 1, Sections vary	Beal 2.0	40	790	8 sections each, K-4	
	97	**2178**			**115**	**2322**		

		Class Size Avg. K-4	Classrooms Required
Enrollment Drawdown	336	20	17
Enrollment Growth	132	20	7
Add'l Seats for Universal FDK	57	20	3
Current Beal Capacity*	265	20	13
	790	20	40

School Committee Class Size Guidelines	
Kindergarten	17-19
Gr. 1-2	20-22
Gr. 3-4	22-24

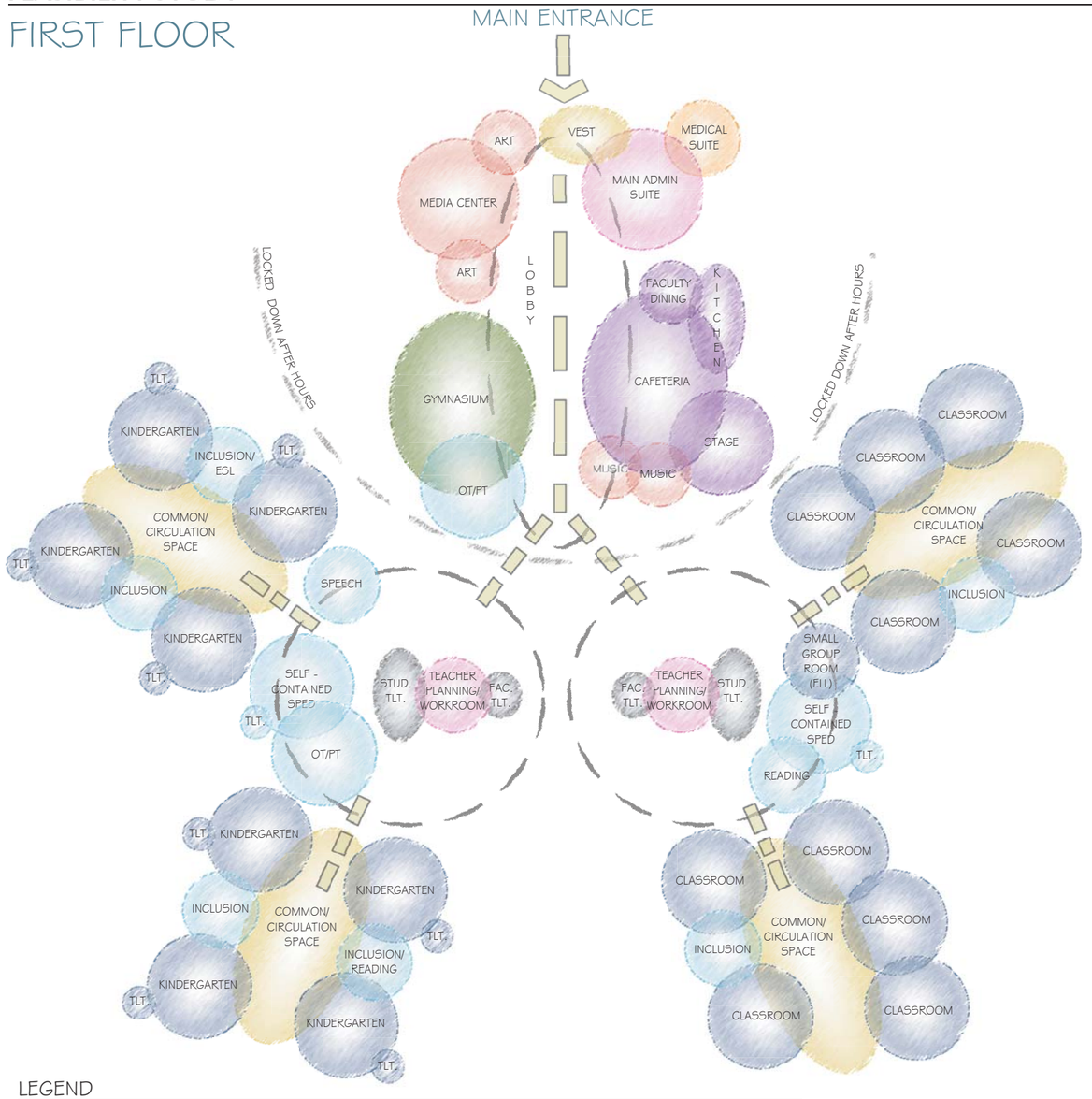
Enrollment drawdown from existing elementary schools provides parity of dedicated spaces across all elementary schools for Art, Music, Special Education, and ELL services.

** Beal ECC current enrollment [310] is a total headcount of all students attending full-day kindergarten, half-day kindergarten, and Grade 1. Of the total 138 students enrolled in half-day kindergarten- 65 attend in the morning session and 73 attend in the afternoon.*

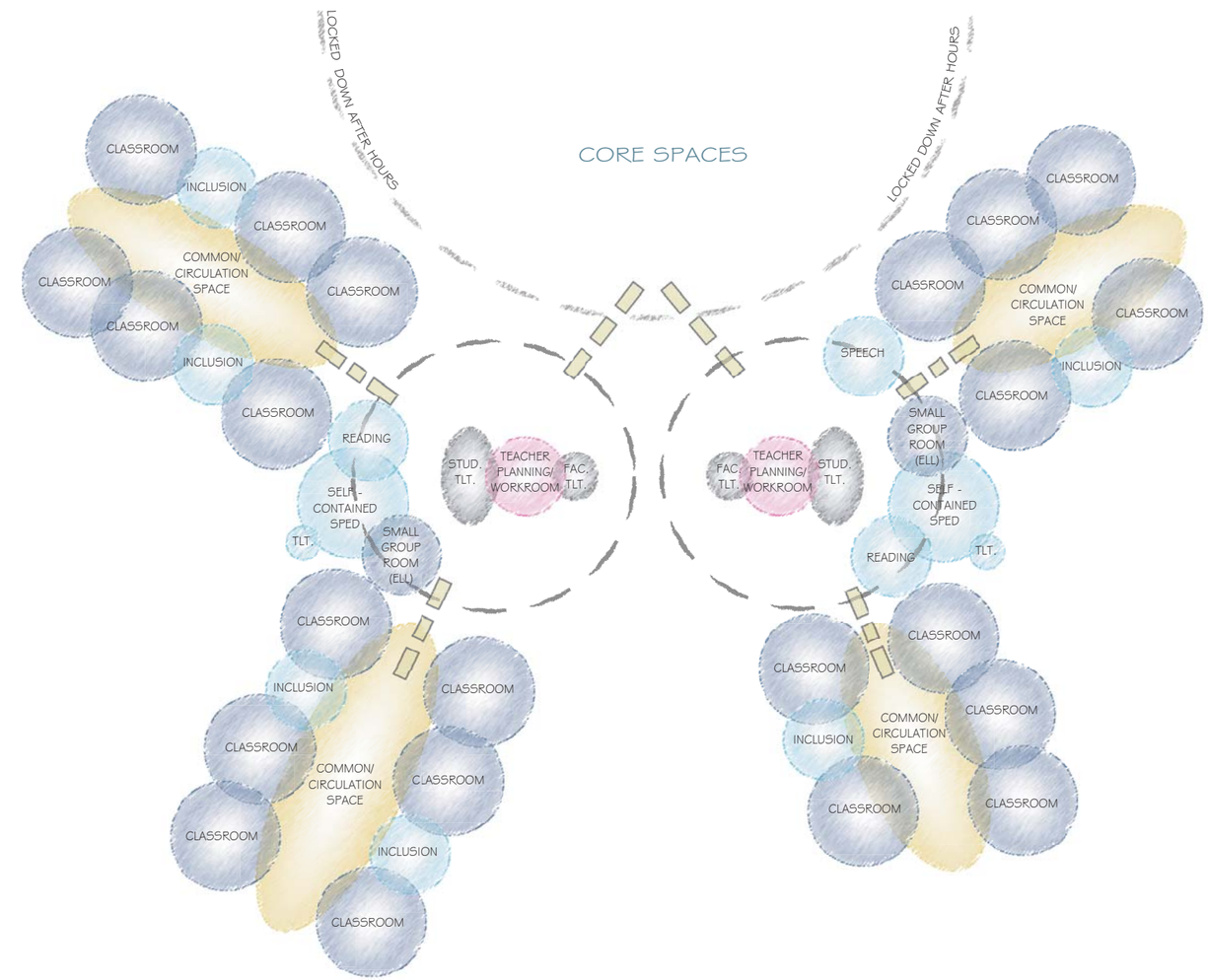
**Beal ECC capacity [265] is the total amount of students the school has space for at any one time.*

	Project Completion Date	Design Capacity	Current Enrollment 10.1.2017	# Over Capacity	% Over Capacity	Notes
Floral	1997	660	750	90	14%	55 Floral Grade 1 students are at Beal due to lack of space at Floral. If you include these we are 145 students or 22% over capcity.
Sherwood	2013	900	967	67	7%	
Oak	2004	900	1009	109	12%	
Shrewsbury High School	2002	1475	1832	357	24%	The Core Spaces [Media Center, Cafeteria,Gymnasium, Etc.] were designed for 1800; Core Academic Spaces design enrollment was 1475. Academic wings were constructed in a way to facilitate future additional expansion.
Total	**na**	**3935**	**4558**	**623**	**16%**	

FIRST FLOOR

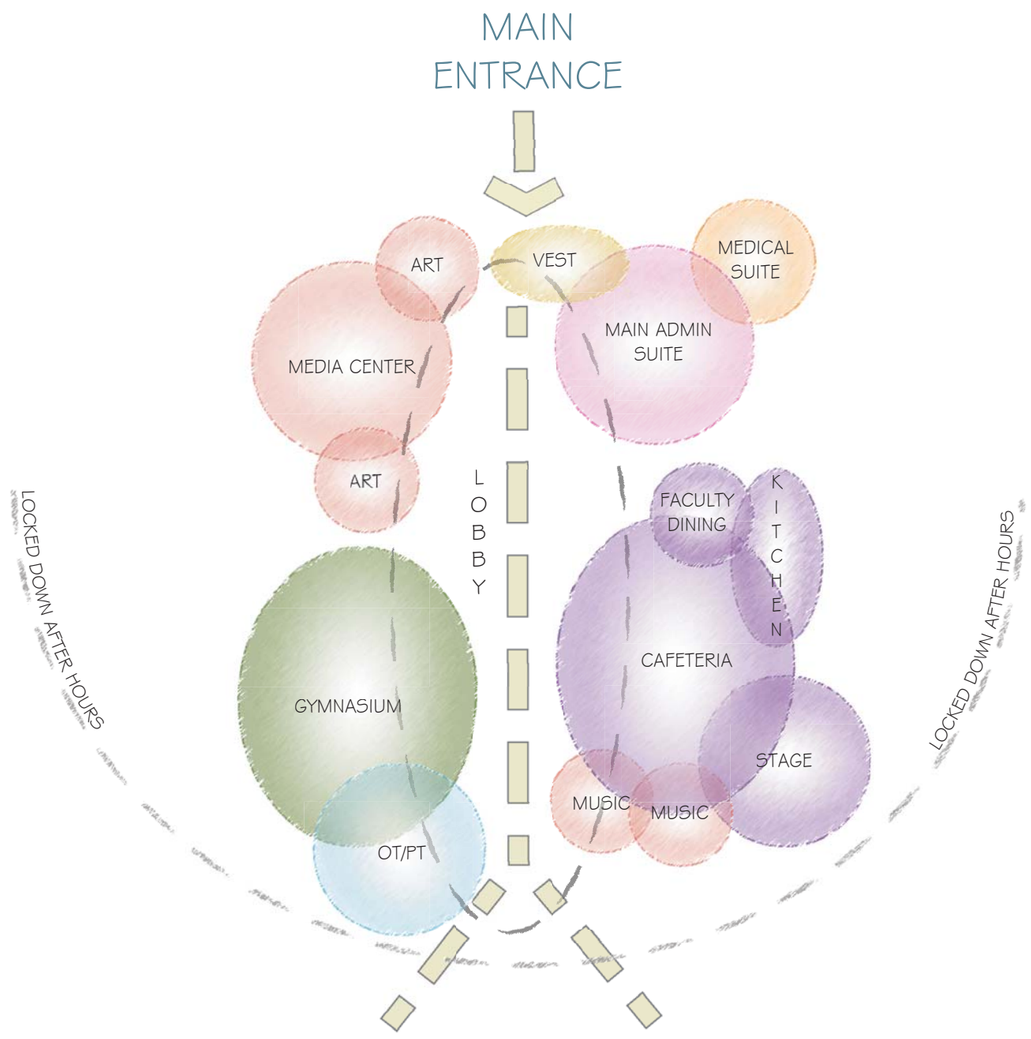


SECOND FLOOR



LEGEND

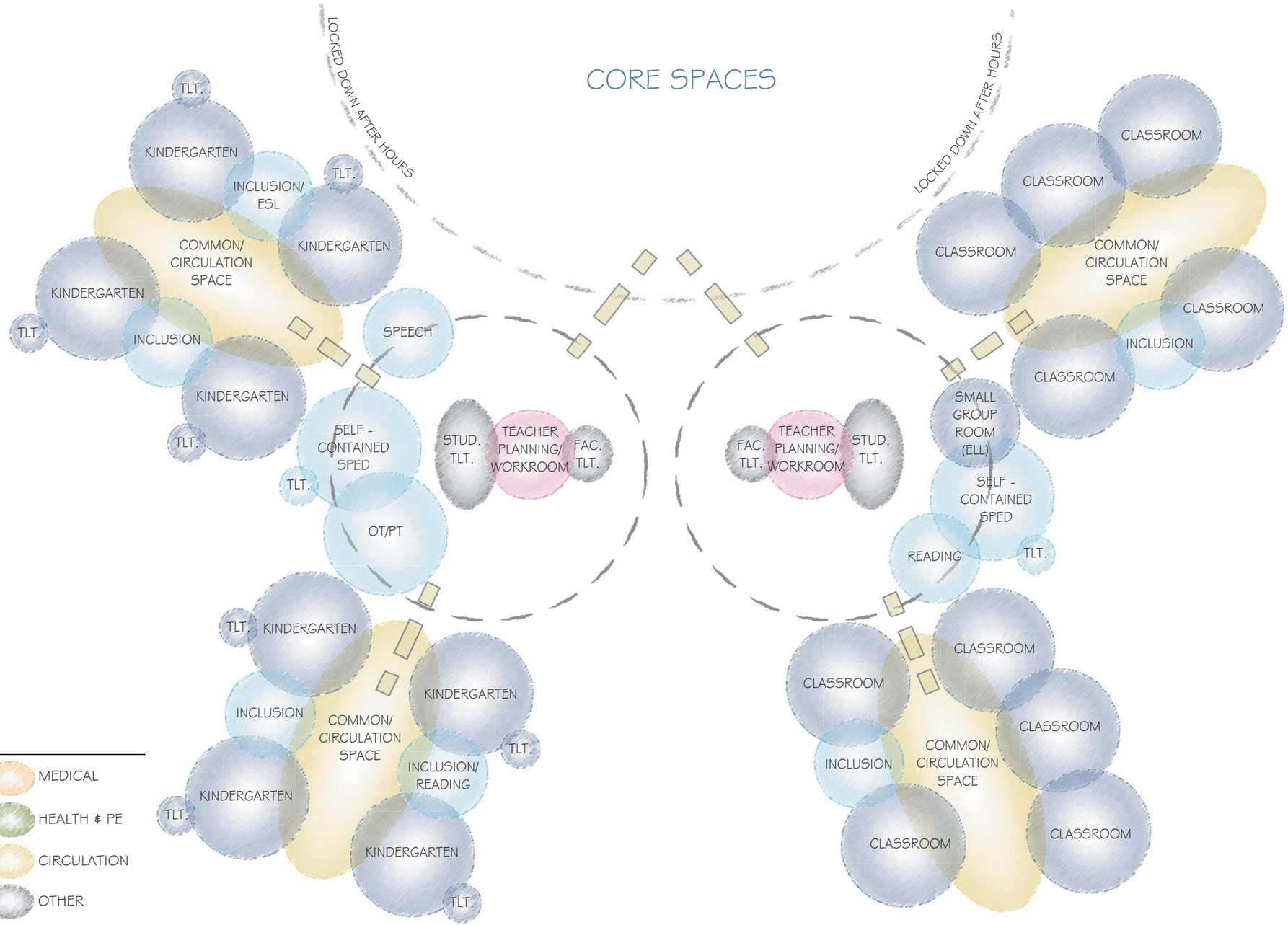
- CORE ACADEMIC
- SPECIAL EDUCATION
- MEDIA / ART / MUSIC
- DINING & FOOD SERVICE
- ADMIN & GUIDANCE
- MEDICAL
- HEALTH & PE
- CIRCULATION
- OTHER



TWO STORY CLASSROOM CLUSTERS

LEGEND

- CORE ACADEMIC
- DINING & FOOD SERVICE
- HEALTH & PE
- SPECIAL EDUCATION
- ADMIN & GUIDANCE
- CIRCULATION
- MEDIA / ART / MUSIC
- MEDICAL
- OTHER


CORE SPACES
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LOCKED DOWN AFTER HOURS
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KINDERGARTEN
INCLUSION/ ESL
TLT.
COMMON/ CIRCULATION SPACE
KINDERGARTEN
KINDERGARTEN
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INCLUSION
SPEECH
KINDERGARTEN
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SELF - CONTAINED SPED
TLT.
OT/PT
STUD. TLT.
TEACHER PLANNING/ WORKROOM
FAC. TLT.
FAC. TLT.
TEACHER PLANNING/ WORKROOM
STUD. TLT.
CLASSROOM
CLASSROOM
CLASSROOM
COMMON/ CIRCULATION SPACE
CLASSROOM
INCLUSION
CLASSROOM
SMALL GROUP ROOM (ELL)
SELF - CONTAINED SPED
READING
TLT.
TLT.
KINDERGARTEN
INCLUSION
COMMON/ CIRCULATION SPACE
KINDERGARTEN
TLT.
INCLUSION/ READING
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CLASSROOM
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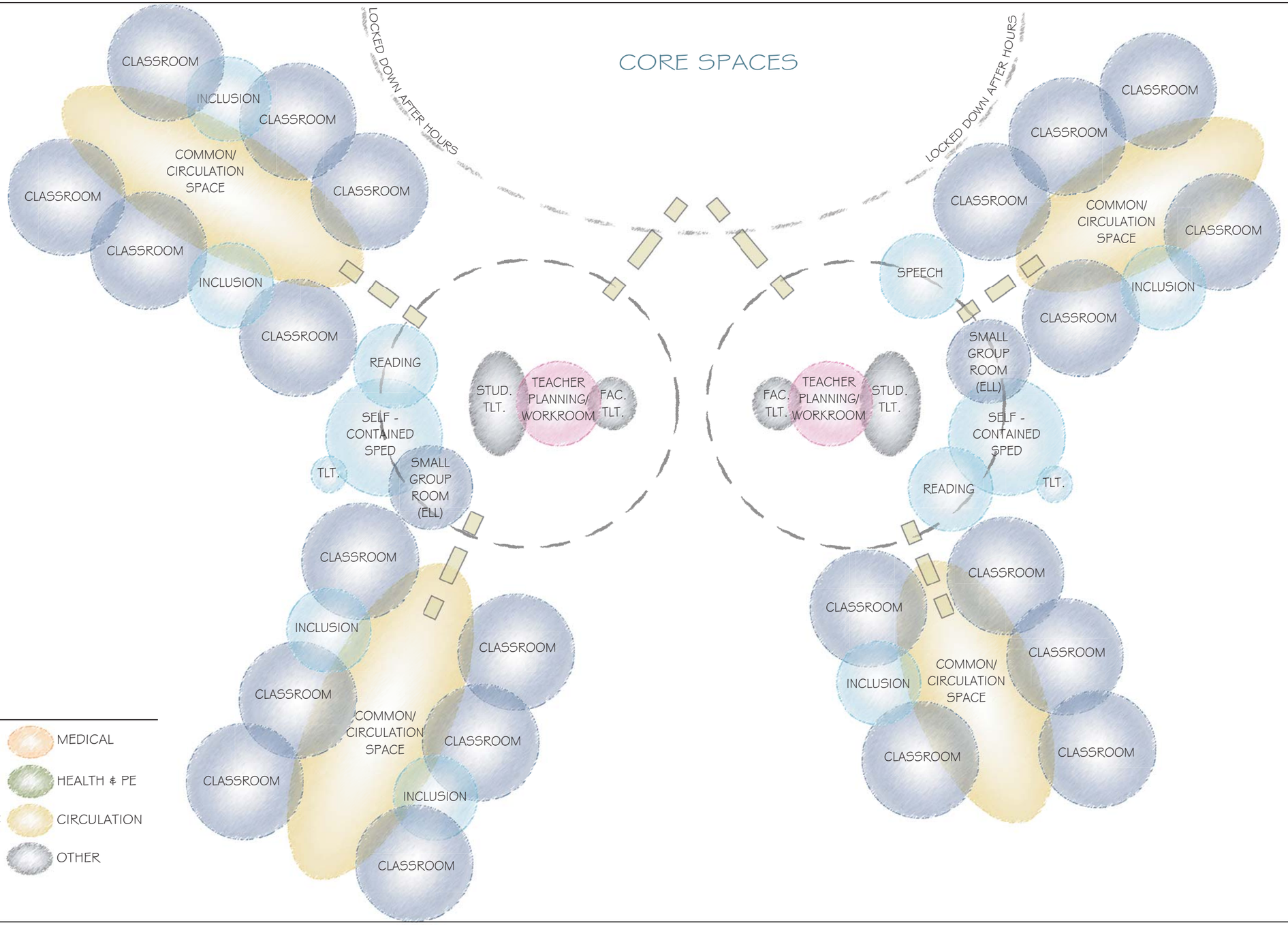
INCLUSION
COMMON/ CIRCULATION SPACE
CLASSROOM
CLASSROOM
LEGEND
CORE ACADEMIC
SPECIAL EDUCATION
MEDIA / ART / MUSIC
DINING & FOOD SERVICE
ADMIN & GUIDANCE
MEDICAL
HEALTH & PE
CIRCULATION
OTHER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STUD. TLT.
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FAC. TLT.
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TEACHER PLANNING/ WORKROOM
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SPEECH
SMALL GROUP ROOM (ELL)
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SPECIAL EDUCATION
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DINING & FOOD SERVICE
ADMIN & GUIDANCE
MEDICAL
HEALTH & PE
CIRCULATION
OTHER

3.1.3 INITIAL SPACE SUMMARY

A. MSBA Space Summary Template
B. Floor Plans of Existing Facility
C. Narrative & Diagrams for Variances

3.1.3 INITIAL SPACE SUMMARY

A. MSBA Space Summary Template

1. 790 Students (K-4)

Proposed Space Summary- Beal K-4 Elementary School

Beal K-4 Elementary	Existing Conditions			Proposed			MSBA Guidelines			
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
CORE ACADEMIC SPACES		**13**	**9,272**			**46,650**		**34**	**33,800**	
(List classrooms of different sizes separately)										
Pre-Kindergarten w/ toilet						0	1,200		-	1,100 SF min - 1,300 SF max
Kindergarten w/ toilet				1,150	8	9,200	1,200	6	7,200	1,100 SF min - 1,300 SF max
Kindergarten without toilet		**10**	7,185			0				
General Classrooms - Grade 1-6		**3**	2,087	925	32	29,600	950	28	26,600	900 SF min - 1,000 SF max
Commons				650	8	5,200				
ESL/ELL				450	3	1,350				
Teacher Planning				325	4	1,300				
SPECIAL EDUCATION		**4**	**2,753**			**12,360**			**9,060**	
(List rooms of different sizes separately)										
Self-Contained SPED [Substantially Separate]		2	2,248	925	4	3,700	950	6	5,700	8% of pop. in self-contained SPED
Self-Contained SPED - toilet				80	4	320	60	6	360	
Resource Room [Inclusion]				375	12	4,500	500	4	2,000	1/2 size Genl. Clrm.
Small Group Room / Reading				250	3	750	500	2	1,000	1/2 size Genl. Clrm.
Reading Office				120	1	120				
Reading Storage				120	1	120				
Speech	285	1	285	250	2	500				
OT/PT	220	1	220	925	2	1,850				
Special Education Site Coordinator Office				150	1	150				
Special Education Conference Room				350	1	350				
ART & MUSIC		**1**	**332**			**5,075**			**5,075**	
Art Classroom - 25 seats		1	332	1,000	2	2,000	1,000	2	2,000	assumed schedule 2 times / week / student
Art Workroom w/ Storage & kiln				150	2	300	150	2	300	
Music Classroom / Large Group - 25-50 seats				1,500	1	1,500				
Music Classroom				1,275	1	1,275	1,200	2	2,400	assumed schedule 2 times / week / student
Music Practice / Ensemble				75	0	0	75	5	375	
HEALTH & PHYSICAL EDUCATION		**4**	**3,269**			**7,650**			**6,300**	
Gymnasium	3,126	1	3,126	7,000	1	7,000	6,000	1	6,000	6000 SF Min. Size
Gym Storeroom [Includes Recreation Storage]		**3**	143	500	1	500	150	1	150	
Health Instructor's Office w/ Shower & Toilet				150	1	150	150	1	150	
MEDIA CENTER		**1**	**691**			**4,225**			**4,225**	
Media Center / Reading Room	691	1	691	3,025	1	3,025	4,225	1	4,225	
Meeting Area [80 People]				1,200	1	1,200				
Office						0				
Workroom						0				
Storage						0				
Computers						0				
Maker Space						0				
Books						0				
Health						0				
IT Offfice						0				

Proposed Space Summary- Beal K-4 Elementary School

Beal K-4 Elementary	Existing Conditions			Proposed			MSBA Guidelines			
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
DINING & FOOD SERVICE		**3**	**2,175**			**10,461**			**9,776**	
Cafeteria / Dining	954	1	954	5,000	1	5,000	5,925	1	5,925	2 seatings - 15SF per seat
Stage				1,500	1	1,500	1,000	1	1,000	
Chair / Table / Equipment Storage				463	1	463	463	1	463	
Kitchen	650	1	650	3,200	1	3,200	2,090	1	2,090	1600 SF for first 300 + 1 SF/student Add'l
Staff Lunch Room	571	1	571	298	1	298	298	1	298	20 SF/Occupant
MEDICAL		**2**	**172**			**950**			**710**	
Medical Suite Toilet with Shower	54	1	54	100	1	100	60	1	60	
Nurses' Office / Waiting Room				350	1	350	250	1	250	
Examination Room / Resting	118	1	118	100	5	500	100	4	400	
ADMINISTRATION & GUIDANCE		**6**	**1,026**			**2,925**			**2,925**	
General Office / Waiting Room / Toilet	192	**2**	384	590	1	590	545	1	545	
Teachers' Mail and Time Room				100	1	100	100	1	100	
Duplicating Room				150	1	150	150	1	150	
Records Room				110	1	110	110	1	110	
Principal's Office w/ Conference Area	168	1	168	200	1	200	375	1	375	
Principal's Secretary / Waiting						0	125	1	125	
Assistant Principal's Office				150	1	150	120	1	120	
Supervisory / Spare Office				150	1	150	120	1	120	
Conference Room				400	1	400	250	1	250	
Guidance Office [Psychologist/Counselor]				150	3	450	150	3	450	
Guidance Storeroom				35	1	35	35	1	35	
Teachers' Work Room	208	1	208			0	545	1	545	
Instructional Coaches/Curriculum Coordinator	133	1	133	120	2	240				
Instructional/Curriculum Conference Room	133	1	133	350	1	350				
CUSTODIAL & MAINTENANCE		**4**	**531**			**2,390**			**2,390**	
Custodian's Office	445	1	445	150	1	150	150	1	150	
Custodian's Workshop				375	1	375	375	1	375	
Custodian's Storage		**2**	38	375	1	375	375	1	375	
Recycling Room / Trash				400	1	400	400	1	400	
Receiving and General Supply				363	1	363	363	1	363	
Storeroom				527	1	527	527	1	527	
Network / Telecom Room	48	1	48	200	1	200	200	1	200	
OTHER			**0**			**0**			**0**	
Other *(specify)*										

Proposed Space Summary- Beal K-4 Elementary School

Beal K-4 Elementary	Existing Conditions			Proposed			MSBA Guidelines			
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
Total Building Net Floor Area (NFA)			**20,221**			**92,686**			**74,261**	
Proposed Student Capacity / Enrollment			**310**			**790**			**790**	
Total Building Gross Floor Area (GFA)[2]			**33,779**			**142,736**			**114,550**	
Grossing factor (GFA/NFA)			**1.67**			**1.54**			**1.54**	

[1] **Individual Room Net Floor Area (NFA)** Includes the net square footage measured from the inside face of the perimeter walls and includes all specific spaces assigned to a particular program area including such spaces as

[2] **Total Building Gross Floor Area (GFA)** Includes the entire building gross square footage measured from the outside face of exterior walls

Architect Certification

I hereby certify that all of the information provided in this "Proposed Space Summary" is true, complete and accurate and, except as agreed to in writing by the Massachusetts School Building Authority, in accordance with the guidelines, rules, regulations and policies of the Massachusetts School Building Authority to the best of my knowledge and belief.

Name of Architect Firm: _____

Name of Principal Architect: _____

Signature of Principal Architect: _____

Date: _____

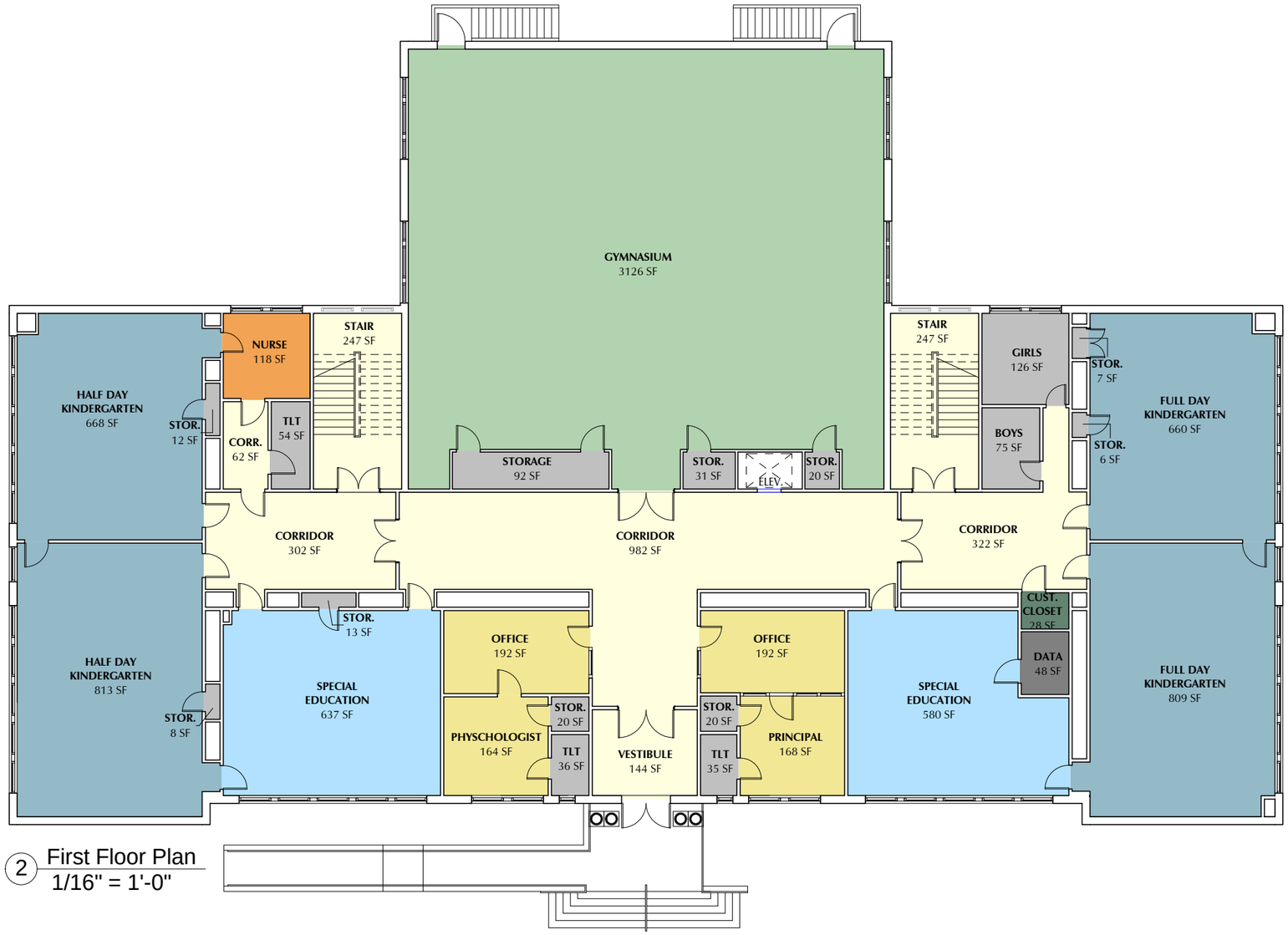
3.1.3 INITIAL SPACE SUMMARY

B. Floor Plans of Existing Facility

1 Basement Floor Plan
1/16" = 1'-0"

LEGEND

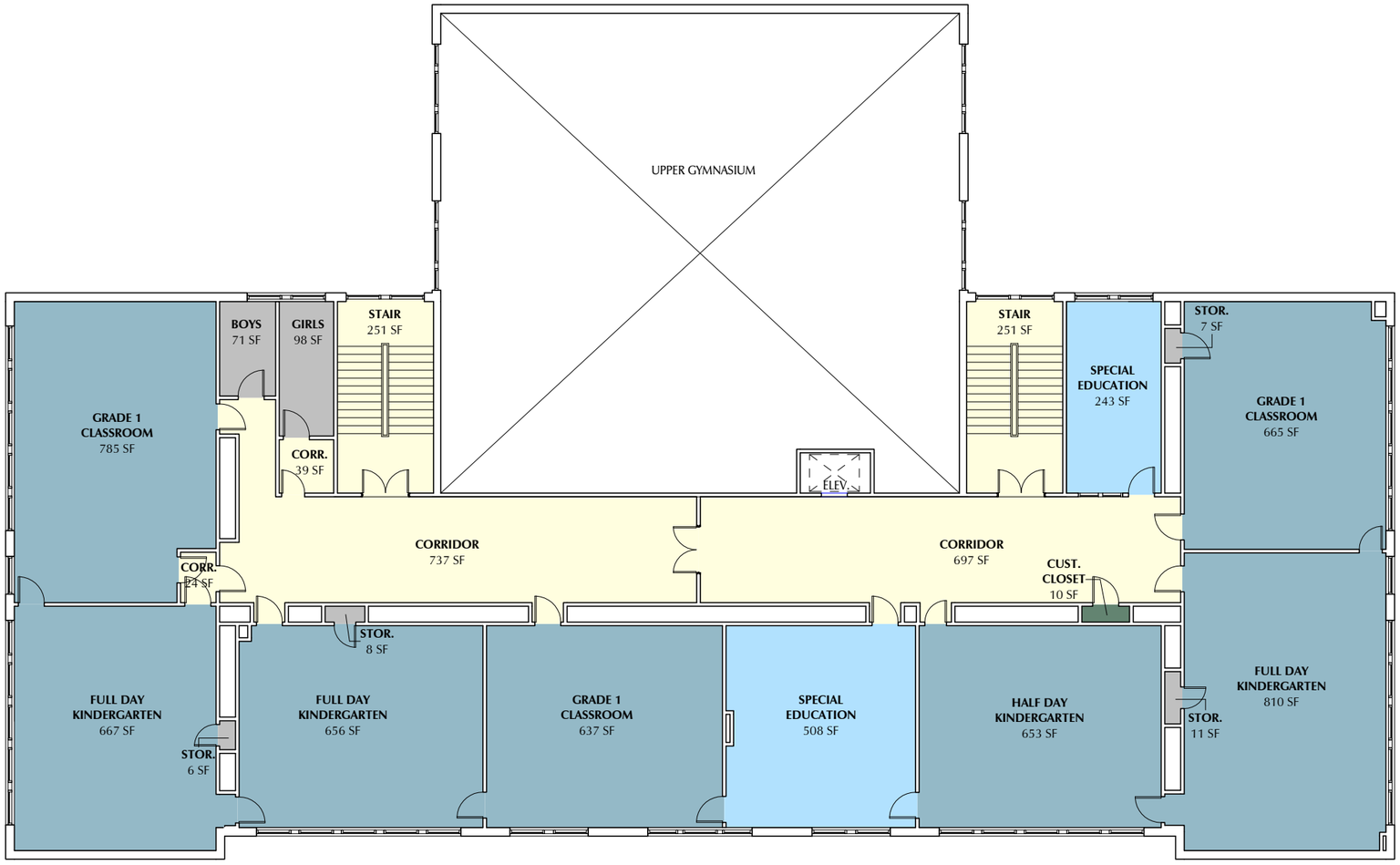
- Core Academic
- Special Education
- Art & Music
- Health & Physical Education
- Media Center
- Dining & Food Service
- Administration, Guidance
- Medical
- Custodial & Maintenance
- Other
- Mechanical / Electrical
- Circulation



2 First Floor Plan
1/16" = 1'-0"

LEGEND

- Core Academic
- Special Education
- Art & Music
- Health & Physical Education
- Media Center
- Dining & Food Service
- Administration, Guidance
- Medical
- Custodial & Maintenance
- Other
- Mechanical / Electrical
- Circulation



3 Second Floor Plan
1/16" = 1'-0"

LEGEND

- Core Academic
- Special Education
- Art & Music
- Health & Physical Education
- Media Center
- Dining & Food Service
- Administration, Guidance
- Medical
- Custodial & Maintenance
- Other
- Mechanical / Electrical
- Circulation

3.1.3 INITIAL SPACE SUMMARY

C. Narrative & Diagrams for Variances

1. Narrative of Variances – 790 Students (K-4)
2. Program Diagram – Existing vs. MSBA vs. Proposed

The following is a summary of the variances between the proposed and MSBA recommended areas for the major Space Summary Template categories based on a 790 student Kindergarten through Grade 4 facility. See Section 3.1.2.B for greater detail regarding the spatial requirements to support the Shrewsbury Elementary School program.

Core Academic: (MSBA: 34,550 sq. ft.; Proposed: 46,650 sq. ft.)

Eight **general classrooms** per grade level (total of 40) are expected to meet the needs of the general K-4 population, resulting in six classrooms above the MSBA guidelines. The need for 40 classrooms is based on the school district's policies on teacher to student ratio which are as follows: Kindergarten 17-19 Students, Grades One & Two 20-22 Students, and Grades Three & Four 22-24 Students. Additionally, three English Language Learner/English Second Language **(ELL/ESL) classrooms** are required due to the high level of incoming Non-English speaking and English Second Language families in Shrewsbury. **Common Rooms** for each grade level will be used to support numerous curriculum needs including: tutorials, small group instruction, project based learning, and team teaching. **Teacher Planning** spaces are utilized for daily preparation blocks and collaborative teaching efforts, like Professional Learning Community planning, instructional coaching, and curriculum collaboration.

Special Education: (MSBA: 9,060 sq. ft.; Proposed: 12,360 sq. ft.)

After careful analysis of the services required to serve the Special Education population in the district, fewer self-contained classrooms are needed than the MSBA space summary template, but a greater number of inclusion related spaces are required to support OP/PT, Reading, Speech, and inclusion services. In order to maximize scheduling and staffing some of the spaces will serve multiple purposes throughout any given day. The additional square footage requirements include: **Special Education Site Coordinator, Conference Room, Reading Office & Storage,** and Additional space for the following: **OT/PT, Small Group Rooms,** and **Resources rooms.**

Art and Music: (MSBA: 5,075 sq. ft.; Proposed: 5,075 sq. ft.)

No variance; Space allocations for **Music Practice/Ensemble**, not needed to support Shrewsbury's elementary music program, were shifted to enlarge the **Music Classrooms** to support the movement based ~~Kodaly~~ curriculum.

Health and Physical Education: (MSBA: 6,300 sq. ft.; Proposed: 7,650 sq. ft.)
In order to provide a space for a school wide meeting/assembly the **Gymnasium** needed to be increased in size (7,000sq.ft. ÷ 7sq.ft. per occupant (chairs only-not fixed) = 1,000 occupants). The anticipated school wide occupant total (students & staff) will be a in the range of 920-1,000 occupants.

Media Center: (MSBA: 4,225 sq. ft.; Proposed: 4,225 sq. ft.)
No Variance.

Dining and Food Service: (MSBA: 9,776 sq. ft.; Proposed: 10,461sq. ft.)
Careful evaluation of the **Cafeteria** seating needs for assembly as well as lunchtime showed that a slightly smaller space would be adequate. This reduction in square footage was offset by an increased stage size, to accommodate the choral program, as well as an increased **Kitchen** and Servery space, to support the continuous high volume of students and storage of fresh food offerings.

Medical: (MSBA: 710 sq. ft.; Proposed: 950 sq. ft.)
The proposed area includes adequate space for the required confidentiality and screening for the health suite to service a 790 student population. The planned features include: Office suitably sized and secured for medicine distribution, confidential phone calls and meetings; toilet room, examination room, rest area with beds, waiting area, and screening space.

Administration and Guidance: (MSBA: 2,925 sq. ft.; Proposed: 2,925 sq. ft.)
No Variance; **Principal's Secretary/Waiting** & **Teachers' Work Room** space allocations and reductions to the **Principals' Office** were shifted to allow for increase in the **General Office/Waiting Room, Conference Room, Assistant Principals' Office, Supervisory Office,** and for the addition of an **Instructional Coaches/Curriculum Coordinator** spaces. The district has implemented instructional coaches/curriculum coordinators at all of their schools to ensure that curriculum is being developed, coordinated, and delivered consistently across the entire district.

Custodial: (MSBA: 2,390 sq. ft.; Proposed: 2,390 sq. ft.)
No variance

Other: (MSBA: 0 sq. ft.; Proposed: 0 sq. ft.)
No Variance

Gross Square Footage Factor: (MSBA: 1.54; Proposed: 1.54)
No variance

FEASIBILITY STUDY

3.1.3 INITIAL SPACE SUMMARY
C.2 Program Diagram - Existing vs. MSBA Template (790 Students)

ACADEMIC

EXISTING: 9,272 NSF
PROPOSED: 33,800 NSF

SPECIAL EDUCATION

EXISTING: 2,753 NSF
PROPOSED: 9,060 NSF

ART/MUSIC

EXISTING: 332 NSF
PROPOSED: 5,075 NSF

HEALTH & PHYSICAL EDUCATION

EXISTING: 3,269 NSF
PROPOSED: 6,300 NSF

MEDIA CENTER

EXISTING: 691 NSF
PROPOSED: 4,225 NSF

DINING & FOOD SERVICE

EXISTING: 2,175 NSF
PROPOSED: 9,776 NSF

MEDICAL

EXISTING: 172 NSF
PROPOSED: 710 NSF

ADMIN & GUIDANCE

EXISTING: 1,026 NSF
PROPOSED: 2,925 NSF

CUSTODIAL & MAINTENANCE

EXISTING: 531 NSF
PROPOSED: 2,390 NSF

GROSSING FACTOR: WALLS, CORRIDORS, STAIRS, TOILETS, MECHANICAL ROOMS, STORAGE ROOMS, JANITOR CLOSETS, ETC.

EXISTING: 33,779 GSF
PROPOSED: 114,550 GSF

	ADDITIONAL AREA REQUIRED BY EDUCATIONAL PROGRAM	
	EXISTING AREA THAT EXCEEDS PROPOSED EDUCATIONAL PROGRAM	
	TOTAL BUILDING AREA EXISTING	33,779 G.S.F.
	TOTAL BUILDING AREA REQUIRED BY EDUCATIONAL PROGRAM	114,550 G.S.F.

FEASIBILITY STUDY

3.1.3 INITIAL SPACE SUMMARY
C.2 Program Diagram - Existing vs. Proposed (790 Students)

ACADEMIC

EXISTING: 9,272 NSF
PROPOSED: 46,650 NSF

SPECIAL EDUCATION

EXISTING: 2,753 NSF
PROPOSED: 12,360 NSF

ART/MUSIC

EXISTING: 332 NSF
PROPOSED: 5,075 NSF

HEALTH & PHYSICAL EDUCATION

EXISTING: 3,269 NSF
PROPOSED: 7,650 NSF

MEDIA CENTER

EXISTING: 691 NSF
PROPOSED: 4,225 NSF

DINING & FOOD SERVICE

EXISTING: 2,175 NSF
PROPOSED: 10,461 NSF

MEDICAL

EXISTING: 172 NSF
PROPOSED: 950 NSF

ADMIN & GUIDANCE

EXISTING: 1,026 NSF
PROPOSED: 2,925 NSF

CUSTODIAL & MAINTENANCE

EXISTING: 531 NSF
PROPOSED: 2,390 NSF

GROSSING FACTOR: WALLS, CORRIDORS, STAIRS, TOILETS, MECHANICAL ROOMS, STORAGE ROOMS, JANITOR CLOSETS, ETC.

EXISTING: 33,779 GSF
PROPOSED: 142,736 GSF

ADDITIONAL AREA REQUIRED BY EDUCATIONAL PROGRAM

EXISTING AREA THAT EXCEEDS PROPOSED EDUCATIONAL PROGRAM

TOTAL BUILDING AREA EXISTING — 33,779 G.S.F.

TOTAL BUILDING AREA REQUIRED BY EDUCATIONAL PROGRAM — 142,736 G.S.F.

FEASIBILITY STUDY

3.1.3 INITIAL SPACE SUMMARY
C.2 Program Diagram - MSBA vs. Proposed (790 Students)

ACADEMIC

MSBA: 33,800 NSF
PROPOSED: 46,650 NSF

SPECIAL EDUCATION

MSBA: 9,060 NSF
PROPOSED: 12,360 NSF

ART/MUSIC

MSBA: 5,075 NSF
PROPOSED: 5,075 NSF

HEALTH & PHYSICAL EDUCATION

MSBA: 6,300 NSF
PROPOSED: 7,650 NSF

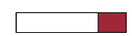
MEDIA CENTER

MSBA: 4,225 NSF
PROPOSED: 4,225 NSF

DINING & FOOD SERVICE

MSBA: 9,776 NSF
PROPOSED: 10,461 NSF

MEDICAL



MSBA: 710 NSF
PROPOSED: 950 NSF

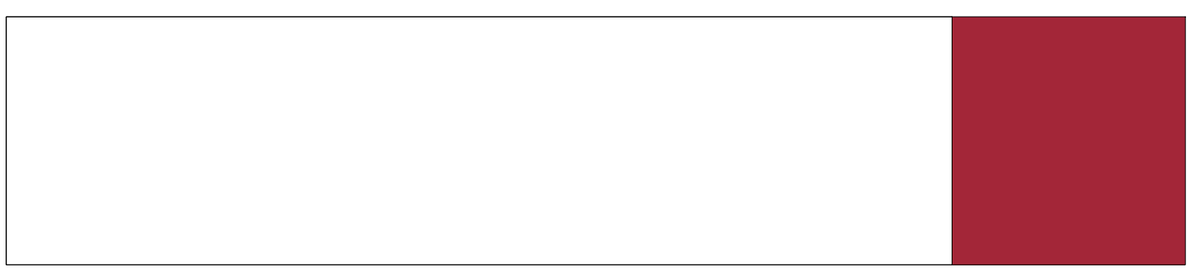
ADMIN & GUIDANCE

MSBA: 2,925 NSF
PROPOSED: 2,925 NSF

CUSTODIAL & MAINTENANCE

MSBA: 2,390 NSF
PROPOSED: 2,390 NSF

GROSSING FACTOR: WALLS, CORRIDORS, STAIRS, TOILETS, MECHANICAL ROOMS, STORAGE ROOMS, JANITOR CLOSETS, ETC.



MSBA: 114,550 GSF
PROPOSED: 142,736 GSF

	ADDITIONAL AREA REQUIRED BY EDUCATIONAL PROGRAM	
	TOTAL BUILDING AREA PER MSBA GUIDELINES	114,500 G.S.F.
	TOTAL BUILDING AREA REQUIRED BY EDUCATIONAL PROGRAM	142,736 G.S.F.

3.1.4 EVALUATION OF EXISTING CONDITIONS

A. Legal Title to the Property
B. Determination of Historical Registrations
C. Evaluation of Significant Structural, Environmental, Geotechnical or other Physical Conditions
D. Assessment of the Facility for the Presence of Hazardous Materials
E. Supporting Documents

3.1.4 EVALUATION OF EXISTING CONDITIONS

A. Legal Title to the Property

1. Proof of Legal Title to the Existing School Property
2. Deed of Existing Site
3. Proof of Legal Title to the Alternative Site-Allen Farm
4. Development Determination-Allen Farm
5. Deed of Allen Farm
6. Proof of Legal Title to the Alternative Site-Glavin Center
7. Development Determination-Glavin Center
8. Deed of Glavin Center

The Town of Shrewsbury erected the existing facility currently known as the Beal Early Childhood Center in 1922 as the only Junior/Senior High School in town. The parcel consists of 3.85 acres and is centrally located in town. The documents that describe the property and its ownership are included in this section and are as follows:

1. Deed – Book and Page 2208/524
2. Property Card – MBLU 22/158000

Based on research performed by LPA and their consulting engineers, as well as information provided by the Town of Shrewsbury, LPA has determined that the property is available for development.

Additionally, there are two alternative sites that are currently being considered for development. The first site, is the property commonly known as the "Allen Farm" property located at 384-386 South Street. This property consists of one large parcel (60.89 acres) which is part of a series of parcels which the Town obtained thru special town meeting in 2002 to convey or lease the property for general municipal purposes to the Shrewsbury Corporation. The documents that describe the property, how it was acquired, and its ownership are included in this section and are as follows:

1. Deed – Book and Page 28672/173
2. Property Card – MBLU 42/011000
3. Acquisition & Development – Special Town Meeting Certified Vote
4. Acquisition & Development – Special Town Meeting & Home Rule Petition

Based on research performed by LPA and their consulting engineers, as well as information provided by the Town of Shrewsbury, LPA has determined that the property can be made available for development.

The second alternative site being considered, commonly known as the "Glavin Center" property, consists of an existing complex of buildings [±100,000 sq.ft. in total], playfields, and agricultural land. Under the proposed town warrant the land will be acquire for three separate purposes, 20.38 Acres for "General Municipal Use", 13.4813 Acres for "Shrewsbury Youth Soccer", 49.6059 Acres for "Agricultural Purposes", for a total acquisition of 83.52 Acres. The two portions being acquired for "General Municipal Use" are the portions of the site being targeted for development of a new school. The documents that describe the property, how it will be acquired, and its current ownership are included in this section and are as follows:

1. Deed – Book and Page 1324/244
2. Property Card – MBLU 33/082000
3. Acquisition & Development – Special Town Meeting Warrant Article

Based on research performed by LPA and their consulting engineers, as well as information provided by the Town of Shrewsbury, LPA has determined that the property can be made available for development.

and such sale shall forever bar me and all persons claiming under me from all right and interest in the granted premises, whether at law or in equity. And out of money arising from such sale the grantee or his representatives shall be entitled to retain all sums then secured by this deed, whether then or thereafter payable, including all costs, charges and expenses incurred or sustained by them by reason of any default in the performance or observance of the said condition, rendering the surplus, if any, to me or my heirs or assigns; and I hereby, for myself and my heirs or assigns, covenant with the grantee and his heirs, executors, administrators, and assigns, that, in case a sale shall be made under the foregoing power, I or they will upon request, execute, acknowledge, and deliver to the purchaser or purchasers a deed or deeds of release confirming such sale, and said grantee and his assigns are hereby appointed and constitute the attorney or attorneys irrevocable of the said grantor to execute and deliver to the said purchaser a full transfer of all policies of insurance on the buildings upon the land conveyed by this mortgage at the time of such sale. And it is agreed that the grantee, or his executors, administrators or assigns, or any person or persons in their behalf, may purchase at any sale made as aforesaid, and that no other purchaser shall be answerable for the application of the purchase money; and that, until default in the performance or observance of the condition of this deed, I and my heirs and assigns may hold and enjoy the granted premises and receive the rents and profits thereof.

And for the consideration aforesaid I, Hazel Frances Hultman, wife of Paul Hultman, do hereby release unto the said grantee and his heirs and assigns all right of or to both D O W E R and H O M E S T E A D in the granted premises, and all other rights and interests therein.

I N W I T N E S S W H E R E O F we, the said Paul Hultman and Hazel Frances Hultman, hereunto set our hands and seals this fifth day of April in the year one thousand nine hundred and twenty.

Signed and sealed in the presence of

William C Mellish — Paul Hultman (seal)
Hazel Frances Hultman (seal)

Commonwealth of Massachusetts

Worcester ss. April 5th 1920. Then personally appeared the above-named Paul Hultman and acknowledged the foregoing instrument to be his free act and deed, before me-

William C Mellish Justice of the Peace.
My commission expires March 17 1923

Rec'd April 5, 1920, at 4h. 30m. P. M. Ent'd & Ex'd.

* * * * * * * * * * *

Rice

to

Town of Shrewsbury

2-$2.00 Stamps Cancelled

See Plan Book 35 Plan 3

K N O W A L L M E N B Y T H E S E P R E S E N T S that I, William E. Rice of Shrewsbury, Worcester County, Massachusetts, in consideration of One Dollar and other valuable consideration, paid by Town of Shrewsbury, a municipal corporation, in the Commonwealth of Massachusetts, the receipt whereof is hereby acknowledged, do hereby G I V E, G R A N T, B A R G A I N, S E L L and C O N V E Y unto the said Town of Shrewsbury, a certain parcel of land situated in said SHREWSBURY in said County of Worcester, bounded and described as follows: Beginning at a point in the northwesterly line of Wesleyan Street at land now or formerly of Henrietta Foster; thence north 13° 30' west by said Foster land two hundred eight (208) feet to a corner; thence north 64° east still by said Foster land thirty-four (34) feet to a corner; thence north 2° 30' west by land now or formerly of Adaline A. Chase two hundred forty-four (244) feet to a corner of other land of grantor; thence south 67° west by said land of the grantor two hundred seventy-two and nine tenths (272.9) feet to a corner; thence south 13° 30' east two hundred sixty-three and eleven one hundredths (263.11) feet and south 16° 30' east one hundred fifty-one and forty-two one hundredths (151.42) feet to said northwesterly line of Wesleyan Street; thence northeasterly by said line of Wesleyan Street one hundred ninety-two and eighteen one hundredths (192.18) feet to the place of beginning. Containing two and twenty-two one hundredths (2.22) acres more or less. Said premises are shown on a plan of land for school lot and street in Shrewsbury, Massachusetts, by R. E. Allen & Son, Engr's dated March, 1920.

T O H A V E and T O H O L D the granted premises, with all the privileges and appurtenances thereto belonging, to the said Town of Shrewsbury and its successors and assigns, to its own use and behoof forever. And I hereby for myself and my heirs, executors, and administrators, covenant with the grantee and its successors and assigns that I am lawfully seized in fee-simple of the granted premises; that they are free from all incumbrances; that I have good right to sell and convey the same as aforesaid; and that I will and my heirs, executors, and administrators shall W A R R A N T and D E F E N D the same to the grantee and its successors and assigns forever against the lawful claims and demands of all persons.

IN WITNESS WHEREOF I the said William E. Rice, being unmarried, hereunto set my hand and seal this fifth day of April in the year one thousand nine hundred and twenty.
Signed and sealed in presence of
Raymond B. Fletcher William E. Rice (seal)
Commonwealth of Massachusetts.
Worcester, ss. April 5, 1920. Then personally appeared the above-named William E. Rice and acknowledged the foregoing instrument to be his free act and deed, before me-
Raymond B. Fletcher Justice of the Peace.
Rec'd April 5, 1920, at 4h. 52m. P. M. Ent'd & Ex'd.

* * * * * * * * * * *

KNOW ALL MEN BY THESE PRESENTS that The Massachusetts Conference Association of Seventh Day Adventists, a corporation duly established under the laws of the Commonwealth of Massachusetts, and having its usual place of business at Lancaster, Worcester County, in consideration of One Dollar and other good and valuable considerations, to it paid by Leonard J. Smith, Edgar J. Smith, Charles Roy Smith and Donald E. Smith, all of said Lancaster, the receipt whereof is hereby acknowledged, do hereby GIVE, GRANT, BARGAIN, SELL and CONVEY unto the said Leonard J. Smith, Edgar J. Smith, Charles Roy Smith and Donald E. Smith, a certain tract or parcel of land, with the buildings thereon, situated in the southerly part of LANCASTER, in the County of Worcester and Commonwealth of Massachusetts, bounded and described as follows:- Beginning at the northwest corner of said tract of land, at the junction of Sawyer and Prescott Streets, thence easterly by said Prescott Street two hundred and three (203) feet more or less to land of Mrs. Manning (formerly of Mrs. Case); thence southerly by said land of Mrs. Manning seventy-three feet (73) more or less to land of George B. Mason (formerly of William B. Mason, previously of Roxie A. Rice) thence by said Mason's land westerly two hundred two and one-half (202 1/2) feet more or less to Sawyer Street; thence northerly by said Sawyer Street seventy-three feet (73) more or less to place of beginning. Reserving the privilege to George B. Mason of entering and letting the surface water of said Mason's cellar drain through the pipes belonging to said property. Said premises are conveyed subject to the taxes for the year 1920. Being the same premises conveyed to The Massachusetts Conference Association of Seventh Day Adventists, by the South Lancaster Academy, by deed dated May 22, 1917, and recorded with Worcester District Deeds, Book 2162, Page 496. TO HAVE and TO HOLD the granted premises, with all the privileges and appurtenances thereto belonging, to the said Leonard J. Smith, Edgar J. Smith, Charles Roy Smith and Donald E. Smith, and their heirs and assigns, to their own use and behoof forever. And the said Corporation hereby covenants with the grantees and their heirs and assigns that it is lawfully seized in fee simple of the granted premises; that they are free from all incumbrances, that it has good right to sell and convey the same as aforesaid; and that it will WARRANT and DEFEND the same to the grantees and their heirs and assigns forever against the lawful claims and demands of all persons.

Mass. Conference Assoc'n of Seventh Day Adventists to Smith et als.

2-$2.00 Stamps
1-$1.00 Stamp
Cancelled

IN WITNESS WHEREOF the said - Massachusetts Conference Association of Seventh Day Adventists has caused its corporate seal to be hereto affixed and these presents to be signed, acknowledged and delivered in its name and behalf by John K. Jones and Hira T. Curtis, its President and Treasurer hereto duly authorized, this second day of April, in the year one thousand nine hundred and twenty.
Massachusetts Conference Association
of Seventh Day Adventists (seal)
by John K. Jones, President
Hira T. Curtis Treasurer.
Commonwealth of Massachusetts
Worcester, ss. On this second day of April, 1920, before me appeared John K. Jones, President and Hira T. Curtis, Treasurer to me personally known who being duly sworn did say that they are the President and Treasurer of The Massachusetts Conference Association of Seventh Day Adventists and that the seal affixed to the foregoing instrument is the corporate seal of said Corporation and that said instrument was signed and sealed in behalf of said Corporation by authority of - Massachusetts Conference Association of Seventh Day Adventists and the said John K. Jones, President and Hira T. Curtis Treasurer acknowledged said instrument to be the free act and deed of said Corporation.
Amos T. Saunders Notary Public
My commission expires July 14, 1921

At a meeting of the Board of Trustees of The Massachusetts Conference Association of Seventh Day Adventists duly called and held on March 10th, 1920, it was VOTED That the President and Treasurer be authorized to sell and convey the property of the Corporation located at the corner

1-7 MAPLE AVE

Location	1-7 MAPLE AVE	**Mblu**	22/ 158000/ / /
Acct#	3618	**Owner**	SHREWSBURY TOWN OF HOWARD BEAL HIGH SCHO
Assessment	$4,008,200	**Appraisal**	$4,008,200
PID	3618	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$3,155,100	$853,100	$4,008,200
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$3,155,100	$853,100	$4,008,200

Owner of Record

Owner	SHREWSBURY TOWN OF HOWARD BEAL HIGH SCHO	**Sale Price**	$0
Co-Owner		**Certificate**	
Address	100 MAPLE AVE SHREWSBURY, MA 01545-5338	**Book & Page**	2208/ 524
		Sale Date	04/05/1920
		Instrument	1N

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
SHREWSBURY TOWN OF HOWARD BEAL HIGH SCHO	$0		2208/ 524	1N	04/05/1920

Building Information

Building 1 : Section 1

Year Built:	1922
Living Area:	31,400
Replacement Cost:	$5,202,983
Building Percent Good:	53
Replacement Cost Less Depreciation:	$2,757,600

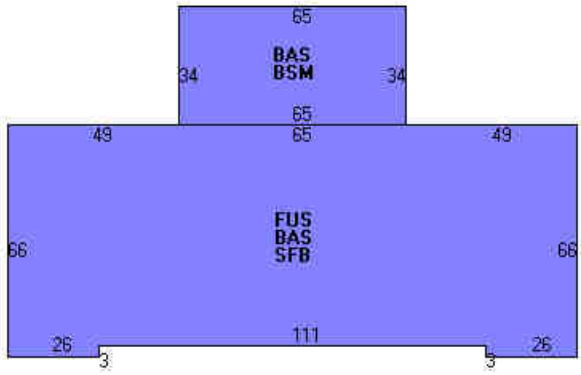
Building Attributes

Building Photo

Building Photo
(http://images.vgsi.com/photos/ShrewsburyMAPhotos//\00\02\6

Field	Description
STYLE	High School
MODEL	Commercial
Grade	C
Stories	2.00
Occupancy	1
Exterior Wall 1	Brick Veneer
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Rubber Memb
Interior Wall 1	Plaster
Interior Wall 2	
Interior Flr 1	Vinyl Tile
Interior Flr 2	
Heating Fuel	Nat Gas
Heat Type	Steam
AC Pct	0
Heat Pct	100
Bldg Use	Town - Education
Total Rooms	0
Bedrooms	0
Full Baths	0
Half Baths	19
Xtra Fixtures	0
1st Floor Use	
Elevators	0
Frame	Masonry
Plumbing	Average
Foundation	Poured Conc
Partitions	Average
Wall Height	14
% Sprinkler	0

Building Layout



Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	12,635	12,635
FUS	Finished Upper Story	10,425	10,425
SFB	Semi fin base	10,425	8,340
BSM	Basement	2,210	0
		35,695	31,400

Extra Features

Extra Features				Legend
Code	Description	Size	Value	Bldg #
ELV1	Elevator-Pass	10 STOPS	$397,500	1
KIT	Kitchen	1 UNITS	$0	1

Land

Land Use

Use Code	9340
Description	Town - Education
Zone	H
Neighborhood	C4
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	3.86
Frontage	
Depth	
Assessed Value	$853,100
Appraised Value	$853,100

Outbuildings

Outbuildings	Legend
No Data for Outbuildings	

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2016	$2,436,500	$728,400	$3,164,900
2015	$2,347,400	$733,700	$3,081,100
2014	$2,347,400	$740,200	$3,087,600

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2016	$2,436,500	$728,400	$3,164,900
2015	$2,347,400	$733,700	$3,081,100
2014	$2,347,400	$740,200	$3,087,600

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6606

49/2.15

QUITCLAIM DEED

We, Audrey A. Doyle-Richardson a/k/a Audrey Doyle of Shrewsbury, Massachusetts, Constance Pukaite of Mequon, Wisconsin, Elaine Allen a/k/a Elaine Kingsriter of St. Paul, Minnesota, and Richard E. Allen of Watsonville, California ("Grantor"), for consideration paid and in consideration of Six Million and 00/100 Dollars ($6,000,000.00), grant to The Inhabitants of the Town of Shrewsbury, a Massachusetts municipal corporation ("Grantee"), with an address c/o Town Clerk, Town of Shrewsbury, 100 Maple Avenue, Shrewsbury, MA 01545, with QUITCLAIM COVENANTS, three certain parcels of land with the buildings thereon situate in Shrewsbury, Worcester County, Massachusetts, to the north of the Hartford Turnpike also known as Route 20 and on the westerly side of South Street, as follows:

03 JAN 10 AM 10:52

Locus: 384-386 South Street, Shrewsbury, MA 01545
0 South Street, Shrewsbury, MA 01545
719 Hartford Turnpike, Shrewsbury, MA 01545

PARCEL I:

The land and buildings thereon situate in Shrewsbury, Worcester County, Massachusetts to the north of the Hartford Turnpike also known as Route 20, and on the westerly side of South Street, containing approximately 49 acres and also identified in Town of Shrewsbury Assessors records as the portion of Parcel 42-011000 west of South Street.

For Grantor's title see deed of Richard E. Allen, Trustee under the Stuart H. Allen Trust, and Trustee under the Dorothy M. Allen Trust, dated August 24, 1998 and recorded with the Worcester County Registry of Deeds in Book 20371, Page 181.

PARCEL II:

The land and buildings thereon situate in Shrewsbury, Worcester County, Massachusetts to the north of the Hartford Turnpike also known as Route 20, and on the westerly side of South Street, containing approximately 1.856 acres, shown as Parcel A on a Plan entitled "Plan of land in Shrewsbury, Mass. owned by Stuart H. Allen" dated October 1973, and recorded with said Deeds in Plan Book 392, Plan 22, and also identified in Town of Shrewsbury Assessors records as Parcel 42-011001.

For Grantor's title see deeds of Stuart H. Allen and Dorothy M. Allen dated 12/29/92 and 12/28/93 recorded with said Deeds in Book 14843, Page 21, Book 14843, Page 22, Book 14924, Page 303 and Book 14924, Page 302, respectively.

MAIL:
T. PHILIP LEADER, ESQ
391 MECHANIC STREET
WORCESTER, 01608

NELSON & O'CONNELL
8557

9008597_1

PARCEL III:

The land situate in Shrewsbury, Worcester County, Massachusetts on the northerly side of the Hartford Turnpike also known as Route 20, and on the westerly side of South Street, containing approximately 11 acres and also identified in Town of Shrewsbury Assessors records as Parcel 42-021000.

For Grantor's title see deeds of Stuart H. Allen and Dorothy M. Allen dated 12/27/88, 12/27/89, 12/30/86, and 12/26/90 and recorded with said Deeds in Book 11838, Page 3, Book 11838, Page 4, Book 12544, Page 54, Book 12544, Page 55, Book 13171, Page 378, Book 13171, Page 380, Book 13171, Page 383, and Book 13171, Page 383, respectively.

Meaning and intending to convey all the Grantor's right, title and interest in and to all property of the Grantor situate in Shrewsbury, Worcester County, Massachusetts on the northerly side of the Hartford Turnpike also known as Route 20, and on the westerly side of South Street, but specifically excluding the property of the Grantor on the easterly side of South Street.

The above premises are conveyed subject to and together with the benefit of all rights, restrictions, covenants and easement of record, if any, insofar as the same are now in force and applicable.

No Massachusetts Deed Excise Taxes Stamps are affixed hereto, none being required by law.

SEE PLAN 790-23

Executed under seal as of the 10th day of January, 2003.

Audrey A. Doyle-Richardson
Audrey A. Doyle-Richardson

_____
Constance Pukaite

_____
Elaine Allen

_____
Richard E. Allen

COMMONWEALTH OF MASSACHUSETTS

Worcester, ss. Dec 30, 2002

Then personally appeared the above-named Audrey A. Doyle-Richardson and acknowledged the foregoing instrument to be her free act and deed, before me,

Ann M. Dagle
NOTARY PUBLIC:
My Commission expires:
ANN M. DAGLE
My Commission Expires March 19, 2004

STATE OF WISCONSIN

_____ COUNTY _____, 200__

Then personally appeared the above-named Constance Pukaite and acknowledged the foregoing instrument to be her free act and deed, before me,

_____
NOTARY PUBLIC:
My Commission expires:

9008597_1

Executed under seal as of the 10th day of January, 2003.

Audrey A. Doyle-Richardson

Constance Pukaite

Constance Pukaite

Elaine Allen

Richard E. Allen

COMMONWEALTH OF MASSACHUSETTS

Worcester, ss. _____, 200__

Then personally appeared the above-named Audrey A. Doyle-Richardson and acknowledged the foregoing instrument to be her free act and deed, before me,

NOTARY PUBLIC:
My Commission expires:

STATE OF WISCONSIN

Ozaukee COUNTY 12-31, 2002

Then personally appeared the above-named Constance Pukaite and acknowledged the foregoing instrument to be her free act and deed, before me,

Deborah L. Dufresne
NOTARY PUBLIC:
My Commission expires:
10-9-05

9008597_1

Executed under seal as of the 10th day of January, 2003.

Audrey A. Doyle-Richardson

Constance Pukaite

Elaine Allen

Richard E. Allen

COMMONWEALTH OF MASSACHUSETTS

Worcester, ss. _____, 200__

Then personally appeared the above-named Audrey A. Doyle-Richardson and acknowledged the foregoing instrument to be her free act and deed, before me,

NOTARY PUBLIC:
My Commission expires:

STATE OF WISCONSIN

_____ COUNTY _____, 200__

Then personally appeared the above-named Constance Pukaite and acknowledged the foregoing instrument to be her free act and deed, before me,

NOTARY PUBLIC:
My Commission expires:

9008597_1

Executed under seal as of the 10th day of January, 2003.

Audrey A. Doyle-Richardson

Constance Pukaite

Elaine Allen

Richard E. Allen

COMMONWEALTH OF MASSACHUSETTS

Worcester, ss. _____, 200__

Then personally appeared the above-named Audrey A. Doyle-Richardson and acknowledged the foregoing instrument to be her free act and deed, before me,

NOTARY PUBLIC:
My Commission expires:

STATE OF WISCONSIN

_____ COUNTY _____, 200__

Then personally appeared the above-named Constance Pukaite and acknowledged the foregoing instrument to be her free act and deed, before me,

NOTARY PUBLIC:
My Commission expires:

9008597_1

STATE OF MINNESOTA

Ramsey COUNTY 12/30, 2002

Then personally appeared the above-named Elaine Allen and acknowledged the foregoing instrument to be her free act and deed, before me,

NOTARY PUBLIC:
My Commission expires:

THERESA J. DRAPINSKI
NOTARY PUBLIC - MINNESOTA
My Commission Expires 1/31/2005

STATE OF CALIFORNIA

_____ COUNTY _____, 200__

Then personally appeared the above-named Richard E. Allen and acknowledged the foregoing instrument to be his free act and deed, before me,

NOTARY PUBLIC:
My Commission expires:

9008597_1

STATE OF MINNESOTA

_____ COUNTY _____, 200__

Then personally appeared the above-named Elaine Allen and acknowledged the foregoing instrument to be her free act and deed, before me,

_____
NOTARY PUBLIC:
My Commission expires:

STATE OF CALIFORNIA

Santa Cruz COUNTY December 31, 2002

Then personally appeared the above-named Richard E. Allen and acknowledged the foregoing instrument to be his free act and deed, before me,

Esmeralda Medina
NOTARY PUBLIC:
My Commission expires: March 1, 2006

ESMERALDA C. MEDINA
Commission # 1344895
Notary Public - California
Santa Cruz County
My Comm. Expires Mar 1, 2006

9008597_1

ATTEST: WORC. Anthony J. Vigliotti, Register

384-386 SOUTH ST

Location	384-386 SOUTH ST	**Mblu**	42/ 011000/ / /
Acct#	9571	**Owner**	SHREWSBURY TOWN OF
Assessment	$6,517,200	**Appraisal**	$6,517,200
PID	9571	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$45,600	$6,471,600	$6,517,200
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$45,600	$6,471,600	$6,517,200

Owner of Record

Owner	SHREWSBURY TOWN OF	**Sale Price**	$6,000,000
Co-Owner		**Certificate**	
Address	100 MAPLE AVE SHREWSBURY, MA 01545	**Book & Page**	28672/ 173
		Sale Date	01/10/2003
		Instrument	1E

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
SHREWSBURY TOWN OF	$6,000,000		28672/ 173	1E	01/10/2003
RICHARDSON AUDREY C/O RICHARD H ALLEN	$100		20371/ 181	1A	09/01/1998
ALLEN STUART H ALLEN DOROTHY	$0		16996/ 77	1N	04/24/1995

Building Information

Building 1 : Section 1

Year Built:	
Living Area:	0
Replacement Cost:	$0
Building Percent Good:	
Replacement Cost Less Depreciation:	$0

Building Attributes	
Field	**Description**
Style	Outbuildings
Model	
Grade	
Stories	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type	
AC Pct	
Bedrooms	
Full Baths	
Half Baths	
Extra Fixtures	
Total Rooms	
Bath Style:	
Kitchen Style	
Kitchens	
Extra Kitchens	
Frame	
Bsmt Floor	
Bsmt Garage	
Foundation	
WS Flues	
Fireplaces	
Xtra Openings	
Fini BSMT SF	
Solar HW	
Int vs. Ext	

Building Photo

(http://images.vgsi.com/photos/ShrewsburyMAPhotos//default.jp

Building Layout

Building Layout

Building Sub-Areas (sq ft)	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend

No Data for Extra Features

Land

Land Use

Use Code	9300
Description	Town Vacant
Zone	J
Neighborhood	C7
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	60.89
Frontage	
Depth	
Assessed Value	$6,471,600
Appraised Value	$6,471,600

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
MSC	Misc Structure			3800 UNITS	$45,600	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2016	$45,600	$5,589,500	$5,635,100
2015	$45,600	$5,592,900	$5,638,500
2014	$45,600	$5,597,300	$5,642,900

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2016	$45,600	$5,589,500	$5,635,100
2015	$45,600	$5,592,900	$5,638,500
2014	$45,600	$5,597,300	$5,642,900

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TOWN OF SHREWSBURY

100 Maple Avenue
Shrewsbury, MA 01545-5398
Voice: 508-841-8507
Fax: 508-842-0587

Sandra E. Wright, Town Clerk
swright@th.ci.shrewsbury.ma.us

Joyce C. Record, Assistant Town Clerk
JoyceR@th.ci.shrewsbury.ma.us

CERTIFICATE

I, Sandra E. Wright, certify that I am the Town Clerk of the town of Shrewsbury, Massachusetts, and further certify that following is a true copy of the vote of the town at the Special Town Meeting held on September 9, 2002 at Shrewsbury High School auditorium.

Article 2: **Purchase Allen Land North of Hartford Tpk. And Westerly side of South St.**

VOTED BY STANDING VOTE YES, 172; NO, 7 a motion to appropriate the sum of $6,100,000.00 to acquire under such terms and conditions deemed appropriate by the Board of Selectmen the land and buildings thereon situated in Shrewsbury, Worcester County, Massachusetts to the north of Hartford Turnpike also known as Route 20 and the westerly side of South Street, containing approximately 49 acres identified in tax assessors records as Plate 42, Plots 9, 11 and 11-1 with said land being a portion of land granted by trustee's deed to Audrey Richardson, Constance Pukaite, Elaine Allen and Richard Allen on August 24, 1998, and recorded in the Worcester County Registry of Deeds at Book 20371, Page 181, and the land situated in Shrewsbury, Worcester County, Massachusetts on the northerly side of Hartford Turnpike also known as Route 20 and the westerly side of South Street, containing approximately 11 acres identified in the tax assessor records as Plate 42, Plots 18, 19, 20 and 21 with a fractional interest in said land granted by Stuart H. Allen to Audrey Doyle, Richard Allen, Constance Pukaite and Elaine Kingsriter, formerly Elaine Allen (the "Grantees") on December 21, 1988, and recorded in the Worcester County Registry of Deeds at Book 11838, Page 3, and with said deed ratified and confirmed so as to convey to the Grantees the entire interest in said land in a trustee's deed to Audrey Richardson, Constance Pukaite, Elaine Allen and Richard Allen on August 24, 1998, and recorded in the Worcester County Registry of Deeds at Book 20371, Page 181, and to fund the costs associated with the acquisition including the cost of survey, engineering, appraisal, legal and bond issuance and other professional expenses and fees, for the purposes of conveying or leasing all or a portion of such land to the Shrewsbury Corporation in aid of the purposes of the Corporation pursuant to the special act which the Board of Selectmen has been authorized to petition the General Court to enact pursuant to the vote of the Town passed under Article 1 of the warrant for this special town meeting, or, if such special act establishing the Shrewsbury

Corporation is not enacted by December 31, 2003 or the Board of Selectmen determines that it is not in the best interests of the Town to convey or lease all or a portion of such land to the Corporation, for general municipal purposes; that to meet this appropriation the Treasurer, with the approval of the Board of Selectmen, is authorized to borrow $6,100,000.00 under G.L. c.44, §7(3) or any other enabling authority, including said special act; and that the Board of Selectmen is authorized to sell, gift, transfer and/or convey all or a portion of said land to the Shrewsbury Corporation in aid of the purposes of the Corporation pursuant to said special act under such terms and conditions deemed appropriate by the Board; provided, however, that this vote shall not take effect until the Town votes to exempt from the limitation on total taxes imposed by G.L. c.59, §21C (Proposition 2½) amounts required to pay the principal of and interest on the borrowing authorized by this vote.

In witness whereof I hereunto set my
hand and the seal of the Town
this 25th day of July, 2011

Sandra E. Wright

Sandra E. Wright
Town Clerk

ɜss prescribed in
/er, that the total
time under this
ıpter 121B of the
ized valuation as
21 of said chapter
ɜid chapter 121B
nder this section
ınding under this
l chapter 121B to
twithstanding the
ɜ town may issue
ation of money to
ɔy the town under
time by the issue
ɔriod from the date
ınding notes shall
ɔ revenue funds of
ɲy such notes or
led in this section,
s section shall be

at its special town
lied and confirmed
nen of the Town to
of the purposes of
ıch vote, including
d therein and the
ion by the board of
ıuthority granted in

vote of 2/3 of its
judicial or superior
the General Laws.

dopt a new charter,
ı act which refer to
derstood, upon the
:ercise the same or

the commonwealth
o effect the purpose

SECTION 29. The provisions of this act are severable, and if any of its provisions shall be held unconstitutional by any court of competent jurisdiction, the decision of the court shall not impair any of the remaining provisions.

SECTION 30. This act shall take effect upon its passage.

9/9/2002
STM

***ARTICLE 2 Purchase Allen Land North of Hartford Tpk. and Westerly Side of South St.**

VOTED to end debate and vote the printed motion.

VOTED BY STANDING VOTE YES, 172; NO, 7 a motion to appropriate the sum of $6,100,000.00 to acquire under such terms and conditions deemed appropriate by the Board of Selectmen the land and buildings thereon situated in Shrewsbury, Worcester County, Massachusetts to the north of Hartford Turnpike also known as Route 20 and the westerly side of South Street, containing approximately 49 acres identified in tax assessors records as Plate 42, Plots 9, 11 and 11-1 with said land being a portion of land granted by trustee's deed to Audrey Richardson, Constance Pukaite, Elaine Allen and Richard Allen on August 24, 1998, and recorded in the Worcester County Registry of Deeds at Book 20371, Page 181, and the land situated in Shrewsbury, Worcester County, Massachusetts on the northerly side of Hartford Turnpike also known as Route 20 and the westerly side of South Street, containing approximately 11 acres identified in the tax assessor records as Plate 42, Plots 18, 19, 20 and 21 with a fractional interest in said land granted by Stuart H. Allen to Audrey Doyle, Richard Allen, Constance Pukaite and Elaine Kingsriter, formerly Elaine Allen (the "Grantees") on December 21, 1988, and recorded in the Worcester County Registry of Deeds at Book 11838, Page 3, and with said deed ratified and confirmed so as to convey to the Grantees the entire interest in said land in a trustee's deed to Audrey Richardson, Constance Pukaite, Elaine Allen and Richard Allen on August 24, 1998, and recorded in the Worcester County Registry of Deeds at Book 20371, Page 181, and to fund the costs associated with the acquisition including the cost of survey, engineering, appraisal, legal and bond issuance and other professional expenses and fees, for the purposes of conveying or leasing all or a portion of such land to the Shrewsbury Corporation in aid of the purposes of the Corporation pursuant to the special act which the Board of Selectmen has been authorized to petition the General Court to enact pursuant to the vote of the Town passed under Article 1 of the warrant for this special town meeting, or, if such special act establishing the Shrewsbury Corporation is not enacted by December 31, 2003 or the Board of Selectmen determines that it is not in the best interests of the Town to convey or lease all or a portion of such land to the Corporation, for general municipal purposes; that to meet this appropriation the Treasurer, with the approval of the Board of Selectmen, is authorized to borrow $6,100,000.00 under G.L. c.44, §7(3) or any other enabling authority, including said special act; and that the Board of Selectmen is authorized to sell, gift, transfer and/or convey all or a portion of said land to the Shrewsbury Corporation in aid of the purposes of the Corporation

pursuant to said special act under such terms and conditions deemed appropriate by the Board; provided, however, that this vote shall not take effect until the Town votes to exempt from the limitation on total taxes imposed by G.L. c.59, §21C (Proposition 2½) amounts required to pay the principal of and interest on the borrowing authorized by this vote.

***ARTICLE 3 Amend Zoning Bylaw and Zoning Map Office Research District**

VOTED a motion to end debate and vote the printed motion.

VOTED BY STANDING VOTE YES, 162; NO, 1 a motion to amend the Zoning Bylaw as follows:

Part 1. In Section VII, Table II, Office Research District (amended 11/13/2001):

a) Amend "Lot Frontage" from 50 feet to 100 feet.
b) Amend "Open Space Percent of Lot Area" from 30 to 25.
c) Amend "Height in Feet" from 96 to 50(11) and further add a footnote (11) to Section VII Table II as follows: (11) If parking for at least 100 cars is provided at grade but under a building the overall height of the building may be increased up to 60 feet and five stories, with the parking facility constituting one story.
d) Amend "Number Stories" from 8 to 4 (11)
e) In the "District" column, amend "Office Research" by adding footnote (8) to incorporate the existing buffer zone requirements that apply to "Limited Office-Research."
f) Amend footnote (8) by deleting the first clause ending in the word amendment, and substituting the following: "Where Office Research and Limited Office Research border land zoned for single family purposes as of the effective date of this amendment,"

And further, after the words "commercial buildings," add the word "driveways".

Part 2. In Section VII.D Off-Street Parking, add the following:
Under D 2. Design of Off Street Parking and Loading Spaces: add a new item "i" as follows:

i. In the Office Research District up to 25% of all off-street parking spaces may be designed for small cars. For said spaces the parking bay shall be 8 by 16 feet; all other parking and parking design criteria in Section VII subsection D shall apply.

Part 3. In Section VI, Table I: Use Regulations Schedule, add the following amendments:

1. For the use "Hotels, motels, or lodging houses" under the column designated O-R, add a footnote, i.e. (23), and add a footnote to the "Footnotes to Table I" as follows: (23) Hotels, motels, and lodging houses, are not permitted in the Office Research District unless they have direct access to Route 9,

Print

Acts 2002

CHAPTER 493 AN ACT ESTABLISHING THE SHREWSBURY CORPORATION. (see House, No. 5395) Approved by the Acting Governor, January 1, 2003

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:

SECTION 1. It is hereby declared that in the town of Shrewsbury, unused, underused, substandard, undeveloped or underdeveloped areas exist; that each such area constitutes a menace, injurious and inimical to the health, safety and welfare of the residents of the town; that each such area constitutes an economic liability, substantially impairing or arresting the sound growth of the town and retarding the economic well-being of the commonwealth; that each such area decreases the value of private investments and threatens sources of public revenue; that redevelopment of each such area in accordance with locally approved community and economic development, capital improvement or other plans, including the town's master plan, for the elimination of such conditions and prevention of their recurrence is necessary to retain existing enterprises, attract new commercial, industrial or residential development, and promote the sound and orderly growth of the town; that the existence of such unused, underused, undeveloped or underdeveloped areas makes persons unwilling or unable to do business in the town; that the menace of such unused, underused or underdeveloped areas is beyond remedy and control solely by the regulatory process in the exercise of the police powers, and cannot be dealt with effectively by the ordinary operations of private enterprise without the aids herein provided; that to prevent a recurrence of such conditions in such areas, the improvement of sites for commercial, industrial or residential uses or for necessary public facilities in the areas, the disposition of property for redevelopment incidental to the foregoing, the exercise of powers by the corporation, and any assistance which may be given by the town or any other public body in connection therewith, are public uses and purposes for which public money may be expended; that the acquisition, planning, clearance, development, rehabilitation or rebuilding of such unused, underused, substandard and undeveloped areas for commercial, industrial, residential, institutional and public facility purposes are public benefits for which public funds may be expended for the good and welfare of the town and the commonwealth.

It is hereby further declared that there exists in the town conditions of underemployment which cause hardship to many individuals and families, wastes vital human resources, increases the public assistance burden, impairs the security of family life, impedes the economic and physical development of the town and adversely affects the welfare and prosperity of its people; that obsolete, inefficient or inadequate public facilities and infrastructure are causing injury to the town's economy; that the unaided efforts of private industry have not provided and cannot provide the necessary sites within the development zone due to problems in the assembly of suitable sites, the provision of adequate public facilities and services, the unavailability of private capital for development and the inability of private enterprise alone to plan, finance and coordinate feasible development projects.

It is hereby further declared that there exists in the town of Shrewsbury a dire need to develop or redevelop public facilities and infrastructure to stimulate and support economic growth; that without such public facilities and services the town cannot arrest the decline of, revitalize, stabilize or expand its economy; that without such public facilities the town cannot develop a sound, vibrant economic base; that the development, management and operation of public facilities in support of economic development are essential to the preservation and enhancement of the town's tax base and economy.

It is hereby further declared that there exists in the town of Shrewsbury a dire need to protect and preserve open space and to develop affordable housing in order to support the objectives of balanced growth; that without sufficient open space and housing affordable to a broad range of incomes, the town cannot develop and sustain a vibrant economic base; and that the protection of open space and the provision of affordable housing are essential to the preservation and enhancement of the town's tax base and economy.

Therefore, a public corporation is necessary to address these and related public purposes. It is the purpose of the corporation created by this act to aid the town, private enterprises and non-profit organizations, and other public agencies in the speedy and orderly development or redevelopment of unused, obsolete, underused or underdeveloped areas, and in the development, operation and management of facilities and infrastructure necessary to support the economic vitality of the town.

SECTION 2. As used in this act, the following words, unless a different meaning clearly appears from the context, shall have the following meanings:-

"Board of selectmen", the duly elected board of selectmen of the town of Shrewsbury.

"Corporation", the Shrewsbury Corporation established under section 3.

"Cost of a project", all costs, whether incurred before or after the issue of bonds or notes hereunder, of acquisition, site development, construction, improvement, enlargement, reconstruction, alteration, machinery, equipment, furnishings, demolition or removal of existing buildings or structures, including the cost of acquiring any lands to which such buildings or structures may be moved, financing charges, interest prior to and during the carrying out of any project, interest for up to 2 years after completion or estimate completion date of any project, planning, engineering and legal service, administrative expense, the funding of notes issued for capital purposes, such reserve for debt service or other capital or current expenses as may be required by a trust agreement or resolution securing notes or bonds, and all other expenses incidental to the determination of the feasibility of any development project or to carrying out a development project or to placing the project in operation.

"Development area", any area located in the town of Shrewsbury that is suitably zoned for the kinds of activities identified in section 3, including but not limited to research and development, commercial, light industrial and business uses, residential uses whether a principal use or an accessory or incidental use carried out in association with an economic development or an open space and preservation project, or under a land disposition agreement with the town.

"Development project", (1) a project to be undertaken in furtherance of the purposes of this act, for acquisition or leasing by the corporation of land and improvements thereon and the development of the property so acquired; (2) a project to be undertaken in furtherance of the purposes of this act for the rehabilitation or conservation of property, or for the demolition, removal, rehabilitation or addition of improvements whenever necessary to carry out the purposes of this act; (3) a project entailing the construction, improvement, or rehabilitation of infrastructure, public facilities, or both, in furtherance of the purposes of this act; and (4) a project involving a combination of the foregoing types of projects. A development project may include improvements necessary for carrying out the objectives of the project, together with such site improvements as are necessary for the preparation of any site for uses in accordance with locally approved development plans, and making any land or improvements acquired in the area of the project available for redevelopment or rehabilitation by private enterprise, including sale, initial leasing or retention by the corporation for industrial, commercial, business, manufacturing or residential uses contemplated by a development plan. A development project may include the construction by the corporation of any of the buildings, structures or other facilities for industrial, commercial, business, manufacturing or residential uses contemplated by a development plan and the repair, removal or rehabilitation by the corporation of any of the buildings, structures or other facilities located in a development area which are to be repaired, moved or rehabilitated. A development project may also include a preservation project as defined by this act, where limited development of land to be preserved primarily for conservation, farming, forestry, recreation or open space uses may be carried out by the corporation in order to finance the cost of acquiring the land and improvements thereon.

"Development plans", a plan or study, including, but not limited to, a master plan or comprehensive plan, community development or economic development plan, open space and recreation plan, capital improvements plan, or other plan approved from time to time by the Shrewsbury planning board or board of selectmen, which plan shall guide the type, land use, general location, density and other requirements of a development project carried out by the corporation.

"Preservation project", a development project carried out for the principal purpose of preservation or conservation of land, including but not limited to land in forestry, agricultural, horticultural or recreational use when valued, assessed and taxed

under chapter 61, chapter 61A or chapter 61B of the General Laws, or a historically significant property, landmark, site or other cultural resource determined by the board of selectmen, where a limited amount of development or redevelopment is necessary to finance the acquisition of land or improvements or to achieve the town's conservation and community preservation objectives. A development project carried out as a preservation project may include residential, commercial, business, research or industrial uses provided that the land is zoned for such uses.

"Town", the town of Shrewsbury.

"Town manager", the town manager of the town of Shrewsbury.

"Town meeting", town meeting of the town of Shrewsbury acting in a lawfully convened session.

SECTION 3. (a) There is hereby established a body politic and corporate to be known as the Shrewsbury Corporation, or by a name designated by the board of selectmen. The corporation shall be a public instrumentality separate from the town, and is not an authority, board or committee of the town. The corporation is empowered to carry out this act, and the exercise by the corporation of the powers conferred by this act is the performance of essential public and governmental functions.

(b) The purposes of the corporation shall be to correct or address the conditions found to exist in the town as set forth in section 1, promote the common good and general welfare of the town, improve the living standards of the citizens thereof by fostering the improvement of their employment opportunities, preserve and protect open space, historic resources and affordable housing, and to develop, manage and operate public facilities and infrastructure necessary to improve the town's economy, focusing on, but not limited to, areas within the development zone, all in a manner consistent with approved economic development plans as defined in section 2. In furtherance of purposes and in addition to the powers conferred on the corporation by the foregoing provisions, the corporation may:-

(1) sue and be sued in its own name, plead and be impleaded;

(2) adopt bylaws and rules for the regulation of its affairs and the conduct of its business and to alter the same;

(3) accept, acquire other than by eminent domain, receive and hold by bequest, devise, grant, gift, purchase, exchange, lease, transfer, judicial order or decree, or otherwise, for any of its objects or purposes, any property, both real and personal, from any source, including grants, loans or advances for or in aid of the purposes of the corporation from any federal agency, agency of the commonwealth or any political subdivision thereof;

(4) sell, convey, mortgage, lease, transfer, exchange or otherwise dispose of, any property, both real and personal, that the objectives and purposes of the corporation may require, subject to limitations prescribed by law;

(5) borrow money and, from time to time, to make, accept, endorse, execute, and issue bonds, debentures, promissory notes, bills of exchange, and other obligations of the corporation for monies borrowed or in payment for property acquired or for any of the other purposes of the corporation and to secure the payment of obligations by mortgage, pledge, deed, indenture, agreement, or other instrument of trust, or by other lien upon, assignment of, or agreement in regard to all or any part of the property, rights of privileges of the corporation, whether now owned or hereafter to be acquired, said borrowing not to exceed a period of 40 years;

(6) employ consulting engineers, an executive director, superintendents, managers, and such other employees, agents and consultants as may be necessary in its judgment, and to fix their compensation; employees of the corporation shall not be considered employees of the town; but the town and the corporation may in writing agree to allow employees of the corporation to participate in employee insurance, retirement or other benefit programs offered to town employees; in which case, any employees performing non-administrative or managerial work, shall be members of the appropriate municipal bargaining unit;

(7) make and enter into all contracts and agreements necessary or incidental to the performance of its duties;

(8) receive and accept from any federal agency, the commonwealth or any political subdivision thereof any grants, loans or advances for or in aid of a development project or projects and to receive and accept contributions from any other source of either money, property, labor or other things of value, to be held, used and applied for the purposes for which such grants, loans, advances and contributions may be made;

(9) invest any funds not required for immediate use or disbursement in certificates of deposit or in obligations of the government of the United States or in obligations the payment of the principal of, and interest on, which is guaranteed by the government of the United States; and subject to a specific vote of the board of directors, to invest funds in any fashion in which municipal funds may be invested pursuant to the provisions of chapter 44 of the General Laws;

(10) own and manage real property;

(11) receive assignment of the town's first refusal options in order to continue the forestry, agricultural, horticultural, recreational or open space use of the major portion of any land valued, assessed and taxed under chapter 61, chapter 61A or chapter 61B of the General Laws, where the town has received notification of the owner's intent to sell; but when the corporation accepts assignment of a first refusal option from the town, any development carried out by the corporation in order to finance the cost of acquisition shall be a preservation project as defined in section 2 of this act and all remaining open space shall be protected in perpetuity by a conservation restriction or a donation of the land to the Shrewsbury conservation commission;

(12) make loans to any person, firm, corporation, joint stock company, association or trust located or doing business in the town for the purposes of promoting and developing business, industry, or tourism;

(13) acquire improved and unimproved real estate for the purposes of developing, demolishing, constructing or reconstructing commercial, industrial, residential, institutional, or other establishments thereon, or of developing, redeveloping or constructing public facilities, or for the purpose of disposing of such real estate to others for the development, redevelopment, demolition, construction, operation or management of commercial, industrial, residential, institutional or other establishments, or of public facilities, as the objects and purposes of the corporation may require; but nothing contained herein shall be construed to grant the corporation the power of eminent domain;

(14) acquire, demolish, construct, reconstruct, alter, maintain, sell, convey, transfer, mortgage, pledge or otherwise dispose of commercial, industrial, residential or business establishments or other property as the objects and purposes of the corporation may require;

(15) acquire, subscribe for, own, hold, sell, assign, transfer, mortgage, pledge or otherwise dispose of the bonds, debentures, notes or other securities and evidence of interest in, or indebtedness of, any person, firm, corporation, joint stock company, association or trust, and while the owner or holder thereof, to exercise all of the rights, powers and privileges of ownership;

(16) make relocation payments to persons and businesses displaced as a result of carrying out a development project under this act, in accordance with chapter 79A of the General Laws;

(17) provide advisory services and technical assistance necessary or desirable to carry out the purposes of this act;

(18) prepare or cause to be prepared plans, designs, drawings, specifications and estimates of cost for the construction, reconstruction, development, redevelopment, rehabilitation, remodeling, alteration or repair of development projects and from time to time modify such plans, designs, drawings, specifications and estimates;

(19) designate property for development and preservation projects, except that when the property is owned by the town, the designation and use shall have the concurrence of the board of selectmen;

(20) procure insurance against any loss in connection with its property, other assets and operations, and in relation to insuring the payment of principal and interest for bonds issued pursuant to section 9, in amounts and from insurers as it considers desirable;

(21) arrange or contract with the town for the planning, replanning, opening or closing of streets, roads, alleys or other places or for the furnishing of facilities or for the acquisition by the town of property or property rights or for the furnishing of property or services in connection with a development project or projects;

(22) manage or lease any development project, whether owned or leased by the corporation, and to enter into agreements with the commonwealth or the town or any agency or instrumentality thereof, or with any person, firm, partnership or corporation either public or private for the purposes of causing any development project to be managed;

(23) prepare and amend plans to advance economic development goals within the entire development zone and defining necessary development projects to achieve these goals;

(24) establish subsidiary or affiliate legal entities convenient or necessary to advance the purposes of this act;

(25) establish and collect fees for the use of any properties owned or leased by the corporation, or for the provision of infrastructure, facilities, services and amenities;

(26) act with respect to one or more development projects as a corporation organized under chapter 121A of the General Laws;

(27) carry out any other public purposes designated by the board of selectmen; but, in no case shall members of any municipal bargaining unit be laid off, or their regular compensation or other contractual benefits be otherwise adversely effected; and no action shall be in conflict with any existing or future municipal collective bargaining agreement;

(28) borrow money for the purposes of aiding in the construction of equipment required by the commonwealth or United States to abate air or water pollution;

(29) borrow money for the purposes of aiding in the construction of public facilities, infrastructure and utilities necessary for economic development;

(30) apply to the federal government or to the commonwealth for housing and/or economic development assistance grants to carry out the approved economic development projects, to receive and administer such grants, to contract with the commonwealth for financial assistance, to apply for and receive advances for the estimated costs of surveys and plans and administrative expenses in preparation for economic development projects, and to apply for, receive and administer community development action grants, all to the same extent and subject to the same terms and conditions as an urban renewal agency pursuant to sections 53 to 57A, inclusive, of chapter 121B of the General Laws.

(31) do all acts and things necessary or convenient to carry out the powers expressly granted in this act.

(c) The corporation shall not participate in or intervene in any political campaign on behalf of any candidate for public office, or publish or distribute any statements with respect thereto. Notwithstanding any other provision herein contained, neither the directors, officers, nor the corporation, shall participate in any of the prohibited transactions as defined in section 503 of the Internal Revenue Code, nor shall the corporation accumulate income or engage in any activities if the accumulation of income or the activities so engaged in are or would be within the prohibitions of section 504 of the Internal Revenue Code nor shall the corporation be operated at any time for the primary and sole purpose of carrying on a trade or business for profit.

SECTION 4. The principal office of the corporation shall be located in the town of Shrewsbury.

SECTION 5. For the purposes of chapter 30B of the General Laws, the corporation shall be a governmental body. The corporation shall not be subject to section 16 of chapter 30B of the General Laws. Redevelopment or improvement of any property owned by the corporation or leased by the corporation to another party, including design, development, construction and operation, shall be subject to sections 38A to 38O, inclusive, of chapter 30B of the General Laws; section 39M of chapter 30 of the General Laws; and sections 44A to 44M, inclusive, of chapter 149 of the General Laws, when customized improvements exceed the thresholds contained therein, except to the extent that the corporation enters into a ground lease which provides that title to the improvements remain with the lessee. For the purposes of clause Sixth of section 7 of chapter 4 and chapter 66 of the General Laws, the records of the corporation shall be public records. Chapter 31 of the General Laws shall not apply to any person employed or engaged by the corporation under this act. For the purposes of chapter 268A of the General Laws, the corporation shall be considered a municipal agency. The members of the board of directors and employees of the corporation, together with any person who performs professional services for the corporation on a part -time, intermittent, or consultant basis, such as those of an architect, attorney, engineer, planner, or construction, financial, or real estate expert, shall be special municipal employees.

The corporation shall be subject to all local by-laws and regulations of the town, including the zoning by-law, by-laws concerning the protection of foreshores and wetlands in the town, and historic district regulations where applicable. The corporation shall also be subject to sections 23A to 23C, inclusive, of chapter 39 of the General Laws.

SECTION 6. The corporation shall not be subject to chapter 63 of the General Laws, nor shall the corporation be liable for any taxes based upon or measured by income. The securities and evidences of indebtedness issued by the corporation shall be free from taxation by the commonwealth.

SECTION 7. The corporation shall be managed by a board of directors consisting of 7 members appointed by the board of selectmen. The board of directors shall include persons with education and experience in the fields of law, finance, real estate, architecture or planning and local government. Each member shall be sworn by the Shrewsbury town clerk to the faithful performance of his official duties as a director of the corporation. A majority of the 7 members shall constitute a quorum for the transaction of any business, but any action of the board of directors shall require the affirmative vote of a majority of the entire board.

The original members of the board of directors shall be appointed within 60 days following the effective date of this act. Of the members of the board of directors first appointed, 1 shall be appointed to serve for a term of 1 year, 1 for a term of 2 years, 1 for a term of 3 years, 2 for a term of 4 years, and 2 for a term of 5 years. All terms thereafter shall be for 5 years. Upon the expiration of the term of office of any member of the board of directors, or any subsequent member of the board of directors, the successor of the member shall be appointed for a term of 5 years. In the event of a vacancy on the board of directors, a successor member shall be appointed to complete the term of service for the member whose term has not expired. Unless reappointed, a member of the board of directors shall not hold office after the expiration of his term. At its discretion, the board of selectmen may reappoint a member to the board of directors of the corporation.

The first meeting of the corporation shall be called by the chairman pro tem, who shall be designated by the board of selectmen when the initial appointments to the board of directors are made. There shall be elected by and from the board of directors a president, treasurer, secretary/clerk, and any other officers considered necessary by the board.

A member of the board of directors of the corporation may be removed by the board of selectmen for malfeasance, misfeasance, or willful neglect of duty, but only after reasonable notice and a public hearing by the board of selectmen, unless the notice and hearing are in writing expressly waived by the member of the board subject to removal.

The members of the board of directors shall not receive compensation for the performance of their duties hereunder, but each member shall be reimbursed by the corporation for expenses actually incurred in the performance of his duties. Every reimbursement shall be open to public inspection from and after the requisition therefor.

The board of directors shall have the powers to set a fiscal year for the operation of the corporation and to make, amend, or repeal the by-laws in whole or in part.

SECTION 8. The board of directors shall adopt a corporate seal for the corporation and designate the custodian thereof. The board of directors shall cause at all times accurate accounts to be kept of all receipts and expenditures of the funds of the corporation; and shall make a report annually to the board of selectmen, containing an abstract of such accounts and detailed information of all receipts and expenditures, including prices paid for property acquisition, contracts for construction of facilities and for the leasing thereof, and such other detailed information as may be helpful. The corporation shall cause an audit of its books and accounts to be made at least once in each fiscal year by certified public accountants and the cost thereof shall be treated as a current expense. Except as otherwise provided for in this act, the corporation shall have the full power to exercise care of its property and the management of its business and affairs. The treasurer shall give bond for the faithful performance of his duties, with a surety company authorized to do business in the commonwealth as surety, in such sum as the board of directors may determine, the premium thereof to be paid by the corporation.

SECTION 9. The corporation, from time to time, may provide by resolution, for the issuance of revenue bonds of the corporation for the purposes of paying all or any part of the cost of a development project or projects. The principal of and interest on the bonds shall be payable solely from the funds herein provided for the payment. The bonds of each issue shall be dated, shall bear interest at the rates and shall mature at the time or times not exceeding 40 years from their date or dates, as determined by the corporation, and may be redeemable before maturity, at the option if the corporation, at the price or prices and under the terms and conditions fixed by the corporation before the issuance of the bonds. The corporation shall determine the form of the bonds, including any interest coupons to be attached thereto, and the manner of execution of the bonds, and shall fix the denomination or denominations of the bonds and the place or places of payment of principal and interest, which may be at any bank or trust company within the commonwealth. In case any officer whose signature or a facsimile of whose signature shall appear on any bonds or coupons shall cease to be an officer before the delivery of the bonds, the signature or facsimile shall nevertheless be valid and sufficient for all purposes the same as if he had remained in office until the delivery. The bonds may be issued in coupon or registered form or both, as the corporation may determine, and provision may be made for the registration of any coupon bonds as to principal alone and also as to both principal and interest. The corporation may sell the bonds in a manner and for a price, either at public or private sale, as it may determine to be for the best interests of the corporation.

The proceeds of the bonds shall be used solely for the payment of the cost of a development project, and shall be disbursed in a manner and under such restrictions, if any, as the corporation may provide. Before the preparation of definitive bonds, the corporation may, under like restrictions, issue interim receipts or temporary bonds, with or without coupons, exchangeable for definitive bonds when the bonds have been executed and are available for delivery. The corporation may also provide for the replacement of any bonds which shall become mutilated or shall be destroyed or lost. Revenue bonds may be issued under this act subject only to those proceedings, conditions or things which are specifically required by this act.

The corporation may provide by resolution for the issuance of revenue refunding bonds of the corporation for the purpose of refunding any revenue bonds then outstanding and issued under this act, including the payment of any redemption premium thereon on any interest accrued or to accrue to the date of redemption of the bonds and, if deemed advisable by the corporation, for the additional purpose of construction or reconstructing and extensions or improvements of the development project. The issue of the bonds, the maturities, and other details thereof, the rights of the holders thereof, and the duties of the corporation in respect of the same shall be governed by this act insofar as the same may be applicable.

While any bonds issued by the corporation remain outstanding, the powers, duties or existence of the corporation shall not be diminished or impaired in any way that will affect adversely the interests and rights of the holders of such bonds.

Revenue and revenue refunding bonds issued under this act, unless otherwise authorized by law, shall not constitute a debt of the commonwealth or the town, or a pledge of the faith and credit of the commonwealth or of the town, but the bonds shall be payable solely from the funds herein provided therefore from revenues. In the event that the corporation or the town or commonwealth is not obliged to pay the revenue or revenue refunding bonds, then, all the revenue and revenue refunding bonds shall contain on the face thereof a statement to the effect that neither the corporation nor the commonwealth nor the town shall be obliged to pay the same or the interest thereon except from revenues, and that neither the faith and credit nor taxing power of the commonwealth or of the town is pledged to the payment on the bonds.

All revenue and revenue refunding bonds issued under this act shall have and are hereby declared to have all the qualities and incidents of negotiable instruments as defined in section 3-104 of chapter 106 of the General Laws.

SECTION 10. In the discretion of the corporation the revenue bonds or revenue refunding bonds may be secured by a trust agreement by and between the corporation and a corporate trustee, which may be any trust company or bank having the powers of a trust company within the commonwealth. The trust agreement may pledge or assign the revenues to be received, but shall not convey or mortgage any development project or part thereof.

Either the resolution providing for the issuance of bonds or the trust agreement may contain provisions for protecting and enforcing the rights and remedies of the bondholders, including without limiting the generality of the foregoing provisions defining defaults and providing for remedies in the event thereof, which may include the acceleration of maturities, and covenants setting for the duties of and limitations on the corporation in relation to the acquisition, construction, improvement, enlargement, alteration, equipping, furnishing, maintenance, operation, repair, insurance and disposition of property, the custody, safeguarding, investment and application of moneys, the use of any surplus bond or note proceeds and the establishment of reserves. The resolution or trust agreement may also contain covenants by the corporation in relation to, among other things: (1) the establishment, revision and collection of such rents and charges for services of facilities furnished or supplied by the corporation as shall provide revenues sufficient with other revenues of the development project, if any, to pay (i) the cost of maintaining, repairing and operating the development project and of making renewals and replacements in connection therewith, (ii) the principal of and the interest on the revenue bonds as the same shall become due and payable, (iii) payments in lieu of taxes, betterment and special assessments, and (iv) reserves for such purposes; (2) the purpose or purposes for which the proceeds of the sale of the bonds will be applied and the use and disposition thereof; (3) the use and disposition of the gross revenues of the corporation from the development project, any additions thereto and extensions and improvements thereof, including the creation and maintenance of funds for working capital and for renewals and replacements to the development project; (4) the amount, if any, of additional revenue bonds payable from the revenues of the development project and the limitations, terms and conditions on which the additional revenue bonds may be issued; and (5) the operation, maintenance, management, accounting and auditing of the development project and of the income and revenues of the corporation.

It shall be lawful for any bank or trust company incorporated under the laws of the commonwealth to act as depository of the proceeds of the bonds or of revenues, and to furnish indemnifying bonds or to pledge securities as required by the corporation. The trust agreement may set forth the rights and remedies of the bondholders and of the trustees, and may restrict the individual right of action by bondholders as is customary in trust agreements or trust indentures securing bonds and debentures of corporations. In addition to the foregoing, the trust agreement may contain other provisions as the corporation considers reasonable and proper for the security of the bondholders. All expenses incurred in carrying out the trust agreement may be treated as a part of the cost of the operation of the development project. The pledge by any trust agreement or resolution shall be valid and binding from the time when the pledge is made; the revenues or other moneys so pledged and then held or thereafter received by the corporation shall immediately be subject to the lien of the pledge without any physical delivery thereof or further act; and the lien of the pledge shall be valid and binding as against all parties having claims of any kind in tort, contract or otherwise against the corporation, irrespective of whether the parties have notice thereof. Neither the resolution nor any trust agreement by which pledge it is created need be filed or recorded except in the records of the corporation, and no filing need be made under chapter 106 of the General Laws.

SECTION 11. Revenue bonds and revenue refunding bonds issued under this act are hereby made securities in which all public officers and public bodies of the commonwealth and its political subdivisions, all insurance companies, trust companies in their commercial departments and within the limits set by section 14 of chapter 167E of the General Laws, banking associations, investment companies, executors, trustees and other fiduciaries, and all other persons whatsoever who are now or may hereafter be authorized to invest in bonds or other obligations of a similar nature may properly and legally invest funds, including capital in their control and belonging to them; and the bonds are hereby made obligations which may properly and legally be made eligible for the investment of savings deposits and income thereof in the manner provided by section 2 of said chapter 167E. The bonds are hereby made securities which may properly and legally be deposited with and received by any state or municipal officer or any agency or political subdivision of the commonwealth for any purpose for which the deposit of bonds or other obligations of the commonwealth is now or may hereafter be authorized by law.

SECTION 12. To provide funds for the general purposes of the corporation, including working capital, the corporation may from time to time issue debentures which, unless otherwise authorized by law, shall not constitute a debt of the commonwealth or of the town, or a pledge of the faith and credit of the commonwealth or of the town, and shall be subordinated to all other obligations of the corporation and shall be payable at the time and in installments, if any, as the corporation shall determine, but solely out of the net assets of the corporation; and the holders thereof shall be entitled to interest thereon, but only out of the net earnings of the corporation, and in no event at a rate higher than the rate specified therein.

The debentures may be secured by a trust agreement by and between the corporation and a corporate trustee, which shall be located within the commonwealth and shall be a trust company or bank having the powers of a trust company. The trust agreement shall contain provisions for protecting and enforcing the rights and remedies of the debenture holder. It shall be lawful for any bank or trust company incorporated under the laws of the commonwealth which may act as a depository under the trust agreement to furnish indemnifying bonds or to pledge securities as required by the corporation. The trust agreement shall set forth the rights and remedies of the debenture holders and of the trustee, and may restrict individual right of action by debenture holders. In addition to the foregoing, the trust agreement may contain such other provisions as the corporation may consider reasonable and proper for the security of the debenture holders. All expenses incurred in carrying out the trust agreement may be treated as an item of current expense.

Debentures may be issued under this act without obtaining the consent of any department, division, office, commission, board, bureau or agency of the commonwealth or the town, and without any other proceedings or the happenings of any other condition or things other than those proceedings, conditions or things which are specifically required by this act.

SECTION 13. Any holder of bonds or debentures issued under this act or of any coupons appertaining thereto, and the trustee, except to the extent the rights herein given may be restricted by the trust agreement, may, either at law or in equity, by suit, action, mandamus or other proceeding, protect and enforce all rights under the laws of the commonwealth or granted hereunder or under the trust agreement, and may enforce and compel the performance of all duties required by this act or by the trust agreement, to be performed by the corporation or by any officer thereof.

SECTION 14. Notwithstanding any rule at common law or any authorization, limitation or any general or special law, or any provision in their respective charters, agreements of associations, articles or organization, or trust indentures, domestic corporations organized for the purpose of carrying on business within the commonwealth, including without implied limitation any electric or gas company as defined in section 1 of chapter 164 of the General Laws, railroad corporations as defined in section 1 of chapter 166 of the General Laws, financial institutions, trustees and the town may acquire, purchase, hold, sell, assign, transfer, or otherwise dispose of any bonds, securities or other evidence of indebtedness of the corporation and to make contributions to the corporation, all without the approval of any regulatory authority of the commonwealth.

A contribution made under this section to the corporation shall be in addition to contributions authorized by section 12C of chapter 155 of the General Laws and by other general or special law.

SECTION 15. Except as herein provided, rents and charges for services or facilities furnished or supplied by the corporation shall not be subject to supervision or regulation by any department, division, commission, board, bureau or agency of the commonwealth or the town, and if derived from a development project in connection with which revenue bonds have been issued, shall, with all other revenues derived from the development project, except the part thereof necessary to pay the cost of maintenance, repair and operation, and to provide reserves therefore provided for in the resolution authorizing the issuance of the bonds or in the trust agreement, but including the part thereof necessary to provide the reserves for the payment of the principal of and the interest on the revenue bonds provided for in the resolution or trust agreement, and including also the proceeds of sales by the corporation of property for, or in connection with, a development project, be set aside at such regular intervals provided for in the resolution or trust agreement, in a sinking fund which is hereby pledged to and charged with the payment of: (1) the interest upon the bonds as the interest shall fall due, (2) the principal of the bonds as the same shall fall due, (3) the necessary charges of paying agents for paying principal and interest, and (4) the redemption price or the purchase price of bonds retired by call or purchase as therein provided.

SECTION 16. The corporation shall be liable in contract and in tort in the same manner as a municipal corporation. The directors, employees, officers and agents of the corporation shall be liable in contracts and tort, in the same manner as municipal employees under the General Laws. The corporation shall indemnify its employees under sections 9 and 13 of chapter 258 of the General Laws as public employees. The property or funds of the corporation shall not be subject to attachment or to levy and sale on execution, but if the corporation refuses to pay a judgment entered against it in any court of competent jurisdiction, the superior court may direct the treasurer of the corporation to pay the judgment. The real estate owned by the corporation shall not be subject to liens under chapter 254 of the General Laws, but sections 28 and 29 of chapter 149 of the General Laws shall be applicable to any construction work by the corporation.

SECTION 17. The corporation shall make reports of its condition not less than annually to the board of selectmen and secretary of state, which report shall be published in a newspaper of general circulation in the town within 60 days of the close of the corporation's fiscal year. The secretary of state shall make copies of the reports available to the commissioner of insurance and to the commissioner of banks, and the corporation shall also furnish such other information as may be required by the secretary of state from time to time.

SECTION 18. Notwithstanding any other general or special law to the contrary, the town, acting by vote of town meeting and upon terms and conditions as determined by the board of selectmen, the town manager, or a board or officer to whom such authority is delegated by town meeting, may convey, by sale or gift, property within a development area, or any interest in such property, to the corporation in aid of the public purposes of the corporation. The town may lease for a term not to exceed 40 years any land or land with improvements owned by the town upon terms and conditions as the town manager shall determine, for public purposes consistent with this act. All leases shall provide that the corporation may not encumber property owned by the town, or the corporation's leasehold interest therein, without approval of the board of selectmen.

The town shall not incur any financial obligation as a result of any action by the corporation, absent a 2/3 vote of town meeting.

Notwithstanding any general or special law to the contrary, the corporation shall establish a maintenance reserve fund from any lease revenues obtained from development projects carried out on publicly owned property, sufficient to meet the expenses of maintaining the projects in a fully operational state, including, but not limited to, routine and non-routine maintenance and the maintenance of any and all improvements. All leases shall also provide that the lease shall terminate in the event that the corporation ceases to use the land for the declared public purpose described in section 1.

SECTION 19. The town may take actions in aid of the corporation in connection with a development project pursuant to the provisions of section 23 of chapter 121B.

SECTION 20. A development project shall not be undertaken by the corporation until the board of selectmen holds a public hearing relating to the project and authorizes the project by an affirmative vote of a majority of the entire board. Notice of public hearings shall be given to the public through a legal notice in a newspaper having a general circulation in the town, published no later than 2 weeks before the hearing date.

SECTION 21. The real estate and tangible personal property of the corporation shall be deemed public property used for essential public and governmental purposes and shall be exempt from taxation by the commonwealth or any subdivision thereof and from betterments and special assessments; but in lieu of the taxes, betterments, and special assessments, the town may determine a sum to be paid to it annually in any year or period of years, the sum in any year not to be in excess of the amount that would be levied at the then current tax rate upon the average assessed value of the real estate, including buildings and other structures, for the 3 years preceding the acquisition thereof, the valuation for each year being reduced by all abatements thereon.

The town may, however, agree with the corporation upon the payments to be made, or the corporation may make and the town may accept the payments, the amount of which shall not in either case be subject to the foregoing limitation.

Nothing in this act shall be construed to prevent the taxation, to the same extent and in the same manner as other real estate is taxed, of real estate sold or otherwise transferred by the corporation pursuant to a development project, or the taxation to the same extent and in the same manner as real estate of the commonwealth is taxed, of real estate acquired by the corporation pursuant to a development project and thereafter leased by the corporation; but real estate so acquired by the corporation and sold or leased to an urban redevelopment corporation or other entity operating under chapter 121A, 121B, and 121C of the General Laws shall be taxed under said chapters.

The corporation and the debentures issued under this act, their transfer and the income therefrom, including any profit made on the sale thereof, shall at all times be free from taxation by the commonwealth or any subdivision thereof.

SECTION 22. The corporation is hereby designated as a community-based development organization for purposes of carrying out community or economic development projects with federal financial assistance.

SECTION 23. The corporation is hereby designated as a non-profit organization that may act as a land trust for purposes of carrying out preservation projects as defined in section 2 of this act and for receiving assignment of the town's first refusal options under chapter 61, chapter 61A or chapter 61B of the General Laws.

SECTION 24. The town may raise and appropriate or may borrow funds for the purpose of granting or loaning funds to the corporation to aid the corporation in carrying out any of its public purposes, including, but not limited to, defraying all or part of the development, acquisition and operating costs of any development project, and for the purpose of acquiring land to convey or lease to the corporation for any development project. Indebtedness of the town authorized and issued under this section shall be payable within 40 years from its original date of issue and shall be exempt from the limit of indebtedness prescribed in section 10 of chapter 44 of the General Laws; but the total amount of indebtedness of the town outstanding at any one time under this section and under clauses (1), (2) and (4) of section 20 of chapter 121B of the General Laws shall not exceed 5 per cent of the town's equalized valuation as defined in section 1 of said chapter 44, notwithstanding section 21 of said chapter 121B, and the approval required pursuant to section 22 of said chapter 121B shall be required before the town incurs any indebtedness under this section which will cause the total amount of its indebtedness outstanding under this section and under clauses (1), (2) and (4) of section 20 of said chapter 121B to exceed 2> per cent of the town's equalized valuation. Notwithstanding the provisions of section 17 of said chapter 44 to the contrary, the town may issue temporary notes for a period not to exceed 10 years in anticipation of money to be derived from the sale of serial bonds or notes authorized by the town under this section, and the town may refund notes from time to time by the issue of other temporary notes from time to time, the period from the date of issue of the original notes to the date of maturity of the refunding notes shall not exceed 10 years, and the town shall not be required to use revenue funds of the town to pay any portion of the principal amount of any such notes or refunding notes that are refunded. Except as otherwise provided in this section, indebtedness authorized and incurred by the town under this section shall be subject to said chapter 44.

SECTION 25. The vote of the town passed under article 2 at its special town meeting held on September 9, 2002, is hereby approved, ratified and confirmed with respect to the authorization therein for the board of selectmen of the town to convey the property described therein to the corporation in aid of the purposes of the corporation, and the actions of the town authorized by the vote, including the borrowing for the acquisition of the property described therein and the conveyance of all or a portion of the property to the corporation by the board of selectmen, may be carried out by the town pursuant to the authority granted in this act.

SECTION 26. The corporation may, upon the affirmative vote of 2/3 of its members, petition for its dissolution by order of the supreme judicial or superior court, in the manner provided in section 11A of chapter 180 of the General Laws.

SECTION 27. If the town shall modify its charter, or if it shall adopt a new charter, then without amendment of this act, those provisions of this act which refer to specific municipal officials or municipal bodies shall be understood, upon the charter change, to refer to those who under such change exercise the same or equivalent functions.

SECTION 28. This act, being necessary for the welfare of the commonwealth and the town and its inhabitants, shall be liberally construed to effect the purpose thereof.

SECTION 29. The provisions of this act are severable, and if any of its provisions shall be held unconstitutional by any court of competent jurisdiction, the decision of the court shall not impair any of the remaining provisions.

SECTION 30. This act shall take effect upon its passage.

Approved January 1, 2003.

and Susan R. Bowen hereunto set our hands and seals this twenty ninth day of April in the year one thousand eight hundred and ninety.

Signed, sealed and delivered in presence of Henry T. Farrar — Smith Bowen (seal) Susan R. Bowen (seal)

Commonwealth of Massachusetts. Worcester ss. April 29th 1890. Then personally appeared the above named Smith Bowen and acknowledged the foregoing instrument to be his free act and deed.

Before me Henry T. Farrar Justice of the Peace.

Rec. April 30th 1890 at 3 h 50 m P.M. Ent. & Ex. By Henry S. Wilder Reg.

Hoar Rockwood to Thomas H. Gage

Know all men by these presents that I, Rockwood Hoar of the City and County of Worcester and Commonwealth of Massachusetts, in consideration of One Dollar and other valuable consideration to me paid by Thomas H. Gage A. George Bullock, Frances M. Lincoln, Ellen S. Hale, Henry S. Nourse, Rockwood Hoar and Francis C. Lovell as Trustees of the Worcester Lunatic Hospital, a corporation duly established by the general laws of the Commonwealth of Massachusetts, the receipt whereof is hereby acknowledged, do hereby remise, release and forever quitclaim unto the said Thomas H. Gage, A. George Bullock, Frances M. Lincoln, Ellen S. Hale, Henry S. Nourse, Rockwood Hoar and Francis C. Lovell, Trustees and their successors forever: A certain tract or parcel of land situated in the South part of Shrewsbury in said County of Worcester bounded and described as follows, to wit: Beginning at the Southwest corner thereof on Town road No. 14 by land now or formerly of Israel Rice; thence E. 6° S. seventeen and one half (17½) rods; thence E. 36½° S. ten and three fourths (10¾) rods; thence N. 42° E. sixteen (16) rods and seventeen (17) links; thence E. 1½° N. nineteen (19) rods; thence N. 7° E. twenty one (21) rods; thence W. 11° N. forty three (43) rods to Town Road No. 14; thence by said road Southerly thirty eight (38) rods to the place of beginning. The land on all the lines except the last being owned now or formerly by Israel Rice and Joseph Rice. Containing ten (10) acres and seven (7) rods more or less. Being the same premises conveyed to me by Smith Bowen by his deed of even date herewith.

To have and to hold the granted premises with all the privileges and appurtenances thereto belonging to the said Thomas H. Gage, A. George Bullock, Fra...

Lincoln, Ellen S. Hale, Henry S. Nourse, Rockwood Hoar and Francis C. Lovell as said Trustees and their successors to their own use and behoof forever but in trust nevertheless for the sole use and benefit of the Commonwealth of Massachusetts, And I hereby for myself and my heirs, executors and administrators covenant with the said grantees and their successors that the granted premises are free from all incumbrances made or suffered by me and that I will and my heirs, executors and administrators shall warrant and defend the same to the said grantees and their successors forever against the lawful claims and demands of all persons claiming by, through or under me but against none other.

In witness whereof I the said Rockwood Hoar being unmarried hereunto set my hand and seal this twenty ninth day of April in the year one thousand eight hundred and ninety. Rockwood Hoar (seal)

Signed, sealed and delivered in presence of Henry T. Farrar — } Commonwealth of Massachusetts. Worcester ss. April 30th 1890. Then personally appeared the above named Rockwood Hoar and acknowledged the foregoing instrument to be his free act and deed.

Before me Henry T. Farrar Justice of the Peace.

Rec. April 30th 1890 at 3.50 P.M. Ent'd & Ex'd By Henry B. Miller Reg.

Hoar Rockwood to Thomas H. Gage

Know all men by these presents that I Rockwood Hoar of the City and County of Worcester and Commonwealth of Massachusetts, in consideration of One dollar and other valuable consideration to me paid by Thomas H. Gage, A. George Bullock, Frances M. Lincoln, Ellen S. Hale, Henry S. Nourse, Rockwood Hoar and Francis C. Lovell as Trustees of the Worcester Lunatic Hospital, a corporation duly established by the general laws of the Commonwealth of Massachusetts, the receipt whereof is hereby acknowledged, do hereby remise, release and forever quitclaim unto the said Thomas H. Gage, A. George Bullock, Frances M. Lincoln, Ellen S. Hale, Henry S. Nourse, Rockwood Hoar and Francis C. Lovell, Trustees and their successors forever, A certain tract or parcel of land containing twenty (20) acres and sixty three (63) square rods, situated on the South side of the old Turnpike leading from Worcester to Boston, in the South part of Shrewsbury in said County

214 LAKE ST

Location	214 LAKE ST	**Mblu**	33/ 082000/ / /
Acct#	7532	**Owner**	COMMONWEALTH OF MASS WORCESTER REGIONAL
Assessment	$18,192,200	**Appraisal**	$18,192,200
PID	7532	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$9,126,400	$9,065,800	$18,192,200
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$9,126,400	$9,065,800	$18,192,200

Owner of Record

Owner	COMMONWEALTH OF MASS WORCESTER REGIONAL	**Sale Price**	$0
Co-Owner	FOR CHILDREN WITH SPECIAL NEEDS	**Certificate**	
Address	214 LAKE ST SHREWSBURY, MA 01545-3960	**Book & Page**	1324/ 244
		Sale Date	04/30/1890
		Instrument	01

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
COMMONWEALTH OF MASS WORCESTER REGIONAL	$0		1324/ 244	01	04/30/1890

Building Information

Building 1 : Section 1

Year Built:	1965
Living Area:	60,000
Replacement Cost:	$12,839,625
Building Percent Good:	71
Replacement Cost Less Depreciation:	$9,116,100

Building Attributes	
Field	**Description**
STYLE	Elementary School

Building Photo

MODEL	Commercial
Grade	B
Stories	2.00
Occupancy	1
Exterior Wall 1	Brick Veneer
Exterior Wall 2	
Roof Structure	Gable
Roof Cover	Asphalt Shing
Interior Wall 1	Wood Panel
Interior Wall 2	Drywall
Interior Flr 1	Linoleum
Interior Flr 2	Vinyl Tile
Heating Fuel	Nat Gas
Heat Type	FHA Duct
AC Pct	100
Heat Pct	100
Bldg Use	Comm Mass Dmh
Total Rooms	0
Bedrooms	0
Full Baths	5
Half Baths	15
Xtra Fixtures	0
1st Floor Use	
Elevators	0
Frame	Masonry
Plumbing	Average
Foundation	Poured Conc
Partitions	Average
Wall Height	10
% Sprinkler	100

Building Photo

(http://images.vgsi.com/photos/ShrewsburyMAPhotos//\00\02\74/28.jpg)

Building Layout

BSM[30000]

BAS[30000]

FUS[30000]

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	30,000	30,000
FUS	Finished Upper Story	30,000	30,000
BSM	Basement	30,000	0
		90,000	60,000

Building 1 : Section 1

Year Built: 1965
Living Area: 0
Replacement Cost: $12,839,625
Building Percent Good: 71
Replacement Cost Less Depreciation: $9,116,100

Building Attributes	
Field	**Description**
Style	Outbuildings
Model	
Grade	
Stories	

Building Photo

Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type	
AC Pct	
Bedrooms	
Full Baths	
Half Baths	
Extra Fixtures	
Total Rooms	
Bath Style:	
Kitchen Style	
Kitchens	
Extra Kitchens	
Frame	
Bsmt Floor	
Bsmt Garage	
Foundation	
WS Flues	
Fireplaces	
Xtra Openings	
Fini BSMT SF	
Solar HW	
Int vs. Ext	

(http://images.vgsi.com/photos/ShrewsburyMAPhotos//default.jp

Building Layout

Building Layout

Building Sub-Areas (sq ft)	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features				Legend
Code	**Description**	**Size**	**Value**	**Bldg #**
KIT	Kitchen	1 UNITS	$0	1
BGR	Basement Garage	3 UNITS	$0	1

Land

Land Use

Use Code	9140
Description	Comm Mass Dmh

Land Line Valuation

Size (Acres)	98.97
Frontage	

Zone		**Depth**	
Neighborhood	040	**Assessed Value**	$9,065,800
Alt Land Appr	No	**Appraised Value**	$9,065,800
Category			

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
BRN1	Barn - 1 Story			1200 UNITS	$9,000	1
SGN1	Sign 1 Sided			45 UNITS	$1,200	1
SGN1	Sign 1 Sided			4 UNITS	$100	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2016	$9,331,400	$7,786,000	$17,117,400
2015	$9,021,000	$7,945,100	$16,966,100
2014	$9,021,000	$7,786,000	$16,807,000

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2016	$9,331,400	$7,786,000	$17,117,400
2015	$9,021,000	$7,945,100	$16,966,100
2014	$9,021,000	$7,786,000	$16,807,000

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Office of the
TOWN MANAGER

TELEPHONE: (508) 841-8508
FAX: (508) 842-0587
kmizikar@shrewsburyma.gov

TOWN OF SHREWSBURY

Richard D. Carney Municipal Office Building
100 Maple Avenue
Shrewsbury, Massachusetts 01545-5338

January 3, 2018

To: Town Meeting Members

From: Kevin J. Mizikar, Town Manager

Re: Special Town Meeting – Wednesday January 17, 2018

Enclosed please find a copy of the Special Town Meeting Warrant for the Special Town Meeting to be held January 17, 2018 at 7:00 PM in the Oak Middle School Auditorium.

The Finance Committee will review this warrant in detail at a meeting and public hearing held in the Selectmen's Meeting Room in the Richard D. Carney Municipal Office Building on Thursday, January 11, 2018 at 7:00PM. Town Meeting members and interested citizens are invited to attend. The latest information on each of the proposed warrant articles will be presented and those wishing to speak will be heard.

Attached is a guide containing a brief description and proposed motion for each of the articles. Supplemental materials are attached where indicated. Please be advised that the motions are subject to change.

TOWN OF SHREWSBURY

SPECIAL TOWN MEETING GUIDE

Special Town Meeting - January 17, 2018

ARTICLE 1

To see if the Town will vote to raise and appropriate or transfer from available funds in the Treasury a sum of money to supplement various departmental appropriations for the Fiscal Year 2018 operating budget, or to take any other action in relation thereto.

PROPOSED MOTION

I move that the Town vote to transfer $21,350 from Building Inspector Salaries <1-2-3> to Building Inspector Expenses for the Fiscal Year 2018 Operating Budget.

DESCRIPTION

This article proposes to transfer funds from the salaries section of the Building Inspector's budget to the expenses section of the Building Inspector's budget. The funds were originally appropriated to cover the salary of the Assistant Building Inspector. The Assistant Building Inspector resigned in October 2017. Despite promptly posting the vacancy the Town has not found a qualified applicant to fill the vacancy. Therefore, the Town has contracted with a private consultant to cover some of the inspections that are performed by the Assistant Building Inspector position. The requested funding will be used to pay the consultant for their work.

ARTICLE 2

To see if the Town will vote to raise and appropriate or transfer from available funds in the Treasury, a sum of money to the Water System Improvements Account, or to take any other action in relation thereto.

PROPOSED MOTION

I move that the Town vote to transfer $1,241,000 from Free Cash to the Water System Improvements Account.

DESCRIPTION

This article proposes transfer a total of $1,241,000 from Free Cash to the Water System Improvements account. This amount represents the portion of certified Free Cash that was generated in excess revenues, $1,006,000, and unexpended appropriations, $235,000, from

the Water Department in Fiscal Year 2017. Additional information can be found in Supplemental Materials 2A.

ARTICLE 3

To see if the Town will vote to transfer from available funds in the Treasury, a sum of money appropriated under Article 1 at the December 5, 2016 Special Town Meeting to the Sewer Surplus Account and the Water System Improvement account, or to take any other action in relation thereto.

PROPOSED MOTION

I move that the Town to transfer $30,000 from account 01-0192-10-585223 which was appropriated under Article 1 at the December 5, 2016 Special Town Meeting as follows:

$15,000 to the Sewer Surplus Account
$15,000 to the Water System Improvements Account.

DESCRIPTION

This article proposes to transfer funds back to the Sewer Surplus Account and Water System Improvements Account from the account established for the renovation of the second floor of the Town Hall. These funds were not required to complete the project.

ARTICLE 4

To see if the Town will vote:

To authorize the Board of Selectmen to petition the General Court to enact legislation to provide for the following real estate transactions, provided that the General Court may reasonably vary the form and substance of the requested legislation within the scope of the general public objectives of the petition:

(i) Authorize the Commissioner of the Department of Capital Asset Management and Maintenance to convey approximately 13.48 acres of land located along the westerly side of Lake Street in Shrewsbury, shown as Parcel A on a plan on file at the Worcester District Registry of Deeds in Plan Book 905, Plan 90, to Shrewsbury Youth Soccer Association, Inc., a Massachusetts non-profit corporation, provided that the use of said property is restricted to public recreational uses;

(ii) Authorize the Commissioner of the Department of Capital Asset Management and Maintenance to convey approximately 49.6 acres of land located on the easterly side of Lake Street in Shrewsbury, shown on the plan referenced in part (i) above, as Parcel B, to the Town, provided that the use of said property is restricted to agricultural and recreational uses;

(iii) Authorize the Commissioner of the Department of Capital Asset Management and Maintenance to convey two parcels of land, being formerly known

as the Irving A. Glavin Regional Center, located at 214 Lake Street in Shrewsbury, containing approximately 18 acres located on the westerly side of Lake Street and 2.38 acres located on the easterly side of Lake Street, respectively, the 18 acre parcel on the exhibit plan entitled "Land Owned by the Commonwealth of Massachusetts to be Conveyed to the Town of Shrewsbury and Shrewsbury Youth Soccer" dated December 12, 2017, and the 2.38 acre parcel shown as "Parcel 2" on a plan on file at the Worcester District Registry of Deeds in Plan Book 917, Plan 63, to the Town, provided the use of said properties is restricted to general municipal purposes;

(iv) The consideration for the conveyance of Parcel A to the Shrewsbury Youth Soccer Association, Inc. shall be one dollar. The consideration for the conveyance of Parcel B to the Town shall be one dollar. The consideration for the sale of the properties described in part (iii) above, shall be the value of the properties as determined by the Commissioner of the Department of Capital Asset Management and Maintenance based upon an independent professional appraisal report, taking into consideration the restriction on the use of the properties;

(v) The instrument conveying the property described in part (i) above, shall state that if the property is no longer used for public recreational purposes or if Shrewsbury Youth Soccer Association, Inc. ceases to exist, then the Town shall have an enforceable option to purchase the property for one dollar and the Town may then use the property only for recreational purposes; and

(vi) The Commissioner of the Department of Capital Asset Management and Maintenance may retain or grant right of ways or easements for access, egress, utilities and drainage across the properties described herein, as the commissioner deems necessary and appropriate,

or to take any other action in relation thereto.

PROPOSED MOTION

I move that the Town vote to authorize the Board of Selectmen to petition the General Court to enact legislation to provide for the following real estate transactions, provided that the General Court may reasonably vary the form and substance of the requested legislation within the scope of the general public objectives of the petition:

(i) Authorize the Commissioner of the Department of Capital Asset Management and Maintenance to convey approximately 13.48 acres of land located along the westerly side of Lake Street in Shrewsbury, shown as Parcel A on a plan on file at the Worcester District Registry of Deeds in Plan Book 905, Plan 90, to Shrewsbury Youth Soccer Association, Inc., a Massachusetts non-profit corporation, provided that the use of said property is restricted to public recreational uses;

(ii) Authorize the Commissioner of the Department of Capital Asset Management and Maintenance to convey approximately 49.6 acres of land located on

the easterly side of Lake Street in Shrewsbury, shown on the plan referenced in part (i) above, as Parcel B, to the Town, provided that the use of said property is restricted to agricultural and recreational uses;

(iii) Authorize the Commissioner of the Department of Capital Asset Management and Maintenance to convey two parcels of land, being formerly known as the Irving A. Glavin Regional Center, located at 214 Lake Street in Shrewsbury, containing approximately 18 acres located on the westerly side of Lake Street and 2.38 acres located on the easterly side of Lake Street, respectively, the 18 acre parcel on the exhibit plan entitled "Land Owned by the Commonwealth of Massachusetts to be Conveyed to the Town of Shrewsbury and Shrewsbury Youth Soccer" dated December 12, 2017, and the 2.38 acre parcel shown as "Parcel 2" on a plan on file at the Worcester District Registry of Deeds in Plan Book 917, Plan 63, to the Town, provided the use of said properties is restricted to general municipal purposes;

(iv) The consideration for the conveyance of Parcel A to the Shrewsbury Youth Soccer Association, Inc. shall be one dollar. The consideration for the conveyance of Parcel B to the Town shall be one dollar. The consideration for the sale of the properties described in part (iii) above, shall be the value of the properties as determined by the Commissioner of the Department of Capital Asset Management and Maintenance based upon an independent professional appraisal report, taking into consideration the restriction on the use of the properties;

(v) The instrument conveying the property described in part (i) above, shall state that if the property is no longer used for public recreational purposes or if Shrewsbury Youth Soccer Association, Inc. ceases to exist, then the Town shall have an enforceable option to purchase the property for one dollar and the Town may then use the property only for recreational purposes; and

(vi) The Commissioner of the Department of Capital Asset Management and Maintenance may retain or grant right of ways or easements for access, egress, utilities and drainage across the properties described herein, as the commissioner deems necessary and appropriate.

DESCRIPTION

This article proposes that the State Division of Capital Asset Management and Maintenance convey a 13.48 acre parcel of land to Shrewsbury Youth Soccer for recreational purposes, a 49.6 acre parcel of land to the Town of Shrewsbury for agricultural and recreational uses and an 18 acre and 2.38 acre parcels of land to the Town of Shrewsbury for general municipal purposes. These parcels of land are shown on the attached exhibit (Supplemental Materials 4A & 4B) entitled "Land Owned by the Commonwealth of Massachusetts to be Conveyed to the Town of Shrewsbury and Shrewsbury Youth Soccer" dated December 12, 2017.

ARTICLE 5

To see if the Town will vote to accept, in accordance with the provision of MGL c. 60, section 77C, a deed in lieu of foreclosure from Cherele L. Gentile, as Trustee of Giselle Realty Trust, dated September 19, 2017, conveying a parcel containing approximately 3,664 sq. ft. of land, shown as "Parcel A", and four easements for public street purposes, shown as "8.5' Wide Highway Easement" and "8.5' Wide Highway and Sight Distance Easement", located along Prospect Street and North Street and at the intersection of said ways, as shown on a plan entitled, "Plan of Land in Shrewsbury, MA", on file at the Worcester District Registry of Deeds in Plan Book 806, Plan 104, and to transfer said property from the care, custody and control of the Town Treasurer, as Tax Title Custodian, to the Board of Selectmen, for public street purposes, or to take any other action in relation thereto.

PROPOSED MOTION

I move that the Town vote to accept, a deed in lieu of foreclosure from Cherele L. Gentile, as Trustee of Giselle Realty Trust, dated September 19, 2017, conveying a parcel containing approximately 3,664 sq. ft. of land, shown as "Parcel A", and four easements for public street purposes, shown as "8.5' Wide Highway Easement" and "8.5' Wide Highway and Sight Distance Easement", located along Prospect Street and North Street and at the intersection of said ways, as shown on a plan entitled, "Plan of Land in Shrewsbury, MA", on file at the Worcester District Registry of Deeds in Plan Book 806, Plan 104, and to transfer said property from the care, custody and control of the Town Treasurer, as Tax Title Custodian, to the Board of Selectmen, for public street purposes.

DESCRIPTION

This article proposes to accept a deed in lieu of foreclosure for a 3,664 parcel of land shown on an attached exhibit (Supplemental Materials 5A & 5B) entitled "Plan of Land in Shrewsbury, MA", on file at the Worcester District Registry of Deeds in Plan Book 806, Plan 104. This deed was signed by the Treasurer and Town Manager in lieu of a tax title taking and therefore falls under the care custody and control of the Treasurer. This article also proposes to transfer this land to the care custody and control of the Selectmen for public street purposes.

Town Meeting accepted this parcel of land at the intersection of North Street and Prospect Street on October 18, 2005. The Quitclaim Deed was not recorded at the Worcester Registry of Deeds. The owner, Giselle Realty Trust continued to pay taxes on Parcel A until 2016. The owner did not pay taxes on the parcel in 2017, therefore causing the Notice of Warrant to Collect Outstanding Taxes to be issued.

ARTICLE 6

To see if the Town will vote to accept the alteration of the public street layout of North Street and Prospect Street and the intersection of said ways, as voted by the Board of Selectmen on December 12, 2017, to include the areas shown as "*Expanded Roadway*

Layout" Numbered 1, 2, 3 and 4, and "*Parcel A – Acquired for Public Street Purposes*", within the layout of said ways, as shown on a plan entitled, "Plan Showing Alterations to Widen the Public Street Layout of Prospect Street and North Street in Shrewsbury, Massachusetts", prepared by the Town of Shrewsbury Engineering Department, dated October, 2017, and on file in the office of the Town Clerk, or to take any other action in relation thereto.

PROPOSED MOTION

I move that the Town vote to accept the alteration of the public street layout of North Street and Prospect Street and the intersection of said ways, as voted by the Board of Selectmen on December 12, 2017, to include the areas shown as "Expanded Roadway Layout" Numbered 1, 2, 3 and 4, and "Parcel A – Acquired for Public Street Purposes", within the layout of said ways, as shown on a plan entitled, "Plan Showing Alterations to Widen the Public Street Layout of Prospect Street and North Street in Shrewsbury, Massachusetts", prepared by the Town of Shrewsbury Engineering Department, dated October, 2017.

DESCRIPTION

This article proposes to accept an alteration of North Street and Prospect Street. Improvements to the way were made by a developer as part of requirements for a definitive subdivision. An exhibit (Supplemental Materials 6A) is enclosed entitled "Plan Showing Alterations to Widen the Public Street Layout of Prospect Street and North Street in Shrewsbury, Massachusetts", prepared by the Town of Shrewsbury Engineering Department, dated October, 2017. Additionally, an exhibit (Supplemental Materials 6B) entitled "Off-Site Improvements: Prospect Street, North Street, and Broushane Circle" undated, is attached.

ARTICLE 7

To see if the Town will vote to transfer to the Library Project bond proceeds from the Sherwood Middle School Project, which was completed in 2013, or to take any other action in relation thereto.

PROPOSED MOTION

I move that the Town vote to transfer $464,963.35 to the Library Project bond proceeds from the Sherwood Middle School Project, which was completed in 2013.

DESCRIPTION

This article proposes to transfer bond proceeds from the Sherwood Middle School Project that were borrowed but not expended to the Library Project. These funds will be used to payoff a short term bond for the Library project, thus reducing the need to raise these funds

through additional taxation. Bond proceeds can only be transferred and appropriated for any purposes for which a loan may be incurred for an equal or longer period of time than that for which the original loan, including temporary debt, was issued.

ARTICLE 8

To see if the Town will vote to authorize the Board of Selectmen to convey, upon such terms and conditions as the Selectmen deem to be in the best interest of the Town, an easement for drainage purposes in, under, and across Stoney Hill Road to Hartford Realty Trust of Shrewsbury, its successors or assigns, said drainage easement area to consist of approximately 1,000 square feet of land as show on a plan entitled "Drainage Easement Plan, Stoney Hill Road, Shrewsbury, MA", dated December 5, 2017, prepared by WDA Design Group, or take any action in relation thereto.

PROPOSED MOTION

I move that the Town vote to authorize the Board of Selectmen to convey, upon such terms and conditions as the Selectmen deem to be in the best interest of the Town, an easement for drainage purposes in, under, and across Stoney Hill Road to Hartford Realty Trust of Shrewsbury, its successors or assigns, said drainage easement area to consist of approximately 1,000 square feet of land as show on a plan entitled "Drainage Easement Plan, Stoney Hill Road, Shrewsbury, MA", dated December 5, 2017, prepared by WDA Design Group.

DESCRIPTION

This article proposes to grant an easement to Hartford Realty Trust of Shrewsbury to construct a drain pipe across Stoney Hill Road from the proposed The Pointe at Hills Farm Phase 1 project to an existing drainage easement secured by Hartford Realty Trust on the west side of Stoney Hill Road. Seeking this easement was a condition of the Comprehensive Permit that was granted for the Pointe at Hills Farm by the Zoning Board of Appeals in November 2016. Additional information can be found in Supplemental Materials 8A – 8D.

TOWN OF SHREWSBURY

SPECIAL TOWN MEETING GUIDE – SUPPLEMENTAL MATERIALS

Special Town Meeting – January 17, 2018

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4A: Land Owned by the Commonwealth of Massachusetts
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4B: Lease Plan of Land Owned by the Commonwealth of Massachusetts……Pages 12-13

5A: Deed in Lieu of Foreclosure, Parcel A……Pages 14-18

5B: Plan of Land in Shrewsbury, MA
Worcester Registry of Deeds Plan Book 806, Plan 104…….Page 19

6A: Plan Showing Alterations to Widen the Public Street Layout
of Prospect Street and North Street in Shrewsbury, Massachusetts……...Page 20

6B: Off-Site Improvements: Prospect St, North St, Broushane St……Page 21

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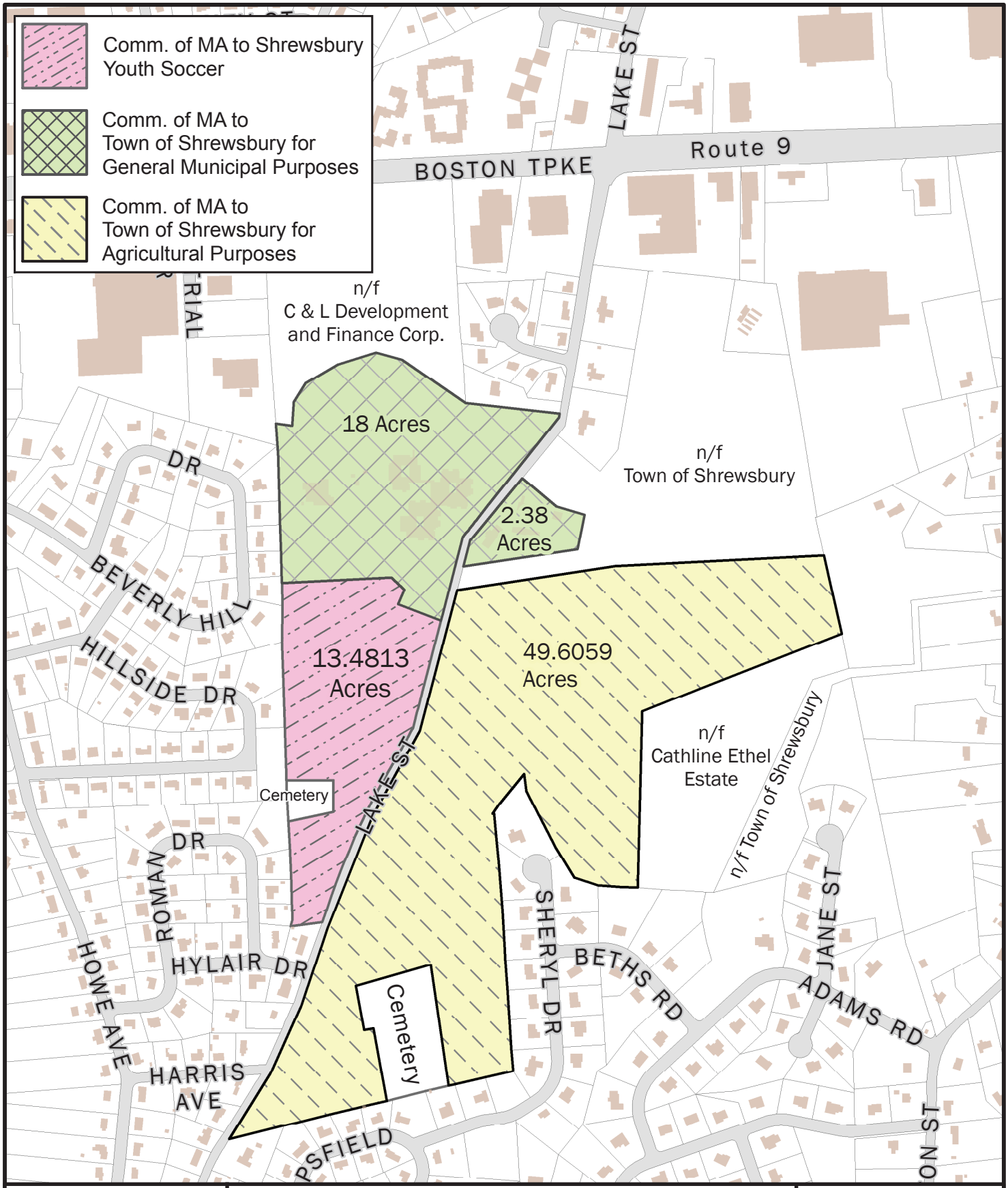
Article #8, January 17, 2018……Page 25-26

Water Department Free Cash Computation

Revenue Area	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013
Water Salaries 1-2-3	$27,229	$22,968	$9,412	$6,746	$5,128
Water Expense 4-5-6	$57,607	$132,416	$118,692	$210,461	$86,653
Water Equipment 8	$0	$35,000	$25,000	$0	$0
Water Special Appropriation 9	$150,938	$75,439	$11,582	$71,614	$98,742
Schedule A - Water Receipts	$1,005,582	$228,347	$43,776	$320,734	$75,767
Impact on Free Cash Balance	$1,241,356	$494,170	$208,462	$609,555	$266,290
Initial Free Cash Balance	$6,822,465	$6,098,965	$5,092,731	$5,580,257	$5,062,332



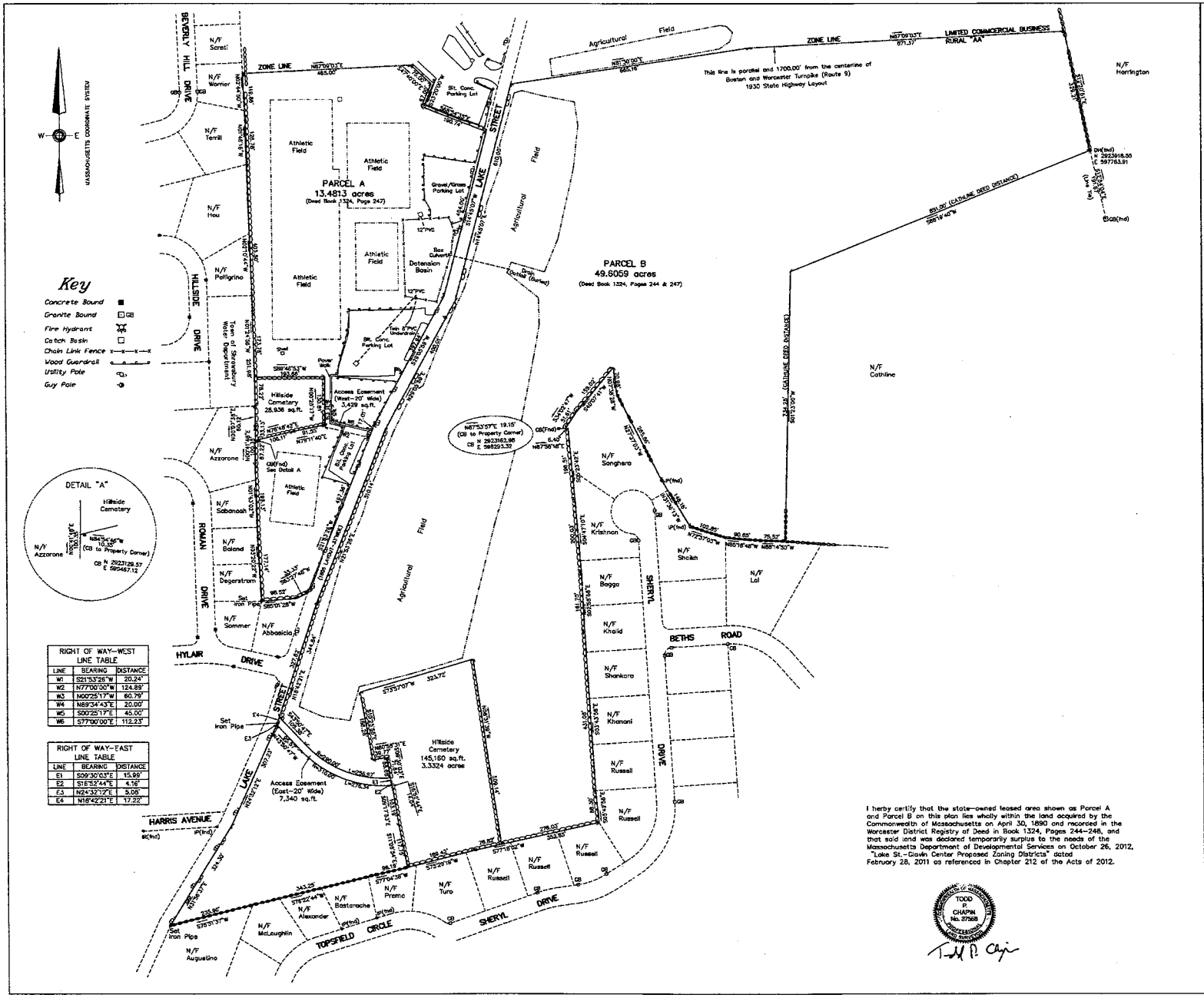
Article 4

Land Owned By The
Commonwealth of Massachusetts
To Be Conveyed To The
Town of Shrewsbury And To
Shrewsbury Youth Soccer

December 12, 2017
Shrewsbury, MA

0 Feet 400

Prepared by the Town of Shrewsbury Engineering Dept.



I CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMITY WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS

Todd P. Chapin 5/13/13
DATE

TODD P. CHAPIN No. 37558 REGISTERED PROFESSIONAL LAND SURVEYOR COMMONWEALTH OF MASSACHUSETTS

WORCESTER DISTRICT REGISTRY OF DEEDS-WORCESTER, MA
PLAN BOOK 905 PLAN 90
Recorded 7/20/14
11 h 00 m A.M.
Book 1 of 1
Plan Sec. 3
In BOOK of
Page 75
ATTEST:

RESERVED FOR REGISTRY OF DEEDS USE ONLY

THE CERTIFICATION SHOWN HEREON IS INTENDED TO MEET REGISTRY OF DEEDS REQUIREMENTS AND IS NOT A CERTIFICATION TO THE TITLE OR OWNERSHIP OF THE PROPERTY SHOWN. OWNERS OF ADJOINING PROPERTIES ARE SHOWN ACCORDING TO CURRENT TOWN OF SHREWSBURY ASSESSORS RECORDS.

I CERTIFY THAT THE PROPERTY LINES SHOWN HEREON ARE THE LINES DIVIDING EXISTING OWNERSHIPS, AND THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED, AND THAT NO NEW LINES FOR DIVISION OF EXISTING OWNERSHIP OR FOR NEW WAYS ARE SHOWN.

Todd P. Chapin 5/13/13
DATE

ASSESSORS MAP 33, A PORTION OF PARCEL 82 & A PORTION OF PARCEL 92

PLAN REFERENCES
PLAN BOOK 62 PLAN 7
PLAN BOOK 215 PLAN 64
PALN BOOK 216 PLAN 81
PLAN BOOK 229 PLAN 22
PLAN BOOK 229 PLAN 73
PLAN BOOK 310 PLAN 54
PLAN BOOK 365 PLAN 19
PLAN BOOK 413 PLAN 35
PLAN BOOK 760 PLAN 9
PLAN BOOK 783 PLAN 122
PLAN BOOK 846 PLAN 8
ROBINSON & FOX, INC. PLAN DATED MAY 1969

NOTES:
PARCEL A CONTAINING 13.4813 ACRES EXCLUDES HILLSIDE CEMETERY-28,936 SQ.FT.

PARCEL B CONTAINING 49.6059 ACRES EXCLUDES HILLSIDE CEMETERY-3.3324 ACRES

I herby certify that the state-owned leased area shown as Parcel A and Parcel B on this plan lies wholly within the land acquired by the Commonwealth of Massachusetts on April 30, 1890 and recorded in the Worcester District Registry of Deed in Book 1324, Pages 244-248, and that said land was declared temporarily surplus to the needs of the Massachusetts Department of Developmental Services on October 26, 2012. "Lake St.-Gavin Center Proposed Zoning Districts" dated February 28, 2011 as referenced in Chapter 212 of the Acts of 2012.

TODD P. CHAPIN No. 37558 REGISTERED PROFESSIONAL LAND SURVEYOR COMMONWEALTH OF MASSACHUSETTS

Todd P. Chapin

LEASE PLAN OF LAND IN THE TOWN OF SHREWSBURY WORCESTER COUNTY

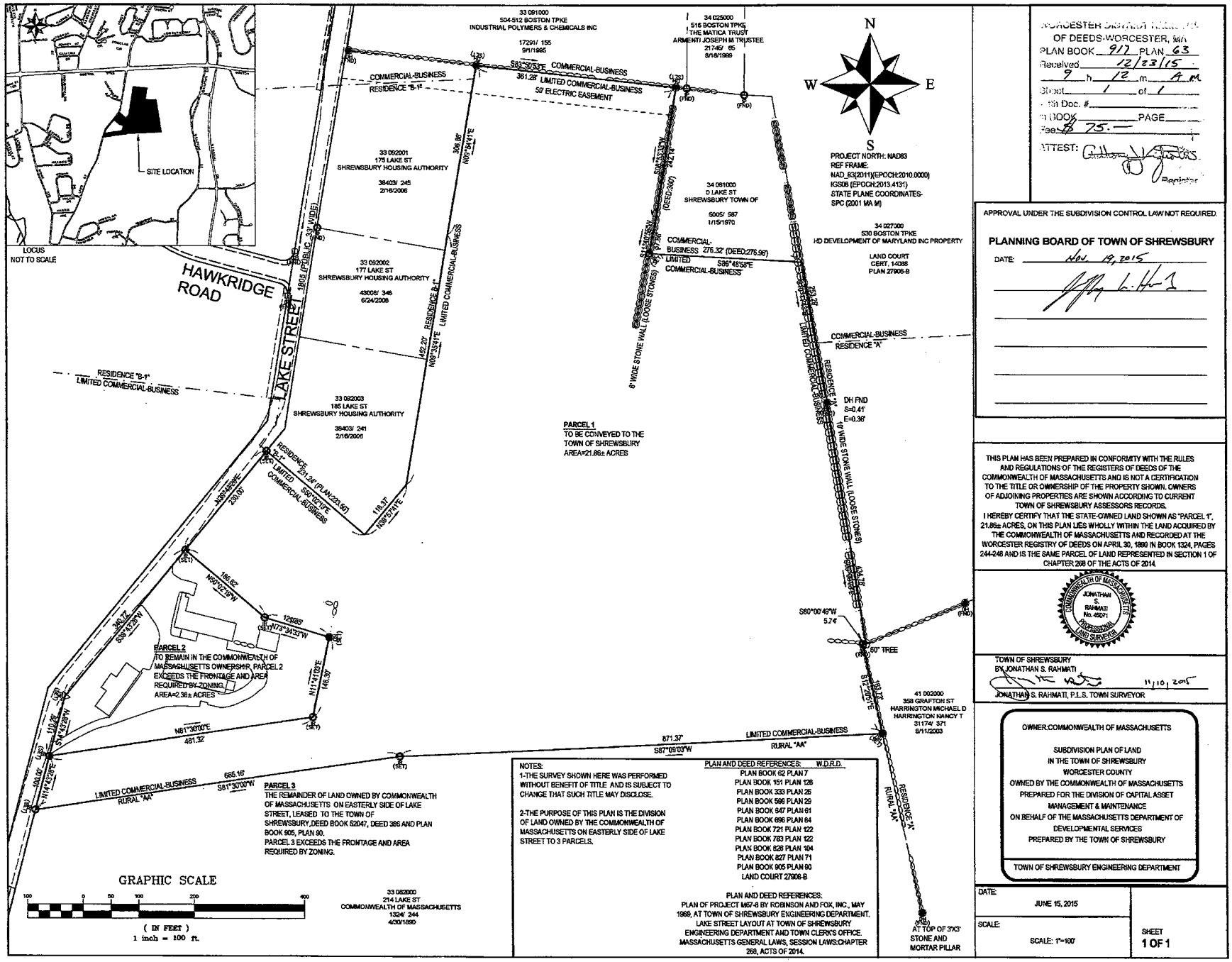
OWNED BY
THE COMMONWEALTH OF MASSACHUSETTS

PREPARED FOR
THE DIVISION OF CAPITAL ASSET MANAGEMENT & MAINTENANCE
ON BEHALF OF THE MASSACHUSETTS DEPARTMENT DEVELOPMENTAL SERVICES

Scale: 1"=120' April 30, 2013

Prepared By
R.W. Hart Associates Inc.
Shrewsbury, Massachusetts
Registered Land Surveyors & Engineers

GRAPHIC SCALE
0 120 240 360
1"=120'



STM Supp 4B Lease Plan of Land Owned by Commonwealth of Massachusetts

2017 00125933
Bk: 58022 Pg: 288
Page: 1 of 5 11/10/2017 09:58 AM WD

Property address: Land off of Prospect Street and North Street, Shrewsbury, Massachusetts

DEED
IN LIEU OF FORECLOSURE

Cherele L. Gentile, Trustee of Giselle Realty Trust u/d/t dated January 26, 2004, and recorded at the Worcester District Registry of Deeds (the "Registry") in Book 32710, Page 383, and pursuant to a Trustee's Certificate recorded herewith in Book 32710, Page 383 ("Grantor"),

for consideration paid, and in full consideration of less than one hundred and 00/100 dollars ($100.00) and pursuant to the provisions of Chapter 60, Section 77C of the General Laws,

Grants to the **Town of Shrewsbury**, a Massachusetts municipal corporation with offices located at 100 Maple Avenue, Shrewsbury, Massachusetts ("Grantee"), with **Quitclaim Covenants:**

I. The land in Shrewsbury, Worcester County, Massachusetts, further described as "Parcel A" as shown on a plan of land entitled "Plan of Land in Shrewsbury, MA.," dated March 5, 2004, and revised on March 12, 2004, prepared by Connorstone, an N.E.I. Company, Consulting Civil Engineers and Land Surveyors, 276 West Main Street, Northborough, Massachusetts 01532, owner Cherele L. Gentile, Trustee of Giselle Realty Trust, 133 Spring Street, Shrewsbury, MA, recorded at the Registry in Plan Book 806, Plan 104 (the "Plan").

Said Parcel A is described as follows:

Beginning at a point on the northerly sideline of North Street at Lot 1B; thence

Running S 78-40-30 W a distance of 137.03 feet to a point; thence

Along a curve to the right having a radius of 9.54 feet a distance of 24.74 feet to a point at the sideline of Prospect Street; thence

Running N 47-16-00 E a distance of 9.189 feet to a point; thence

5

Along a reverse curve to the right having a radius of 25.00 feet a distance of 56.40 feet to a point; thence

Running S 81-59-16 E a distance of 62.34 feet to the point of beginning.

Containing 3,664 square feet, more or less, as shown on the Plan.

Being a portion of the premises conveyed to the Grantor by deed recorded at the Registry in Book 32710, Page 388.

and

II. Permanent, non-exclusive EASEMENTS for PUBLIC STREET purposes together with the attendant and customary uses, including but not limited to the right to pass on foot and with vehicles, to construct, operate and maintain the right of way, to install, monitor, maintain, repair and replace drainage structures and utilities, and for all other purposes for which streets and ways may be used in the Town of Shrewsbury, in, over, under and through a certain areas of land shown as "8.5' Wide Highway and Sight Distance Easement" and "8.5' Wide Highway Easement," on the Prospect Street side and the North Street side, respectively, of Lot 1A and Lot 1B as shown on the Plan.

For Grantee's title, see reservation of Easements in deeds from Grantor recorded at the Registry in Book 33351, Page 394, and Book 33244, Page 359.

Grantor hereby declares under the pains and penalties of perjury that Grantor terminates any and all estates of homestead in and to the premises being conveyed, and that Grantor has no knowledge of any other person or persons who can claim the benefits under the Massachusetts Homestead Act.

[SIGNATURE PAGE FOLLOWS]

Executed as an instrument under seal this 19th day of September, 2017.

GRANTOR:

Cherele L. Gentile,
Trustee of Giselle Realty Trust

COMMONWEALTH OF MASSACHUSETTS

Worcester, ss.

On this 19th day of September, 2017, before me, the undersigned notary public, Cherele L. Gentile, Trustee of Giselle Realty Trust, personally appeared, proved to me through satisfactory evidence of identification, which was personal knowledge, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that she signed it voluntarily for its stated purpose as the voluntary act of Giselle Realty Trust.

Notary Public

Printed Name: Jodi A Vizzo

My Commission Expires: 9-19-2019

JODI A. VIZZO
NOTARY PUBLIC
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires Sept. 19, 2019

[Seal]

ACCEPTED:

TOWN OF SHREWSBURY

By: Laurie Gaudet Date: 10/10/2017
Name: Laurie Gaudet
Title: Town Treasurer/Collector

By: Date: 10/10/2017
Name: Kevin Mizikar
Title: Town Manager

As authorized by vote of Shrewsbury Town Meeting on October 11, 2005, attached as Exhibit A.

TOWN OF SHREWSBURY

Shrewsbury, MA 01545-5338
Voice: 508-841-8507
Fax: 508-842-0587

Sandra E. Wright, Town Clerk
swright@shrewsburyma.gov

Sharyn Thomas, Assistant Town Clerk
sthomas@shrewsburyma.gov

CERTIFICATE

I, Sandra E. Wright, certify that I am the Town Clerk of the Town of Shrewsbury, Massachusetts and further certify that following is a true copy of the vote of the town at the Special Town Meeting (adjourned) held on October 18, 2005 at Shrewsbury High School auditorium.

Article 16: **Accept Land for Highway Purposes North Street, Prospect Street**

VOTED UNANIMOUSLY the printed motion as corrected by striking the word "purchases" and inserting the word "purposes" in the first sentence, to accept a certain parcel of land for highway purposes shown as Parcel "A" on a plan entitled "Plan of Land in Shrewsbury, MA prepared by Connorstone Engineering Inc. and dated March 5, 2004 described as follows:

Beginning at a point on the northerly sideline of North Street at Lot 1B; thence

Running S 78-40-30 W a distance of 137.03 feet to a point; thence

Along a curve to the right having a radius of 9.54 feet a distance of 24.74 feet to a point at the sideline of Prospect Street; thence

Running N 47-16-00 E a distance of 9.189 feet to a point; thence

Along a reverse curve to the right having a radius of 25.00 feet a distance of 56.40 feet to a point; thence

Running S 81-59-16 E a distance of 62.34 feet to the point of beginning.

Containing 3,664 square feet, more or less, as shown on said plan.

In witness whereof I hereunto set my hand and the seal of the Town this 24th day of July, 2017

Sandra E. Wright
Town Clerk

ATTEST: WORC. Anthony J. Vigliotti, Register

WORCESTER DISTRICT REGISTRY OF DEEDS — WORCESTER, MA
PLAN BOOK 806 PLAN 104
Received 03-15-04 5 h. 40 m. PM
Sheet 1 of 1
With Doc. #
in BOOK PAGE
Fee $75.00
ATTEST:
Register

APPROVAL UNDER THE SUBDIVISION CONTROL LAW, IS NOT REQUIRED.
SHREWSBURY PLANNING BOARD
Town Engineer
DATE: MARCH 15, 2004

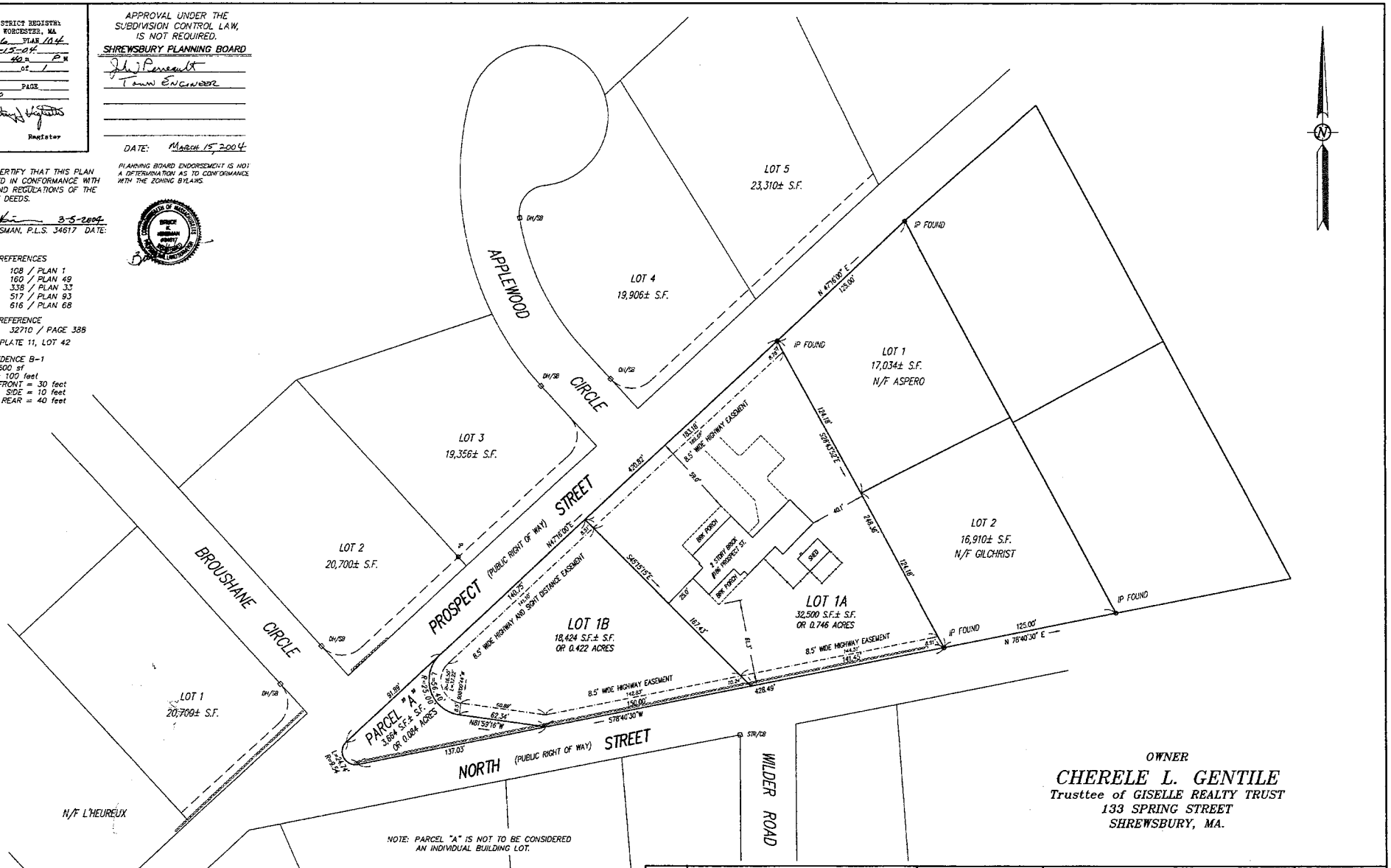
PLANNING BOARD ENDORSEMENT IS NOT A DETERMINATION AS TO CONFORMANCE WITH THE ZONING BYLAWS.

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED IN CONFORMANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.
3-5-2004
BRUCE K. KINSMAN, P.L.S. 34617 DATE:

PLAN REFERENCES
PLAN BOOK 108 / PLAN 1
PLAN BOOK 160 / PLAN 49
PLAN BOOK 338 / PLAN 33
PLAN BOOK 517 / PLAN 93
PLAN BOOK 616 / PLAN 68

DEED REFERENCE
DEED BOOK 32710 / PAGE 388
ASSESSORS PLATE 11, LOT 42

ZONED: RESIDENCE B-1
AREA = 12,500 sf
FRONTAGE = 100 feet
SETBACKS: FRONT = 30 feet
SIDE = 10 feet
REAR = 40 feet



NOTE: PARCEL "A" IS NOT TO BE CONSIDERED AN INDIVIDUAL BUILDING LOT.

OWNER
CHERELE L. GENTILE
Trusttee of GISELLE REALTY TRUST
133 SPRING STREET
SHREWSBURY, MA.

CONNORSTONE
AN N.E.I. COMPANY
CONSULTING CIVIL ENGINEERS
AND
LAND SURVEYORS
276 WEST MAIN STREET
NORTHBOROUGH, MASSACHUSETTS 01532

DESIGNED BY: JAS
CHECKED BY: BKK
COMPUTED BY: JAS
FIELD SURVEY: JAS
DRAWN BY: JAS, REM
SCALE: 1" = 30'
SHEET 1 OF 1.

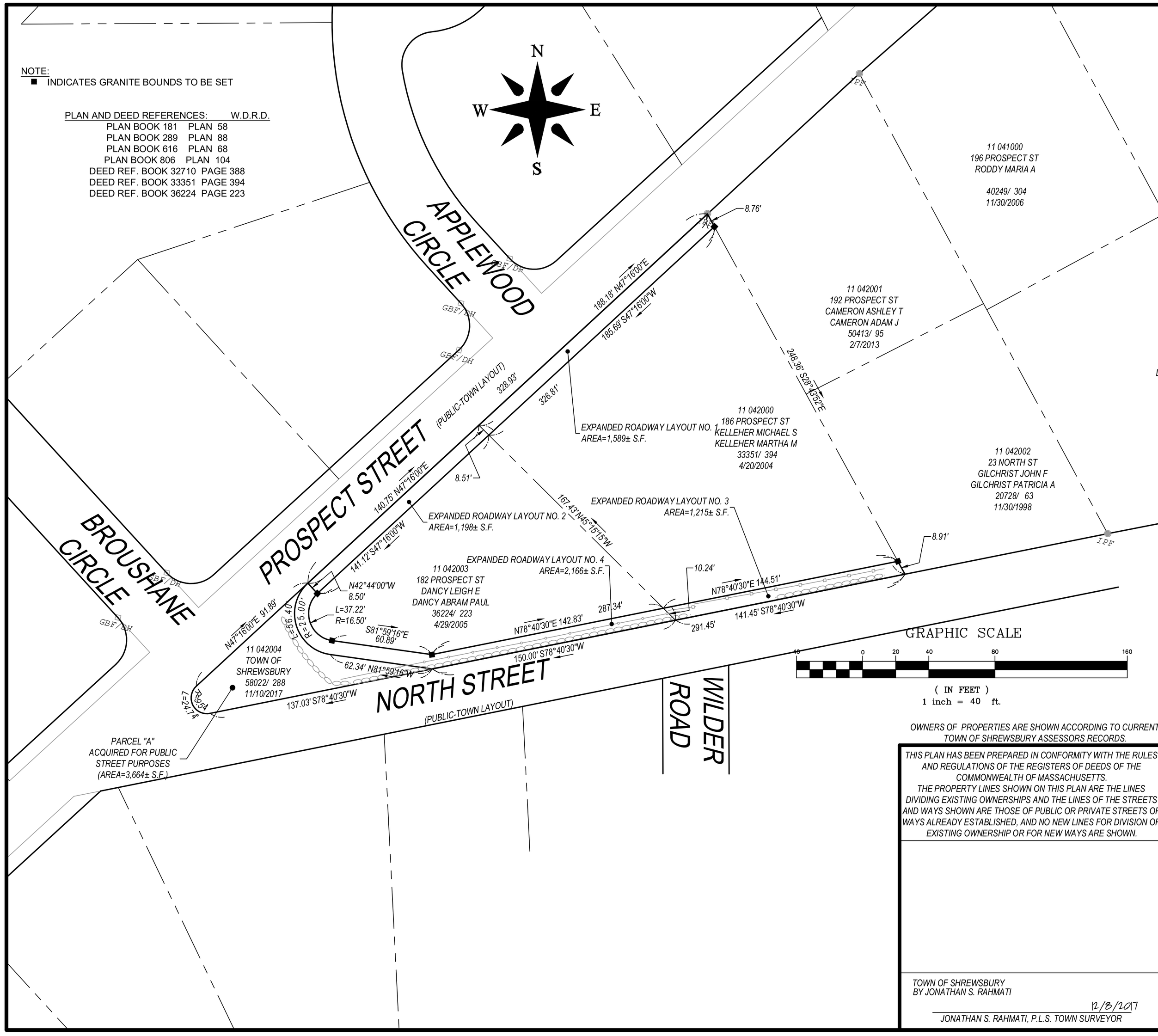
PLAN OF LAND
IN
SHREWSBURY, MA.

MARCH 12, 2004
REVISIONS
DATE: MAR. 5, 2004

STM Supp 5B Plan of Land in Shrewsbury, MA
Worcester Registry of Deeds Plan Book 806, Plan 104

NOTE:
■ INDICATES GRANITE BOUNDS TO BE SET

PLAN AND DEED REFERENCES: W.D.R.D.
PLAN BOOK 181 PLAN 58
PLAN BOOK 289 PLAN 88
PLAN BOOK 616 PLAN 68
PLAN BOOK 806 PLAN 104
DEED REF. BOOK 32710 PAGE 388
DEED REF. BOOK 33351 PAGE 394
DEED REF. BOOK 36224 PAGE 223



LOCUS:
NOT TO SCALE

OWNERS OF PROPERTIES ARE SHOWN ACCORDING TO CURRENT TOWN OF SHREWSBURY ASSESSORS RECORDS.

THIS PLAN HAS BEEN PREPARED IN CONFORMITY WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.
THE PROPERTY LINES SHOWN ON THIS PLAN ARE THE LINES DIVIDING EXISTING OWNERSHIPS AND THE LINES OF THE STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED, AND NO NEW LINES FOR DIVISION OF EXISTING OWNERSHIP OR FOR NEW WAYS ARE SHOWN.

TOWN OF SHREWSBURY
BY JONATHAN S. RAHMATI

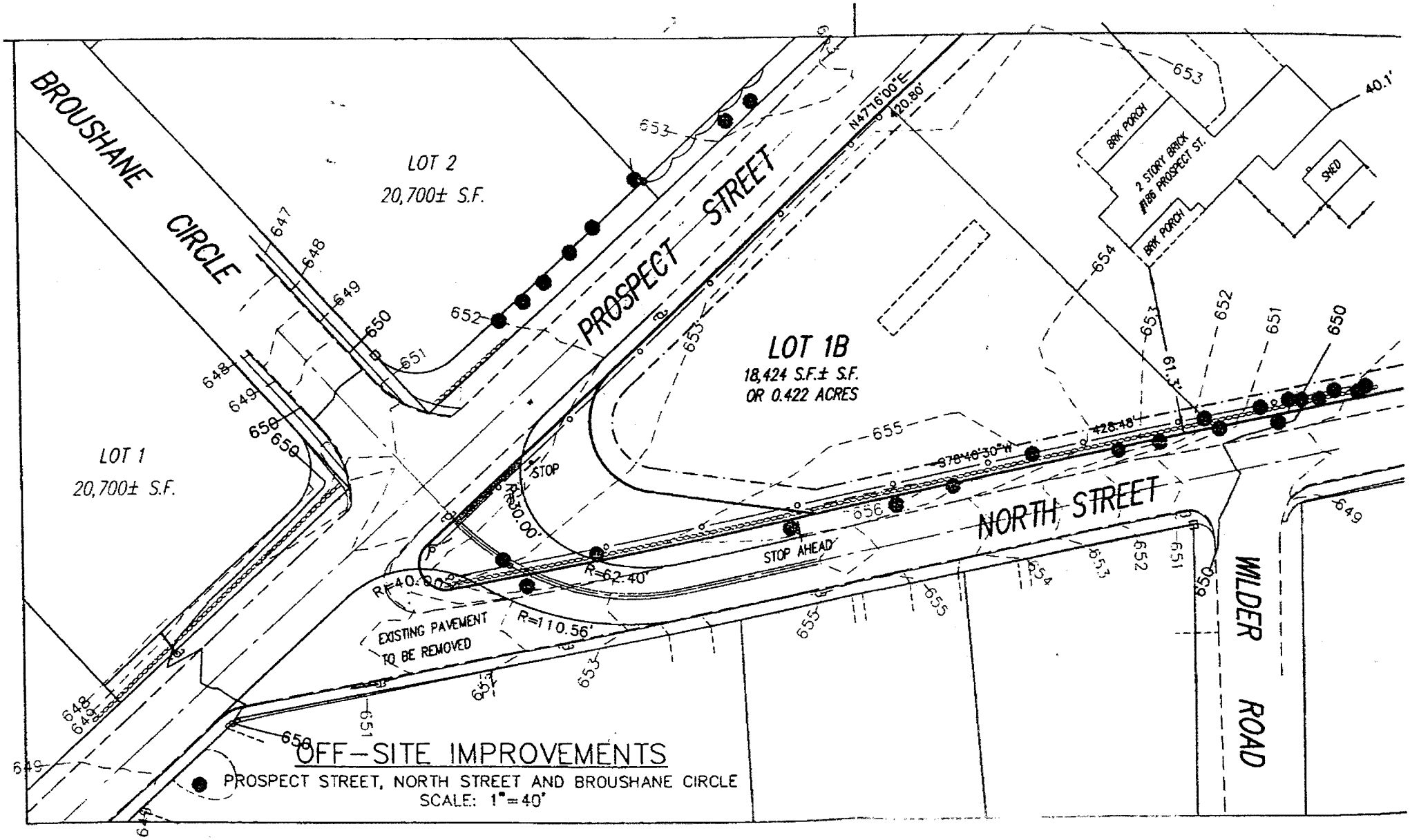
12/8/2017
JONATHAN S. RAHMATI, P.L.S. TOWN SURVEYOR

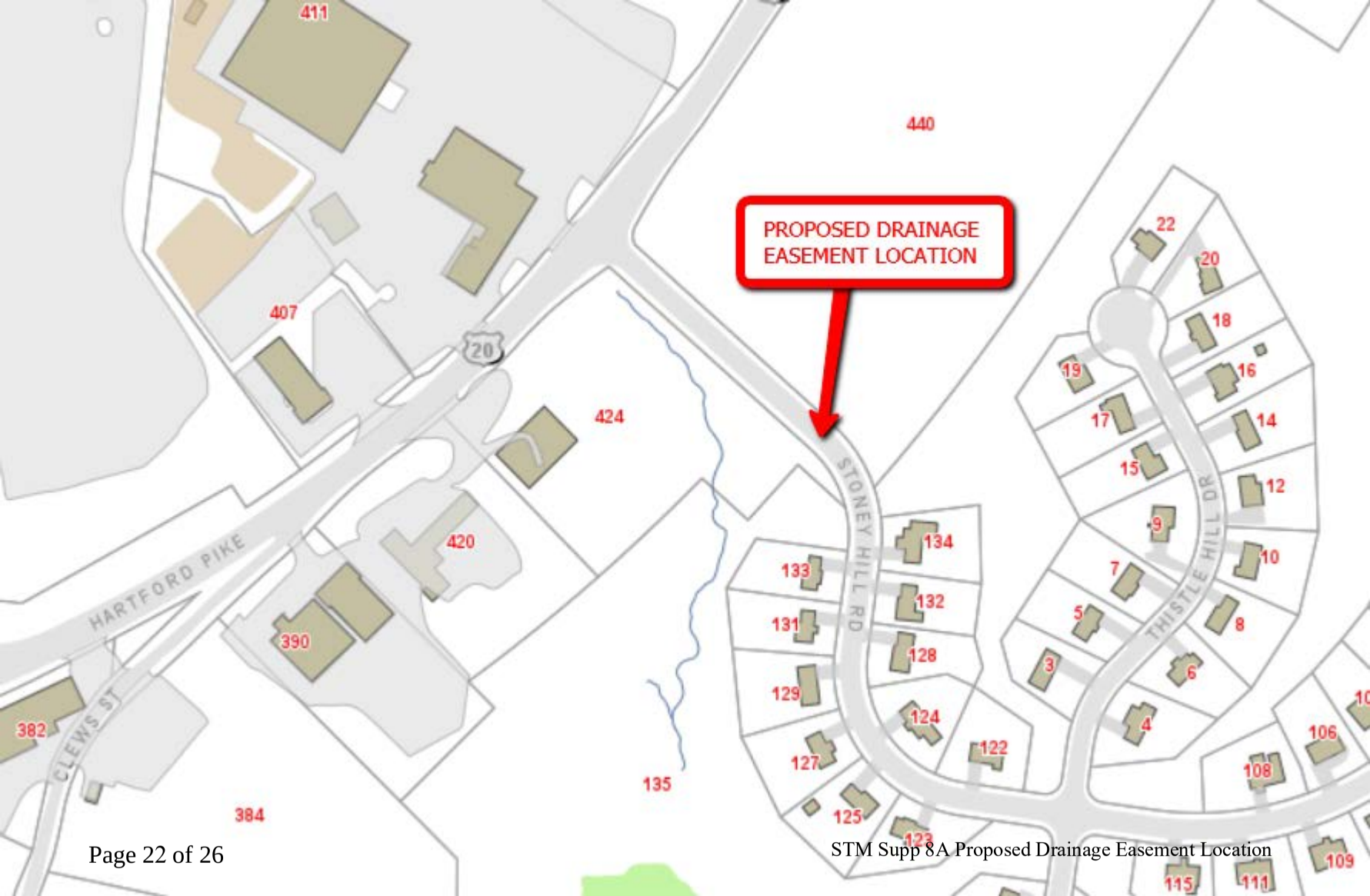
OWNER: TOWN OF SHREWSBURY

PLAN SHOWING ALTERATIONS TO WIDEN THE PUBLIC STREET LAYOUT OF PROSPECT STREET AND NORTH STREET IN SHREWSBURY, MASSACHUSETTS

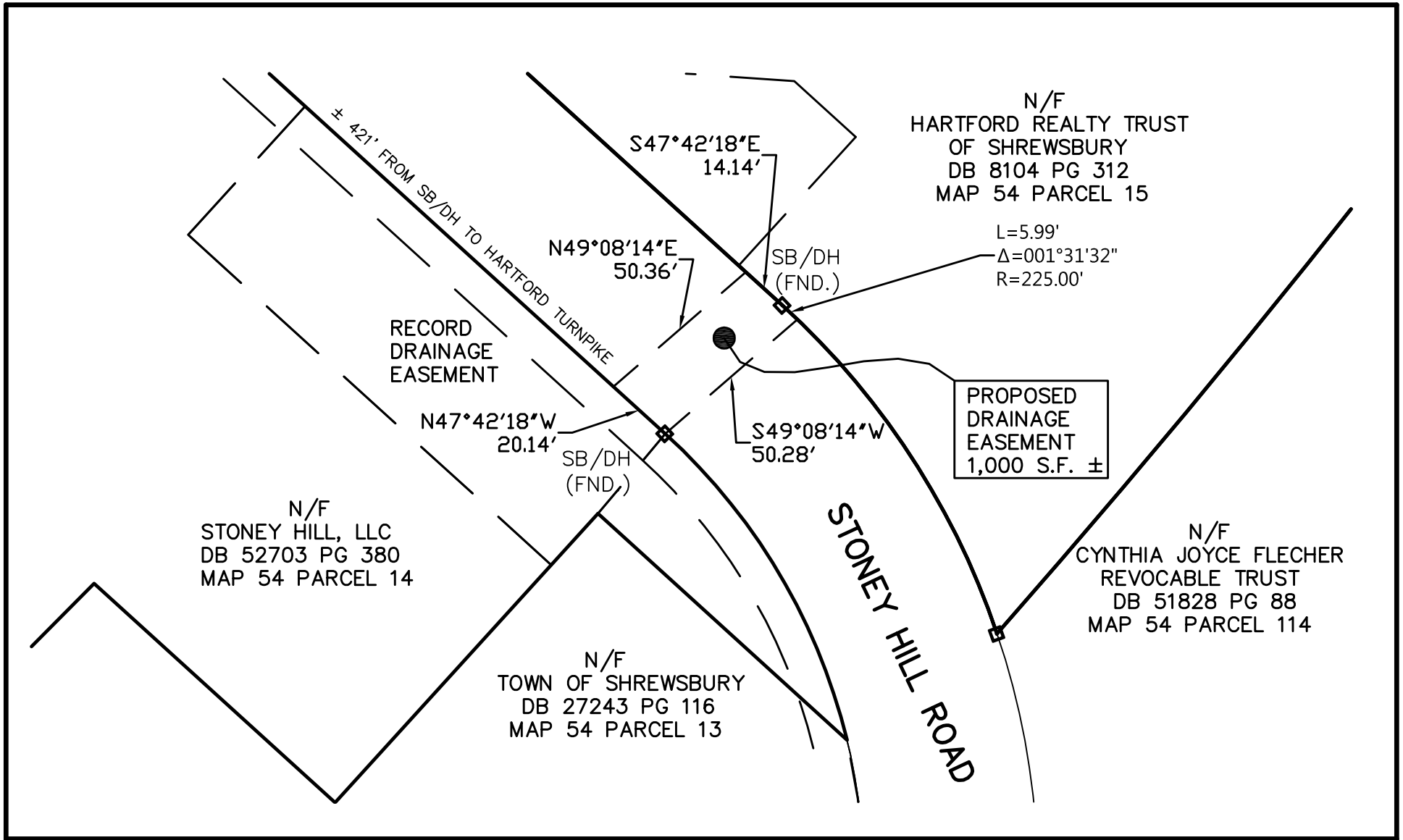
TOWN OF SHREWSBURY ENGINEERING DEPARTMENT

DATE: OCTOBER 2017	
SCALE: AS NOTED	SHEET 1 OF 1


BROUSHANE CIRCLE
LOT 2
20,700± S.F.
PROSPECT STREET
N47°16'00"E
420.80'
LOT 1B
18,424 S.F.± S.F.
OR 0.422 ACRES
BRK PORCH
2 STORY BRICK
#186 PROSPECT ST.
BRK PORCH
SHED
40.1'
LOT 1
20,700± S.F.
STOP
R=30.00'
R=40.00'
R=62.40'
R=110.56'
EXISTING PAVEMENT
TO BE REMOVED
STOP AHEAD
S78°46'30"W
428.48'
NORTH STREET
WILDER ROAD
OFF-SITE IMPROVEMENTS
PROSPECT STREET, NORTH STREET AND BROUSHANE CIRCLE
SCALE: 1"=40'



STM Supp 8A Proposed Drainage Easement Location



PREPARED BY:

WDA DESIGN GROUP

31 EAST MAIN STREET WESTBOROUGH, MA | 508.366.6552
7 CENTRAL STREET PROVIDENCE, RI | 401.274.1360
WDA-DG.COM

OWNER:

Town of Shrewsbury

100 Maple Ave.
Shrewsbury , MA

PREPARED FOR:

Town of Shrewsbury

100 Maple Ave.
Shrewsbury , MA

TITLE:

Drainage Easement Sketch

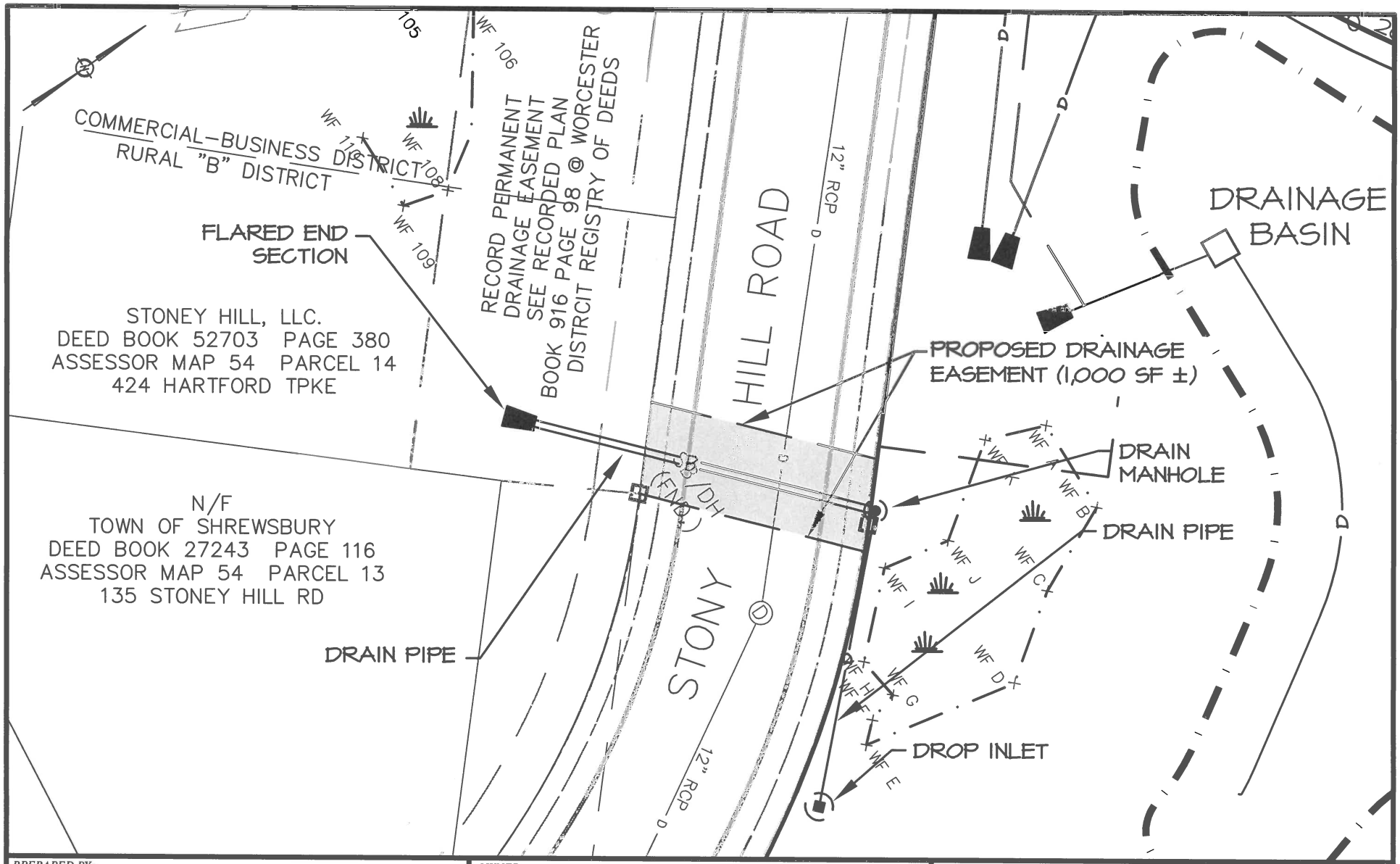
STONEY HILL ROAD

Sherwsbury, MA
(Worcester County)

DATE: 12-05-17 *FILE NO.:*0927150-EASE-2016

JOB NO.: 927.15 *DWG NO.:* 0927150A *DRAWN BY:* SPC

00 30 60 90



PREPARED BY:

WATERMAN DESIGN ASSOCIATES, INC.
31 East Main Street
Westborough, MA 01581
508.366.6552
(fax) 508.366.6506
watermandesign.com wda@wdassoc.com

OWNER:
TOWN OF SHREWSBURY
100 Maple Ave.
Shrewsbury, MA

PREPARED FOR:
Shrewsbury Engineering Department
100 Maple Ave.
Shrewsbury, MA

TITLE:
Proposed Drainage Easement Sketch
STONY HILL ROAD
Shrewsbury, MA
(Worcester)
EXHIBIT

DATE: 09/21/16 FILE NO.: 927300 SCALE: 1" = 30'
JOB NO.: 927.07

Office of the
ENGINEERING DEPARTMENT

RICHARD D. CARNEY
MUNICIPAL OFFICE BUILDING

100 MAPLE AVENUE
(508) 841-8502
FAX (508) 841-8497

TOWN OF SHREWSBURY

MASSACHUSETTS 01545-5398

December 20, 2017

Mr. John Lebeaux, Chair
Shrewsbury Board of Selectmen
100 Maple Avenue
Shrewsbury, MA 01545

Via: Hand Delivery

Re: Special Town Meeting
January 17, 2018
Article #8

Dear Mr. Lebeaux and Members of the Board:

The Engineering Department is in support of granting the proposed drainage easement across Stoney Hill Road to Hartford Realty Trust. The purpose of the drainage easement is to construct a drain pipe across Stoney Hill Road from the proposed The Pointe at Hills Farm Phase 1 project to an existing drainage easement secured by Hartford Realty Trust on the west side of Stoney Hill Road.

Currently the runoff off the site drains to an existing small wetland that discharges overland across the existing sidewalk onto Stoney Hill Road. The runoff then discharges into the Stoney Hill Road drainage system. During winter, icing conditions on the sidewalk have been reported resulting in safety concerns on the sidewalk near the community mailbox.

Through the Conservation Commission's public hearing process, The Pointe at Hills Farm developer was requested to explore options to remedy the existing drainage problem across the sidewalk. The best option to fixing the icing problem would be to install a catch basin on the east side of Stoney Hill Road at the discharge point from the existing wetland and running a drainage pipe to the opposite side of the road.

The proposed drainage system including the pipe crossing will not directly benefit the Town's drainage infrastructure and the proposed drainage infrastructure within The Pointe at Hills Farm, Phase 1 will not become public, remaining private in perpetuity. In order to install the

pipe such that it would not be subject to the Town's EPA MS4 requirements, the pipe would need to be privately owned and maintained.

Therefore, we proposed the pipe be owned and maintained by Hartford Realty Trust and their assigns as part of The Pointe at Hills Farm, Phase 1. The proposed plan submitted to and approved by the Conservation Commission helps to alleviate an existing drainage problem on Stoney Hill Road yet does not burden the Town in the future with long term monitoring, sampling, maintenance, repairs, etc.

If you have any other questions or concerns please contact me.

Sincerely,

Jeffrey W. Howland, PE
Town Engineer

Copy to: File
Conservation Commission

3.1.4 EVALUATION OF EXISTING CONDITIONS

B. Determination of Historical Registrations

1. Narrative
2. MACRIS Results

Beal Early Childhood Center building and/or site are **not** listed on either the Massachusetts Cultural Resource Information System (MACRIS) or the National Register of Historic Places. In accordance with MSBA requirements, a Project Notification Form will be filed with the Massachusetts Historical Commission.

Massachusetts Cultural Resource Information System
MACRIS

MACRIS Search Results

Search Criteria: Town(s): Shrewsbury; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year
SRW.A	Old Mill Road - Elm Street Area		Shrewsbury	
SRW.B	Fairlawn		Shrewsbury	
SRW.C	Oak Street Area		Shrewsbury	
SRW.D	Shrewsbury Historic District		Shrewsbury	
SRW.E	Grafton State Hospital		Shrewsbury	
SRW.F	Massachusetts State Hospitals and State Schools		Shrewsbury	
SRW.908	Grafton State Hospital Ice Pond Complex		Shrewsbury	
SRW.909	Green Hill Find Spot 3		Shrewsbury	
SRW.910	Green Hill Shelter Boulder Site		Shrewsbury	
SRW.911	Green Street Culvert		Shrewsbury	
SRW.905	Milestone, 1767	Boston Post Rd	Shrewsbury	1767
SRW.15		336 Boston Tpk	Shrewsbury	1929
SRW.16		370 Boston Tpk	Shrewsbury	1926
SRW.14	Wheelock, Gershom House	265 Boylston St	Shrewsbury	c 1720
SRW.10	Shrewsbury Fire and Police Station	Church Rd	Shrewsbury	1927
SRW.800	Old Corner of the Mountain View Cemetery	Church Rd	Shrewsbury	1721
SRW.3	Shrewsbury First Congregational Church	1 Church Rd	Shrewsbury	1766
SRW.1	Sumner, Rev. Joseph House	5 Church Rd	Shrewsbury	1797
SRW.2	Brick School - Shrewsbury District #1 Schoolhouse	15 Church Rd	Shrewsbury	c 1830
SRW.17		26 Elm St	Shrewsbury	1922
SRW.18		48 Elm St	Shrewsbury	1927
SRW.19	Mason, Henry House	68-70 Elm St	Shrewsbury	r 1780
SRW.20	Harrington House	103 Elm St	Shrewsbury	r 1765
SRW.24	Carle, Harrison S. House	26 Gleason Rd	Shrewsbury	1917
SRW.21		78 Grove St	Shrewsbury	r 1920
SRW.58	Lecoeuvre, Peter House	97 Grove St	Shrewsbury	1924
SRW.23		100 Grove St	Shrewsbury	r 1925
SRW.22	Lecoeuvre, Peter House	101 Grove St	Shrewsbury	1929
SRW.60	Edgemere Diner	51 Hartford Pike	Shrewsbury	r 1950
SRW.900	I-290 Bridge over Quinsigamond Lake	Lake Ave, North	Shrewsbury	1969
SRW.25	Scandinavian Athletic Club House	432 Lake St	Shrewsbury	r 1920
SRW.26		466 Lake St	Shrewsbury	c 1860
SRW.27	Nelson, Sarah E. House	484 Lake St	Shrewsbury	r 1895
SRW.28	Nelson, Josiah House	543 Lake St	Shrewsbury	r 1820
SRW.29	Stratton, S. Edward House	549 Lake St	Shrewsbury	r 1895
SRW.30		556 Lake St	Shrewsbury	c 1900
SRW.12	Farrar, Capt. John - Pease Tavern	32 Main Circ	Shrewsbury	c 1784
SRW.902	Main Street Bridge over Lake Quinsigamond	Main St	Shrewsbury	1939
SRW.49		211-213 Main St	Shrewsbury	c 1920
SRW.50	Johnson, Zebediah House	239 Main St	Shrewsbury	1732
SRW.51	Fay, S. T. - Bond, Dolly House	285 Main St	Shrewsbury	r 1830
SRW.62	Flint Farmstead	449 Main St	Shrewsbury	c 1750
SRW.63	Iristhorpe Carriage House	449 Main St	Shrewsbury	c 1910
SRW.64	Maynard, John House	506 Main St	Shrewsbury	c 1820
SRW.65	Hapgood, Joab House	520 Main St	Shrewsbury	c 1820
SRW.66	Stone, Joseph House	529 Main St	Shrewsbury	c 1806
SRW.7	Howe Memorial Library	609 Main St	Shrewsbury	1903
SRW.8	Prudential Life Insurance Building	615 Main St	Shrewsbury	1957
SRW.9	Allen, Rev. George House	621 Main St	Shrewsbury	1818
SRW.11	Ward, Gen. Artemas Homestead	788 Main St	Shrewsbury	1727
SRW.31		257 Maple Ave	Shrewsbury	1929
SRW.32	Green, Hen - Worcester House	295 Maple Ave	Shrewsbury	1916
SRW.33	Chelmsford Ginger Ale Company	335 Maple Ave	Shrewsbury	1927
SRW.61	Wolfcrest	44 Oak St	Shrewsbury	1910
SRW.34	Stone, Isaac House	165 Oak St	Shrewsbury	1727
SRW.35		192 Oak St	Shrewsbury	1929
SRW.36		260B Oak St	Shrewsbury	r 1920
SRW.37		276 Oak St	Shrewsbury	r 1920
SRW.13	District #5 Schoolhouse	2 Old Mill Rd	Shrewsbury	1828
SRW.38		87 Old Mill Rd	Shrewsbury	c 1918
SRW.39	Morrill, I. Atwood House	126 Old Mill Rd	Shrewsbury	c 1890
SRW.40	Harrington, Holloway House	136 Old Mill Rd	Shrewsbury	c 1800
SRW.41	Harrington, D. House	148 Old Mill Rd	Shrewsbury	r 1820
SRW.42	Wheelock, Gershom - Dewing, J. House	185 Old Mill Rd	Shrewsbury	c 1800
SRW.43	Brown, Ida J. House	213 Old Mill Rd	Shrewsbury	1919
SRW.44	Smith, J. House	223 Old Mill Rd	Shrewsbury	r 1835
SRW.45		Point Rock	Shrewsbury	c 1930
SRW.6	Stone, Jonas House	4 Prospect St	Shrewsbury	1822
SRW.4	Haven, Samuel House	7 Prospect St	Shrewsbury	1816

SRW.5	Slocum, Philo House	10 Prospect St	Shrewsbury	1806
SRW.46	Cushing, E. P. House	41 Rolfe Ave	Shrewsbury	1918
SRW.903	Route 20 Bridge over Flints Pond	Rt 20	Shrewsbury	1931
SRW.59	Dean, Balch Tavern	Rt 9	Shrewsbury	c 1740
SRW.901	Route 9 Bridge over Route 140	Rt 9	Shrewsbury	1930
SRW.47	Springer, F. A. House	35 Sias Ave	Shrewsbury	1919
SRW.48	Chilton House	32 Tatum Rd	Shrewsbury	1926
SRW.904	Milestone, 1767	West Main St	Shrewsbury	1767
SRW.52	Nurse, Joel - Prentiss, John House	307 West Main St	Shrewsbury	1806
SRW.53	Grafton State Hospital - Security Office	Westborough Rd	Shrewsbury	r 1975
SRW.54	Grafton State Hospital - Willow A	Westborough Rd	Shrewsbury	1910
SRW.55	Grafton State Hospital - Pines Cafeteria	Westborough Rd	Shrewsbury	1939
SRW.56	Grafton State Hospital - Pines Food Service	Westborough Rd	Shrewsbury	1916
SRW.57	Grafton State Hospital - Pines A	Westborough Rd	Shrewsbury	1908
SRW.801	Grafton State Hospital - Hillcrest Cemetery	Westborough Rd	Shrewsbury	c 1901
SRW.906	Grafton State Hospital - Water Tower	Westborough Rd	Shrewsbury	1903
SRW.907	Grafton State Hospital - Reservoir	Westborough Rd	Shrewsbury	1914

3.1.4 EVALUATION OF EXISTING CONDITIONS

C. Evaluation of Significant Structural, Environmental, Geotechnical or other Physical Conditions

1. Existing Conditions Narrative-Architectural
2. Existing Conditions Report-Site Civil
3. Existing Conditions Report-Structural
4. Existing Conditions Report-Fire Protection
5. Existing Conditions Report-Plumbing & HVAC
6. Existing Conditions Report-Electrical
7. Existing Conditions Report-Food Services

EXECUTIVE SUMMARY

The Major Howard W. Beal School, prominently located in the center of Shrewsbury, has been used by the town for educational purposes since it was opened in 1922. While the 33,000-sf building situated on 3.8 acres was no doubt the epitome of contemporary standards for a high school when it was built, it is now extremely deficient to support the needs of a large contemporary elementary school with an enrollment of 790 students. Based on the preliminary program developed for the proposed project, it is anticipated that the floor plate of the school may be 80,000sf. Additionally, separate circulation for busses and parent pick up/drop off vehicles is required.

The Beal School site at 3.8 acres is the equivalent of slightly over 165,500 sf. It would be exceptionally challenging to accommodate the required program on the existing site without further exacerbating the current traffic problems experienced on the neighboring streets, acquiring neighboring property or developing a multi-story building of a scale inappropriate for welcoming young learners. For reference, our design team recommends a site of 12 – 14 acres to support the building and site requirements for the proposed school.

Although the building and site are not reasonable candidates for the 790 student elementary school program, the building itself is iconic in town and may well be suitable for adaptive reuse as housing, offices, or other similar use groups.

While most of the building systems have lived beyond their expected service period, the structure is generally sound, features high ceilings and window openings, and has a spatial scale suitable for adaptability to many uses other than an elementary school. Additionally, upgrades by the town of Shrewsbury including the installation of an elevator and ramps have added value for other use groups.

Developed according to Massachusetts School Building Authority guidelines, the following is a detailed assessment of the architectural, site, and systems features of the property specifically as they relate to an elementary school program.

INTRODUCTION

The following Existing Conditions report was developed to meet the requirements of an MSBA funded public school project. The major objective of this study is to determine the suitability for the existing Beal School building and site for a public school large enough to support 750 K-1 students or 790 K-4 students.

The following documents were made available to the design team and were used as the basis for the majority of the historical narrative, combined with site visits to view the existing conditions, and interviews with Town of Shrewsbury department representatives as appropriate:

- Copies of the original architectural drawings dated 1922 consisting of exterior elevations, floor plans, and structural plans, J William Beal Sons Architect, Boston
- Ramp details by Nault Architects, Worcester
- Site plan for parking and drainage improvements
- Microbial Evaluation report, ATC, 3 January 2006
- Indoor Air Quality Evaluation, MA DPH, 29 August 2006
- Indoor Air Quality Evaluation, ATC, 5 April 2010
- MSBA Statement of Interest document, 8 April 2015

The following Beal School design team firms conducted the evaluations:

- Lamoureux Pagano Associates, Architects
- Nitsch Engineering, civil engineers
- Bolton DiMartino, structural engineers
- Seaman Engineering, mechanical engineers
- ART Engineering, electrical engineers
- UEC, hazardous material assessment

Following the architectural narrative portion of this report, each engineering report is included for further reference.

HISTORY

The Major Howard W. Beal School was originally constructed in 1922 as Shrewsbury's High School on an approximately 3.8-acre site centrally located in the community. The architect was J. Williams Beal Sons, Boston and the builder was J. J. Power of Worcester. The structure is built into a slightly terraced area with 2 stories above a finished ground level floor for a total of about 33,000 square feet.

Built after World War I when students would not typically have had their own cars, lunch was probably either eaten at home or brought to school. The manufacturing industry was still strong in New England and it appears that the high school was built with some of the most contemporary features of the time. Copies of original plans show spaces identified for manual training, bookkeeping, typing, domestic science, a centralized library and multipurpose assembly hall with projection capabilities. While small by today's standards, the classrooms were probably quite sufficient for the simply appointed instructional spaces of the time. As was typical, there was no cafeteria space in the original plan. The building's central town location must have been critical as most of students probably walked to school at the time.

The Beal School was used as the town's high school until 1957 when the new Junior Senior High School was opened on Oak Street. During the 1990's the Beal School was developed as a progressive early childhood education center serving the entire district. Subsequently, the town's population had grown tremendously and the school currently houses some of the early childhood classrooms, but others are assigned to elementary schools that serve up to grade four.

Subsequent to original construction, the following renovations to the building were completed:

- 2012: selective roof repair
- 2007: EPDM roof was re-seamed
- 2001: Elevator and interior and exterior ramps installed
- 1988: the original tar and gravel roof was replaced with an EPDM roofing system including 2″ of insulation
- 1980's: boilers replaced
- 1980's (estimated): upper window sashes were faced with solid panels and suspended ceilings installed
- Various undated modifications/upgrades were made over the years to provide electrical/telecommunications systems as required, toilet partition replacement, flooring and millwork replacement. These changes appear to be part of typical annual capital improvements in an effort to meet current curriculum and selective code requirements.
- See individual engineering reports for further details about systems and site upgrades

EXTERIOR

General

The Beal school is a masonry bearing wall construction with wood framed floors and roof, original single paned wood frame windows, and EPDM roof. All except the roof appear to be primarily original construction with few changes.

Masonry walls: generally in good condition with selective repointing, concrete foundation repair recommended. From visual inspection only, most of the stone banding and detailing including the main entry column portico and school name entablature appear to be in good condition raking and caulking of joints recommended. Uninsulated exterior masonry walls are deficient by contemporary standards for energy efficiency.

Windows: original wood frame, single pane glazed, divided lite, painted windows, with upper sash faced with painted wood panels (presumed late 20th century). Regular maintenance work has been conducted to address putty and paint needs, but the windows are extremely inefficient by contemporary standards and replacement would be recommended. New windows should be insulated glazing with appropriate solar control attributes for each elevation, full sealant and tie-ins with any added proposed exterior wall insulation installation.

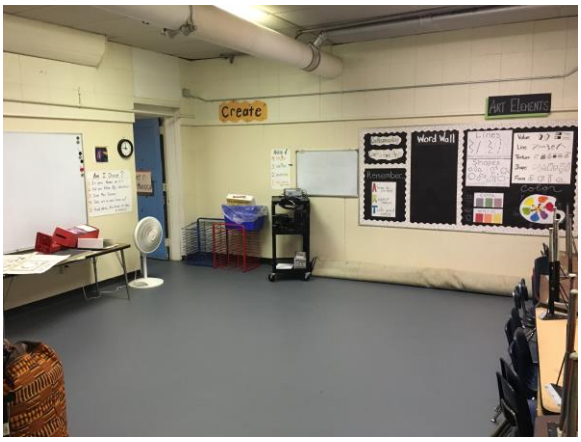
Roof: the original tar and gravel roof was reportedly replaced in 1988 with EPDM membrane system including 2"of insulation. Membrane re-seaming was performed in 2007 and repairs were completed in 2012 to address snow removal damage at the time. Since membrane roofs of this type typically have an expected usefulness of 20-30 years, replacement of the roof is recommended.

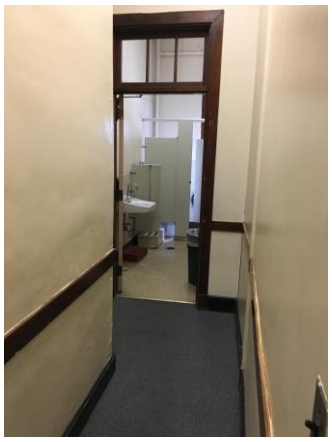
Exterior access: the main entrance is serviced by concrete stairs that are spalling, showing some exposed rebar and have been patched over the years. These are in fair condition and would be recommended for replacement in any major renovation project. The exterior ramp to the entrance was is under 20 years old and in good condition. See accessibility section for comments about the handrail extensions. Other ground level egress points are accessed through cast in place concrete areaways and steps without current code compliant landings or handrails and complete replacement would be recommended if these were to be maintained in a major renovation project.

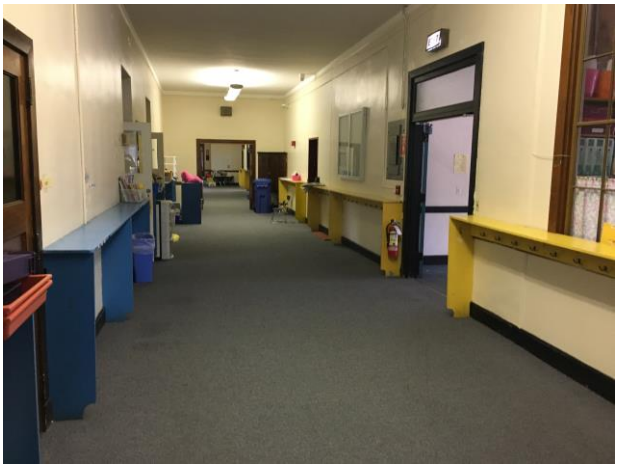
INTERIOR - MATERIALS

General: much of the original layout and original construction remains including: corridor load bearing partitions, stairs, and some millwork. Replacement acoustic tile ceilings, some partition changes, toilet room improvements, replacement millwork, and systems upgrades have been installed.

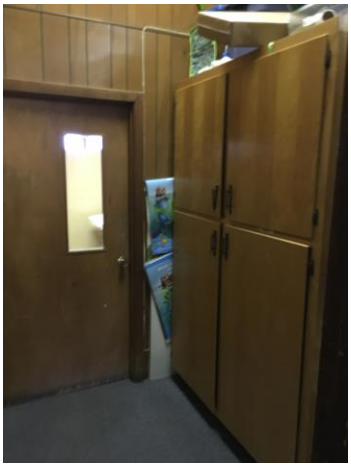
Partitions: Original masonry bearing corridor partitions largely remain with lath and plaster painted finish on the upper levels and painted masonry walls on the ground level. Newer partitions appear to be wood frame/gypsum board construction with painted finish. Many of the wall surfaces are not currently visible due to the classroom furniture and millwork obscuring the view of them. Reportedly, plaster has delaminated in some places and repair is required. Most of the newer partitions are in fair condition due to economical construction techniques and finishes used.
Exterior partitions are not insulated. For any major renovation, a carefully engineering interior insulation system would be recommended for energy efficiency. It would be important to design a system that would continue to allow the exterior masonry to breathe as originally designed. New finish systems, tie-in to any proposed replacement window system, and other details would be recommended as part of the exterior wall system improvements.







Doors: are a mix of original and replacement wood doors, some of the original doors with transoms above. Much of the operating hardware has been changed to lever style accessible hardware, but there are some remaining non-accessible compliant door handles in place. Doors range from fair to good condition and would need to be evaluated on an individual basis for a major renovation project. Due to the original exhaust chase design of the school, a large percentage of the corridor doors do not meet accessibility clearance requirements due to the depth of the wall cavities.



Ceilings: The upper floor classrooms primarily feature 2′ x 4′ suspended acoustic ceiling tile (ACT) systems that appear to have been installed in the 1980's and are in fair condition with sagging and discoloration evident. Especially since sprinkler protection installation and upgraded lighting would typically be featured for any major renovation project, it is expected that the ACT ceilings would be replaced. In corridors, the original painted plaster ceiling appears to be in place in the majority of the area. At a minimum, some repair work to ensure finish soundness would be recommended due to water leaks over the years. The basement ceiling is typically exposed structure painted.

Flooring: It is assumed that original wood finish flooring has been covered (except in the gymnasium) by a variety of finishes including: asbestos composition tile, vinyl composition tile, and carpet over the years. Refer to the hazardous material report for estimated quantities of asbestos tile. All flooring is in poor to fair condition and full replacement would be recommended. The condition/existence of the original wood flooring is unknown with the exception of the gym floor.

Windows: Original wood sash, single paned with drafty conditions and full replacement is recommended (see notes on exterior materials) including sills. New window shades have been installed and are in fair condition.

Hazardous Materials: See attached testing report and recommended budget for abatement of asbestos materials within the building. Any major renovation of the building would require abatement or encapsulation of the hazardous materials.

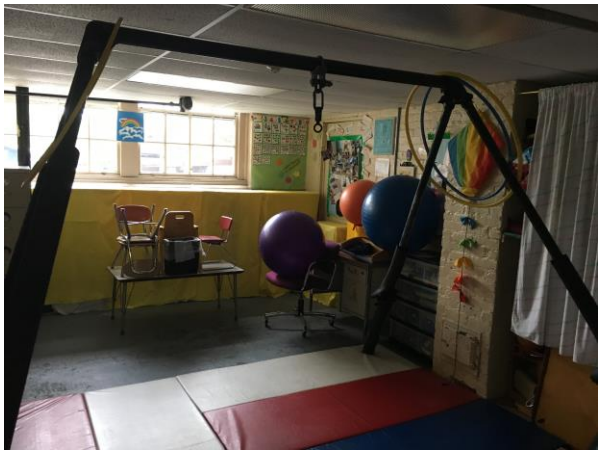
INTERIOR – SPACES

General: Spatially, most of the interior spaces are significantly undersized to serve contemporary educational standards. For example, classrooms range from 645 – 780 square feet (sf) each while MSBA guidelines call for elementary classrooms to range from a minimum of 900 – 1100sf. The cafeteria is 940 sf, sized for a maximum of 62 seats and the gymnasium is about half the current recommended size. Due to the position of the masonry bearing partitions, significant modifications to the spaces would challenging and prohibitively expensive.

The following is a general description of the features of each of the major components of the building.

Main Entry Vestibule: features a WW1 commemorative plaster relief sculpture with bronze metallic finish that is well complemented by the recent site memorial positioned close to the street within view of the main entrance.

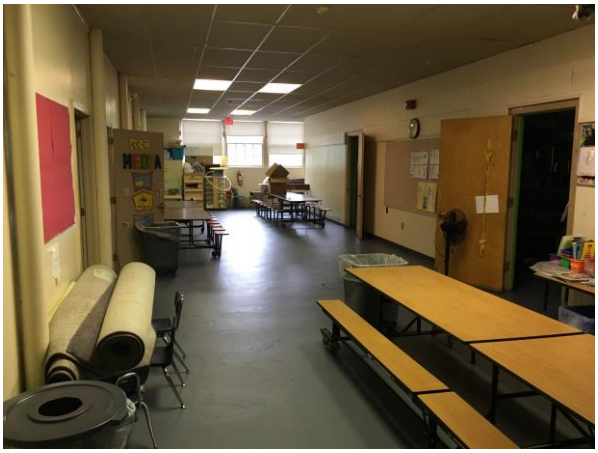
Classrooms: upper floor classrooms feature painted walls with a combination of plaster and gypsum board finish. Some have original high school millwork while most have replacement fixed and modular wood millwork in fair condition. The replacement millwork does not feature accessible sink units. Classroom finishes include, ACT ceilings, carpet and resilient flooring. While the high window sills provide more wall space for materials storage, they are not well suited for young children to have views of the exterior. Lower level classrooms are similarly appointed but have painted brick walls.



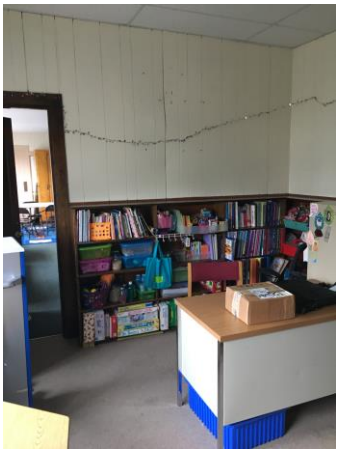
Corridors: designed originally with a wide configuration, the corridors have high plaster ceilings and an airy appearance. Currently, the extra width is reduced by the use of the corridors for cubby storage, equipment, and sinks.

Gymnasium: features a hardwood athletic floor of undetermined age with sanding and refinishing recommended if it is to be maintained. Thickness testing is recommended to determine if it is sufficient for additional refinishing. Suspended acoustical ceiling of fair condition probably covers an original plaster ceiling. Walls are plaster with some infill and panelized painted trim that may be original. Various additions have been made to accommodate storage needs and the elevator installation. Egress from this space is facilitated by exterior uncovered stairs that would not meet current code for an educational use.

Cafeteria/Kitchen: the original manual training space was subdivided into a Cafeteria/Kitchen, Library, Art and Music space and egress ramp. Two rows of columns supporting the gymnasium space above have been integrated into the newer partitions. The ramp has been incorporated to provide egress to the grade level of the parking area. The kitchen features commercial grade stainless steel equipment and serving areas. The cafeteria space is long and narrow and more resembles a corridor than a cafeteria in configuration.



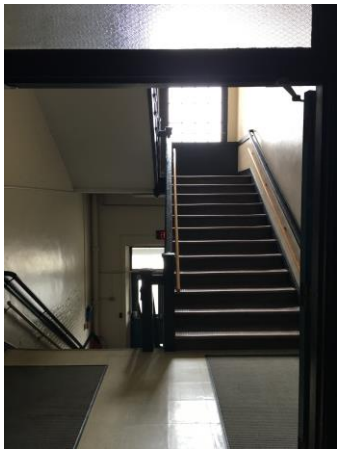
Library: located on the lowest level accessed through the cafeteria, the library is carpeted and use of the limited space is maximized by careful layout.



Offices: are located off of the main entrance but do not feature a direct view of the door. Finishes vary from asbestos tile to carpet and wall finishes that have been applied over the years.

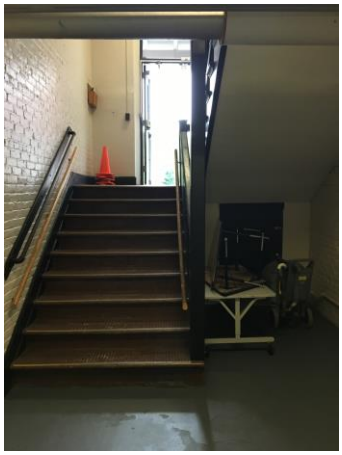
Toilet Rooms: some original marble wall finishes are in place, but most toilet partitions have been replaced with solid plastic partitions in good condition. Lowest level toilet rooms feature painted floors and walls. None of the existing kindergarten toilet rooms have adjacent toilet rooms. See the mechanical report for more information regarding the plumbing systems.

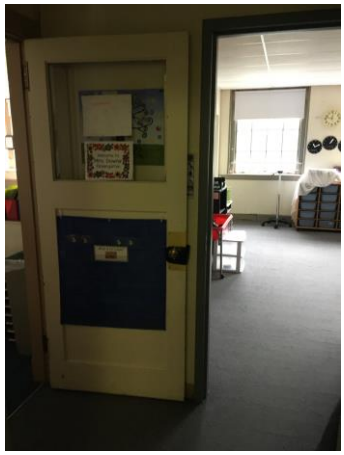
Stairs: original stairs have been covered with rubber treads and resilient landings. Walls are painted brick and plaster. One lower level classroom has steps that lead to an egress door which do not meet code as they do not have handrails or adequate landing space at the door.



Accessibility: Since the building was constructed in 1922, accessibility requirements have changed significantly. Many renovations to the building have been made to upgrade to accessible standards including: exterior and interior ramps, toilet room renovations including accessible stalls, installation of lever door hardware. Accessibility deficiencies noted include:

- Exterior ramp does not include handrail extension at the end as required by current code
- Stairs do not have tapered nosings or handrail extensions
- Some doors do not have lever hardware
- Door clearances at corridor do not meet requirements in many cases (see Interior Materials – Doors narrative above). Depending on the building use for a major renovation, this might be a reasonable condition to petition for variance approval through the Architectural Access Board (AAB).





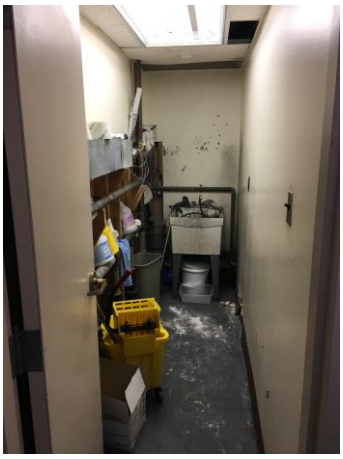
Indoor Air Quality: Several indoor air quality testing reports were issued in 2006 and 2010. Recommendations for improvements included rigorous cleaning practices and providing adequate air changes in the spaces. The original exhaust system through shafts adjacent to the corridors has been abandoned and the only method for ventilation is currently through operable windows.

INTERIOR – SYSTEMS

Most of the existing building systems are outdated and/or inadequate for contemporary use as an educational facility. See the following systems narratives for more details. Some of the more salient items referenced in the reports include:

- Original shaft system exhaust was disabled at some point leaving operable windows as the only ventilation method
- The 1980's vintage boilers have been in use beyond their expected life span
- Electrical systems including technology have been installed over time including: fire alarm system, interactive whiteboard projectors, and the support the elevator system. A full renovation education project would require replacement of all systems

There is no existing sprinkler protection system in the building. Particularly with the wood frame floor and roof system, installation of fire protection would be required for any significant educational renovation project.



SITE

Refer to the Nitsch Engineering report for comments on the site features including topography, site features, and utilities.

Of the 3.8 acre site, 2 acres is dedicated to a community ballfield that is reportedly heavily used. The balance of the site includes the school building, associated parking and driveways, and a fenced play area. The limited onsite paved areas have led to significant congestion in the central town location during the pick-up and drop off periods of the school day. In addition to special education and general bus traffic, many parents pick up and drop off their students.

Nitsch Engineering

October 20, 2017

ASSESSMENT OF EXISTING SITE CONDITIONS

For

THE BEAL EARLY CHILDHOOD CENTER SCHOOL
1-7 Maple Street
Shrewsbury, MA

Prepared for:

LAMOUREUX PAGANO
108 Grove Street
Suite 300
Worcester, MA 01605

Prepared by:

NITSCH ENGINEERING, INC.
120 Front Street, Suite 820
Worcester, MA 01608

Nitsch Project #12345

Nitsch Engineering conducted an existing site conditions assessment for the Beal Early Childhood Center School in Shrewsbury, MA. The purpose of the assessment was to evaluate to site features and characteristics that may affect redevelopment alternatives. The following information is based on record information provided by the Town of Shrewsbury, the Town of Shrewsbury's graphic information system (GIS) database, other record data, and on visual site observations made on August 9, 2017 by Nitsch Engineering personnel.

SITE CHARACTERISTICS

PROPERTY LOCATION & CONFIGURATION

The subject site (Site) is located at 1-7 Maple Avenue in Shrewsbury, MA. The associated parcel is listed as Shrewsbury Assessor's Office Parcel Number 22-15800 and includes approximately 3.86 acres (based on Assessor's data), and is owned by the Town of Shrewsbury Howard Beal High School.

The Site is situated on the south side of Maple Street, at the intersection of Maple Avenue and Main Street. The Site is bounded to the east by residential lots with frontage on Chase Terrace, to the west by Hascall Street, and to the south by Wesleyan Street.

The configuration of the Site is generally rectilinear, with an average width of approximately 250FT (east / west), and an average length of 650FT (north south). The parcel frontage is 330FT+/- along Maple/Main Street, 550FT+/- along Hascall Street, and 185FT+/- along Wesleyan Street.

ZONING CONDITIONS

Most of the Site is located within the Limited Business zoning district. A portion of the Site extending parallel to and approximately 150FT from the Wesleyan Street frontage is within the Residence B-2 zoning district. No portion of the Site appears to be located within other districts or overlay districts.

EASEMENTS AND OTHER PROPERTY LIMITATIONS

An electrical easement is located on the northeast portion of the Site and runs from Maple Ave southerly, parallel with Chase Terrace. The purpose for, contents of, and rights related to this easement are unknown.

There do not appear to be any other easements, rights of way, or related encumbrances on the Site, based on Town of Shrewsbury Assessor's data. This should be confirmed by the topographic and boundary survey procured by the Town. Although it does not appear to be located within an easement, a war memorial is centrally located on the Maple/Main Street frontage and presumably represents a spatial constraint relative to redevelopment of the Site.

EXISTING DEVELOPMENT

The Site is completely developed with the existing Beal School, vehicle parking and access areas, pedestrian walks, an athletic field, and playground. The pavements and bituminous curbs in nearly all areas of the Site are in a deteriorated condition and exhibit signs of failure, including significant cracking, raveling, and missing sections. The lower parking lot (see Site Access section below) is in somewhat better condition than the pavements immediately surrounding the school.

Picture 1: Pavement Deterioration

Picture 2: Pavement Deterioration

Picture 3: Pavement Deterioration

Picture 4: Pavement Deterioration

Picture 5: Pavement Deterioration

Picture 6: Pavement Deterioration

SITE ACCESS

The Site is accessed by several curb cuts. Two curb cuts on Maple/Main Street connect to a semi-circular drive that passes by the front entrance to the school and also connects to a series of parking spaces and access drive on the east side of the building. This drive continues onto a paved parking area on the south side of the building and connects to Hascall Street via a relatively large (50FT+/-) curb cut. An additional parking area is located further south on Hascall Street, accessed by two smaller curb cuts. The parking areas have been striped to accommodate approximately 97 vehicles.

TOPOGRAPHY

The Site generally slopes down from north to south and consists of two plateau areas. The existing school building is located on the "upper plateau" which drops roughly 6-8FT from front to back. The Site abruptly drops about 6FT to a "lower plateau" which includes the playground and athletic field. This area drops another 6-8FT toward Wesleyan Street, which is separated from the fields by another abrupt drop of about 4FT. The total grade change across the Site is approximately 26FT from EL. 660 at Main Street to EL. 634 at Wesleyan Street. The upper and lower areas are currently connected via a handicap ramp and railing system. The ramp system appears to be in good condition, although Nitsch Engineering did not verify ADA/AAB regulatory compliance.

TREE COVER AND VEGETATION

The Site is completely cleared for lawn and turf, except for minor landscaped areas, and tree growth along the eastern property line. Open areas are generally vegetated with mown grass.

SOILS

Based on National Resources Conservation Service (NRCS) data, the soils on the Site consist disturbed soil designated as Urban Land and Udorthents. Adjacent, off-site areas are mapped with Paxton and Woodbridge soils, which tend to have relatively high groundwater tables and may present issues related to groundwater and permeability.

In general, the soils are not likely to represent a significant development constraint in terms of bearing capacity, workability, groundwater management, or erosion.

ENVIRONMENTAL RESOURCES AND HYDROLOGY

There do not appear to be any wetland resource areas or other environmentally sensitive areas on or within close proximity to the Site. The Site also appears to be generally self-draining insofar as stormwater runoff does not appear to cross onto or pass over the Site. There are no rare species (NHESP designated) habitats, or vernal pools on or directly adjacent to the Site. The Site is not within nor directly adjacent to any FEMA flood hazard areas.

EXISTING SITE UTILITIES

STORM DRAINAGE

The portion of the Site surrounding the existing building does not appear to include any stormwater management infrastructure. All paved areas surrounding the school drain toward adjacent streets where runoff is collected by the municipal drainage system. A record document provided by the Town (a partial site plan that was presumably prepared for the construction of the lower parking lot) shows what appears to be a drainage pipe connection between the southern-most corner of the building and the drainage infrastructure in Hascall Street. The record document shows that the pipe connection also includes a drain manhole located just inside the property line on Hascall Street, between the upper and lower sections of the property. The manhole was not observed at the time of Nitsch Engineering's site visit.

A drain pipe crosses the Site under the existing athletic field on the southerly end of the property. The pipe appears to extend from the end of Chase Terrace via an easement through the residential parcels

to the east. The drain appears to connect to the municipal drainage system in Hascall Street. The record site plan provided by the Town does not indicate an easement associated with this pipe.

Based on information provided by the Shrewsbury Engineering Department, there may be a subsurface stormwater retention/infiltration system owned by the Massachusetts Department of Transportation (MassDOT) located on the northeast corner of the Site. The system receives runoff collected in the Maple Avenue right of way. The system may be non-functional as exhibited by reported ponding of stormwater at connected catch basin inlets in Maple Avenue. The size, configuration, and composition of the system is unknown.

What appears to be a capped cast iron downspout connection was also observed at grade at the center of the gymnasium wall. The record drawings to not include a drain pipe in this area.

Runoff generated by the lower parking lot is collected by a double catch basin which appears to connect to the municipal drainage system in Hascall Street.

SANITARY SEWERAGE

The record document referenced above shows a 6” AC sewer service pipe exiting from the eastern-most corner of the building and running south to a sewer manhole located between the upper & lower plateaus. The plan shows an 8” AC pipe running form the sewer manhole to the municipal sewerage infrastructure in Hascall Street. Based on the direction of the 6” AC pipe, it may have originally connected to a “cesspool” on the portion of the Site where the playground is situated. The construction plan for the parking lot / playground indicates that the cesspool was to be filled with sand. It is likely that the cesspool connection was eliminated and replaced with the connection to the municipal system.

WATER

Record documents indicating the location and connection point of the water service for the building are not available. A water gate valve is apparent on the Maple/Main Street frontage, indicating that a domestic water service connection for the building is derived from the municipal water system in Maple/Main Street. A fire protection pipe connection or fire department connection was not observed. No hydrants were observed on the Site, although a hydrant is in close proximity at the southwesterly corner of the Maple Street / Hascall Street intersection.

NATURAL GAS

A natural gas meter was observed at the northeast corner of the building facing Main Street, and gas service is presumably derived from a gas main in Main Street.

ELECTRICAL

Electrical equipment is present at the rear southwest corner of the building. The location of the underground electrical connection is not known.

TELECOM

Not known.

DEVELOPMENT CONSTRAINTS

Certain characteristics of the Site represent development constraints and/or significant redevelopment cost factors including the following:

EASEMENTS AND INCUMBRANCES

The existing electrical easement, the MassDOT drainage system, and the drain pipe from Chase Terrace referenced above should all be further investigated to determine easement conditions and infrastructure conditions to fully evaluate the extent to which they could affect future development of the Site.

ACCESS

The existing site is currently accessed by numerous, and somewhat large curb cuts onto Maple Avenue and Hascall Street. It is likely that redevelopment or reuse of the Site would require a comprehensive pedestrian and vehicular access design that would reduce the total number and size of the existing curb cuts and improve pedestrian access and circulation.

PAVEMENTS

Nearly all of the bituminous pavement on the Site is in a poor/failing condition. Under any redevelopment scenario, all paved areas and curbs affected by the project are likely to require replacement.

TOPOGRAPHY

Any redevelopment or reuse scenario for the Site would need to consider the implications of the existing topography. The existing dual plateau condition of the Site will require either a development program that is divided across these two areas, or a program that includes relatively substantial earth moving component to modify the existing site condition.

STORMWATER MANAGEMENT SYSTEM

The reported MassDOT subsurface stormwater system at the northeast corner of the Site may represent a construction constraint as it may affect the design of a stormwater management system that may accompany future development of the Site. An investigation of its type, components, and condition of the system should be included in future redevelopment planning efforts.

The disposition of the existing drain pipe extending from Chase Terrace should be evaluated. Maintenance of flow carried by this pipe across the Site may affect future development scenarios and the configuration of associated stormwater management systems.

The existing stormwater runoff and management conditions do not generally comply with currently accepted standards in terms of treatment of runoff prior to discharge. Any substantial reconfiguration and/or rehabilitation of the Site should be accompanied by the installation of a stormwater management system that complies with the current Massachusetts Department of Environmental Protection Stormwater Standards (per municipal requirements). At minimum, the system will include a water quality treatment component in the form of treatment chamber(s) and/or other Best Management Practices that address sediment/pollutant removal. Additionally, any redevelopment scheme that represents a net increase in impervious cover must include mitigation measures addressing control of peak runoff rates, and provision of groundwater recharge. Based on the relatively small size of the Site, this mitigation is likely to be in the form of a subsurface retention/detention system. The type and extent of the system(s) will be contingent on the selected redevelopment alternative.

SANITARY SEWER SERVICE

The record documents indicate that the existing sanitary sewer service connection consists of “AC” pipe. This designation typically refers to “Asbestos Concrete” pipe, commonly known as “Transite” pipe. The presence of this AC pipe represents two separate potential redevelopment constraints.

1. Due to the age of the building it is likely that the existing sewer service will need to be replaced to accommodate any redevelopment of the site or reuse of the building.
2. The topography of the site (dual plateaus) may necessitate earth moving under a redevelopment scenario that would require removal or the AC pipe.

In both cases, the AC pipe could be designated as a hazardous waste item, depending on how much of the pipe was disturbed/removed as part of the construction.

The record cesspool is not likely to represent any sort of material hazard, although it is likely to require removal under any significant redevelopment scenario that requires earth moving or new construction in that area.

WATER SERVICES

Unless the existing water supply service has been recently replaced, it is likely that the service will need to be upgraded under any redevelopment or re-use scenario. Redevelopment of the Site or reuse of the building is also likely to require installation of a fire protection service.

Beal Early Childhood Center School
Existing Structural Conditions
Shrewsbury, Massachusetts

1.1 Introduction:

The Beal Early Childhood School is a 33,000 ft^2 masonry veneered building that is being investigated for possible renovation and addition to support an increasing student population, as well as address the aging condition of the building. The wood and masonry building was constructed in 1922 and has remained relatively unchanged since original construction. The renovation and addition option being investigated includes updating the existing school building, and constructing a new structurally isolated addition on the existing site to support an increased student population.

Another option being considered is to abandon this school, and build a new school on an alternate site to accommodate the required student population. Should an entirely new school be constructed, the building will be designed in accordance to the Massachusetts State Building Code requirements for new construction. This report will describe the general conditions of the existing structure, as well as establish structural guidelines, in accordance with the Massachusetts State Building Code, that must be followed during a building renovation and/or addition to the existing building.

2.1 General Report Information:

This report presents the results of our Massachusetts State Building Code (MSBC) Structural review of the Beal Early Childhood School in Shrewsbury, Massachusetts. Our review has been completed in conformance with Chapter 34 of the Eighth Edition of the Massachusetts State Building Code, which became effective August 6, 2010 and the International Existing Building Code, 2009 Edition.

3.1 Basis of the Report:

- This report is based on the visible observations during our site visit on August 9, 2017.
- Original Construction Drawings (no foundation drawings available), “J. Williams Beal, Sons Architects” dated August 24, 1922.

Our observations of the existing building were limited to what was readily visible. We did not evaluate strengths of materials, remove finishes, or take measurements; therefore, we are unable to comment on any structural capacities or deficiencies of the existing structural systems beyond what was readily visible or shown on the existing drawings.

4.1 General Building Description:

The Beal Early Childhood School is a 1920’s era, two-story, brick veneered building with a daylight basement that provides classes for Pre-K through 1st Grade. The school building has remained relatively unchanged since construction with exception to general interior updates and room changes at the basement level.

The original 1922 building was constructed with masonry bearing walls (brick and terra cotta tile), wood framed floors, steel beam girders, steel roof trusses, and wood roof framing pitched to interior drains. Regular maintenance has included re-roofing the building and general maintenance.

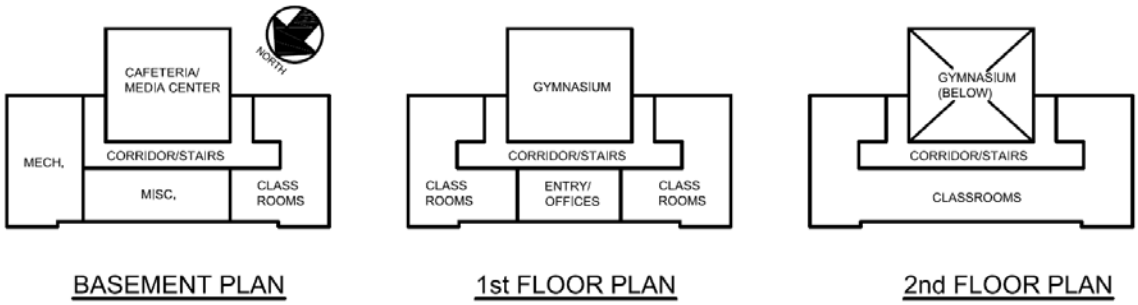


Figure 1-Floor Plans

5.1 General Existing Conditions:

General Exterior:
In general, the exterior walls of the building are 4" brick veneer backed up by unreinforced terra cotta tiles with no airspace between the veneer and backup. The south-east exterior wall of the gymnasium wing is 8" terra cotta tile, without the brick veneer. The exterior walls appear to bear on continuous concrete frost walls.

The exterior walls show signs of typical deterioration (minor thermal cracking, deteriorated mortar joints, and deterioration at steel lintels) due to the age of the building and will require attention during any renovation. There are signs that portions of the exterior veneer has been re-built, or patched due to general deterioration at the east face of the building. Exterior concrete foundation walls are in generally good condition, but there are a few areas that will need attention to seal cracks at the rear of the building to reduce the possibility of water infiltration.

General Interior:
The interior of the buildings appears to be in average condition for a building of this age. The basement level is typically exposed concrete floors and masonry interior bearing walls. The walls and floors appear to be in generally good condition with noticeable wear and tear. The first and second floors are wood framed (rough 2x14 joists, typically) with interior/exterior bearing walls. The drawings note the bearing walls are to be 2x5 wood members, but there are signs that masonry walls were installed. The wood framed floors are in good condition with some signs of creep due to age, but generally appear to be holding up. The plaster walls have some noticeable cracking, likely due to age, but generally appear to be in good condition.

6.1 Building Structure

The two-story building, with a basement, consists of:

- Foundations:
  - Concrete foundation walls with continuous spread footings (based on Architectural sections, no foundation plan provided).
  - Interior spread footings (assumed).
  - Concrete slab on grade.
- Columns:
  - Lally columns (5" dia) in Cafeteria space below Gymnasium.

  - 8” Steel H columns below steel trusses at Gymnasium.
- Walls:
  - Brick and terra cotta masonry interior bearing walls.
  - 8”, 12”, & 16” masonry exterior bearing walls. Terra cotta tile with brick veneer, typical.
- Floors:
  - First and Second Floor classrooms and gymnasium are wood framed with 2”x14” H.P. joists at 16” o.c.
  - Corridors are wood framed with 2”x10” Spruce joists at 15” o.c.
  - Wood sub-floor over wood framing.
- Roof:
  - Flat roof is framed with 2”x10” Spruce rafters at corridors and 2”x14” H.P. rafters at Classrooms and Gymnasium. Roof is pitched locally to internal drains.
  - Steel trusses span the Gymnasium space to support the wood rafters. Truss members are typically double angles at the chords and webs.
  - Wood board sheathing.

Figure 2-Front Elevation

The building structure is fairly typical for 1920’s construction, consisting of wood framing and masonry bearing walls. The masonry walls consist of brick veneer backed up by brick or terra cotta tiles, which was typical in the 1920’s but is rare today due to the lack of reinforcing and lack of ductility with the terra cotta tiles. The wood joists are typically rough sized lumber spanning from the interior bearing walls to the exterior bearing walls. The plans typically note double joists below walls that are parallel to the framing. The interior walls are typically plaster over wood or masonry backup. The floor finishes are a mix of concrete slabs, wood flooring in the gymnasium, and carpet throughout the remainder of the building.

In general, the interior of the building appears to be in average condition for a building of its age with general wear and tear showing in the flooring, walls, and ceilings. There is general cracking in the plaster walls, but the cracks appear to be due to the general age of the walls. The framed floors are typically covered in carpet, so we were not able to notice if the subfloor is showing signs of distress. The exterior bearing walls show some signs of previous repair efforts to address general aging to the

mortar joints and possible water infiltration. There are some newer signs of deterioration that will need to be addressed during a renovation. The deterioration includes lintels that are rusting or have water infiltration issues (north side of gymnasium veneer), mortar joints that need to be repointed, and concrete foundation wall cracks that should be sealed to avoid water infiltration. The tops of the masonry walls at the roof level are capped with limestone, which require general repointing due to their age and requirement for regular upkeep. Several of the top mortar joints appear to have been sealed with a mastic material to keep the water out and should be repointed to maintain integrity.

Snow loads for the original design are not noted on the original construction drawings, but rough calculations indicate that the design snow load was no more than 30 pounds per square foot (psf), which is less than the current Building Code load of approximately 40 psf for school buildings. If the renovation option is chosen, and the roof structure is altered, the existing members in the areas of the alteration will need to be reviewed with modified current snow loads to verify their adequacy. Typically, renovations to roof structures similar to this roof will require supplemental framing at any new modifications or fire protection systems. New roof mounted mechanical units should not be considered for this building, unless strengthening of the roof framing is proposed. Our view of the roof framing was limited to the area near the roof hatch during the site visit, and we did not notice distressed framing, but did notice some disconnected bridging (See Figure 3). Due to the age of the wood framing, and the light design snow load, we would anticipate that some roof framing may need to be repaired or strengthened during a full renovation and a more thorough review of the framing should be completed during the design phase.

Lateral loads (wind & seismic) are resisted by unreinforced masonry walls. The walls would not be adequate for new construction, but may remain unchanged as long as the building does not undergo substantial renovation. Under a substantial renovation, new walls or bracing systems would need to be installed to adequately brace Code mandated loads. It should be understood that due to the tight layout of the building, new walls or braces will likely not be possible, or cost effective.

Figure 3-Roof Framing at Interior Bearing Wall

7.1 Building Code Review- Structural:

This review presents our interpretation of the structural requirements of the International Existing Building Code, as modified by the Massachusetts State Building Code. In general, the provisions of The International Existing Building Code are intended to maintain or increase public safety, health, and general welfare in existing buildings by permitting repair, alteration, addition, and/or change of use without requiring full compliance with the code for new construction except where otherwise specified.

Assumptions:
In order to review the requirements of the Building Code for a renovation to the Beal Early Childhood Center School, the scope of the project must be defined. For this review we are assuming that a Renovation/Addition would include:

- Complete renovation to interior finishes (Painting, flooring, wall finishes, etc.) of existing building.
- New mechanical systems throughout building, including new mechanical rooftop units if the roof is capable of supporting the loads.
- Reroof the entire building.
- Construct a new structurally isolated addition (approximately 90,000-100,000 ft^2) to support added student population and new MSBA space requirements.

Building Codes:

- Massachusetts State Building Code, 8th Edition.
- International Building Code, 2009 Edition (IBC).
- International Existing Building Code, 2009 Edition (IEBC).

Classification of Work: Level 3 (IEBC Section 405) Work area will exceed 50% of the aggregate area of the building.

Structural Requirements associate with Level 3 Work:

Level 3 Work is the highest level of Alteration and the Work must conform to the Structural requirements of Levels 1, 2, & 3.

Level 1 Structural Requirements:

606.2 Addition or replacement of roofing or replacement of equipment: Where addition or replacement of equipment results in additional dead loads, structural components supporting such reroofing or equipment shall comply with the gravity load requirements of the International Building Code.

- There are several exceptions that are permitted by the IEBC. One exception is "Structural elements where the additional dead load from roofing or equipment does not increase the force in the element by more than 5 percent." Based on our initial review, general reroofing work will not increase the force in the element by more than 5 percent since the original roof was designed with a tar and gravel roof, which has appears to have been removed. But, new equipment or modification of roof openings will increase the forces in elements by more than 5 percent and will require a review the element in accordance with the IBC. Adding new members will be difficult with the wood roof framing of the 1922 Building. We recommend avoiding any new equipment on the 1922 Building roof, and assume any new equipment will be supported on new framing.

606.2.1 Wall anchors for concrete and masonry buildings: Where a permit is issued for reroofing more than 25 percent of the roof area of a building assigned to Seismic Design Category B, C, D, E or F with a structural system consisting of concrete or reinforced masonry walls with a flexible roof diaphragm or unreinforced masonry walls with any type of roof diaphragms, the work shall include installation of wall anchors at the roof line to resist the reduced International Building Code level seismic forces as specified in the IEBC.

- The existing walls throughout the building are unreinforced masonry walls and will need to conform to the requirements of this section. Based on our review, some of the walls of the 1922 Building are anchored to wood sill plates, but will need to be reviewed to check the condition of the sills and anchors. Interior bearing walls at the roof level appear to be short cripple walls over the masonry bearing walls. The cripple walls and roof framing do not appear to be anchored to the diaphragm in accordance with the Code and will need to be updated as part of the review.

606.3.1 Bracing for unreinforced masonry bearing wall parapets: Where a permit is issued for reroofing for more than 25 percent of the roof area of a building that is assigned to Seismic Design Category B, C, D, E or F that has parapets constructed of unreinforced masonry, the work shall include the installation of parapet bracing to resist the reduced International Building Code seismic forces specified.

- Work area exceeds 25 percent of the roof area, so the roof parapets will need to be braced. Most roof parapets are less than 16”-24” and will not need additional bracing, but the parapet at the front entrance exceed the limits (width-to-height ratio of 2.5) for unreinforced masonry and will need to be braced.

606.3.2 Roof diaphragms resisting wind loads in high wind regions: Where roofing materials are removed from more than 50 percent of the roof diaphragm of a building or section of a building located where the basic wind speed is greater than 90 mph or in a special wind region, as defined in Section 1609 of the International Building Code, roof diaphragms and connections that are part of the main wind-force resisting system shall be evaluated for the wind loads specified in the International Building Code, including wind uplift. If the diaphragms and connections in their current condition do not comply with these wind provisions, they shall be replaced or strengthened in accordance with the loads specified in the International Building Code.

- Roof diaphragm connections will need to be reviewed as part of the reroofing work. Based on our site review, the roof was sheathed with diagonal board framing, which would not be an adequate diaphragm and the connections do no appear to be adequate to conform resist mandated wind loads. Previous reroofing drawings were not available for review, so we are not aware if plywood was added during previous reroofing projects. We anticipate adding plywood to the existing roof diaphragm and installing additional roof anchorage as part of any substantial renovation project.

Level 2 Structural Requirements:

707.2 New structural elements: New structural elements in alterations, including connections and anchorage, shall comply with the International Building Code (IBC).

- New structural elements will comply with the IBC.

707.3 Minimum design loads: The minimum design loads on existing elements of a structure that do not support additional loads as a result of an alteration shall be the loads applicable at the time the building was constructed.

- Renovation will not change the minimum design loads on the structure. Existing design loads are not noted on existing drawings and will need to be computed prior to modifying existing elements.

707.4 Existing structural elements carrying gravity loads: Alterations shall not reduce the capacity of the existing gravity load-carrying structural elements unless it is demonstrated that the elements have the capacity to carry the applicable design gravity loads required by the International Building Code. Exceptions include structural elements whose stress is not increased by more than 5 percent.

- Design loads will be reviewed, but should remain unchanged at the existing structure.

707.5 Existing structural elements resisting lateral loads: Any existing lateral load-resisting structural element whose demand-capacity ratio with the alteration considered is more than 10 percent greater that its demand-capacity ratio with the alteration ignored shall comply with the structural requirements specified in Section 807.4.

- The existing unreinforced concrete masonry walls provide lateral support for the building. Modifications to the existing building to change wall locations or details will likely increase the demand capacity of the walls by more than 10% and will require an analysis and most likely new structural elements to resist the Code mandated loads.

707.6 Voluntary improvement of the seismic force-resisting system: Alterations to existing structural elements or addition of new structural elements that are not otherwise required by this chapter and are initiated for the purpose of improving the performance of the seismic force-resisting system of an existing structure or the performance of seismic bracing or anchorage of existing nonstructural elements shall be permitted, providing that an engineering analysis is submitted demonstrating the following:

  - The altered structure and the altered nonstructural elements are no less conforming with the provisions of this code with respect to earthquake design than they were prior to the alteration.
  - New structural elements are detailed and connected to the existing structural elements as required by Chapter 16 of the International Building Code.
  - New or relocated nonstructural elements are detailed and connected to existing or new structural elements as required by Chapter 16 of the International Building Code.
  - The alterations do not create a structural irregularity as defined in ASCE 7 or make an existing structural irregularity more severs.

- It would be our intention to present improvement options to the Owner as part of a renovation to be included in future work. Existing unreinforced masonry walls do not conform to the current Building Code and should be replaced with a dedicated seismic force-resisting system, if feasible. Due to cost implications, replacing the unreinforced walls with a new system will likely not be feasible.

Level 3 Structural Requirements:

807.2 New structural elements: New structural elements shall comply with Section 707.2.

- New structural elements will comply with the IBC, per 707.2.

807.3 Existing structural elements carrying gravity loads: Existing structural elements carrying gravity loads shall comply with 707.4.

- Design loads will be reviewed, but should remain unchanged at the existing structure.

807.4 Structural alterations: All structural elements of the lateral-force-resisting system undergoing Level 3 structural alterations or buildings undergoing Level 2 alterations as triggered by Section 707.5 shall comply with this section.

- Alterations to the building structure will be reviewed for conformance to this section. If the building undergoes a renovation/addition that includes demolition and modification of

the existing structure, the building will need to be analyzed to support the code mandated loads.

807.4.1 Evaluation and analysis: An engineering evaluation and analysis that establishes the structural adequacy of the altered structure shall be prepared by a registered design professional and submitted to the code official.

- Renovation to the interior finishes and systems is acceptable without a detailed analysis, but if interior partitions or portions of the building are subject to demolition, an analysis will need to be completed. It should be understood that the existing lateral force resisting system was not designed or detailed In accordance with the current seismic code in mind. Any substantial renovation will likely require a new seismic system of reinforced CMU shear walls.

807.4.2 Substantial structural alteration: Where more than 30 percent of the total floor area and roof areas of the building or structure have been or are proposed to be involved in structural alterations within a 12-month period, the evaluation and analysis shall demonstrate that the altered building or structure complies with the International Building Code for wind loading and with the reduced International Building Code level seismic forces as specified in Section 101.5.4.2 for seismic loading. For seismic considerations, the analysis shall be based on one of the procedures specified in Section 101.5.4. The areas to be counted toward the 30 percent shall be those areas tributary to the vertical load-carrying components, such as joists, beams, columns, walls and other structural components that have been removed, added or altered, as well as areas such as mezzanines, penthouses, roof structures and in-filled courts and shafts.

- The existing building would not conform to mandated loads and detailing requirements and would need to be significantly updated, if the renovation included a significant structural alteration. Due to the age of the building, we recommend limiting alterations to the architectural finishes and select structural modifications. This building is not a good candidate for significant structural alterations.

807.4.3 Limited structural alteration: Where not more than 30 percent of the total floor and roof areas of the building are involved in structural alteration within a 12-month period, the evaluation and analysis shall demonstrate that the altered building or structure complies with the loads applicable at the time of the original construction or of the most recent substantial structural alteration as defined by Section 807.4.2. Any existing structural element whose demand-capacity ratio with the alteration considered is more than 10 percent greater than its demand-capacity ratio with the alteration ignored shall comply with the reduced International Building Code level seismic forces as specified in Section 101.5.4.2. For the purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with sections 1609 and 1613 of the International Building Code with Massachusetts Amendments. For purposes of this section, comparisons of demand-capacity ratios and calculation of design lateral loads, forces, and capacities shall account for the cumulative effects of additions and alterations since original construction.

- With structural upgrades that would be required as part of the renovation, and the limited structural alteration, the buildings could be reviewed to support loads applicable at time of original construction. Structural upgrade requirements would be established during the design, but we would expect the seismic force-resisting system would need to be upgraded throughout the building by replacing existing partitions with dedicated masonry shear walls.

8.1 Conclusions and Recommendations:

The purpose of this report is to identify any structural deficiencies and liabilities that will need to be addressed during any substantial renovation, which we understand, is being considered. The report is based on the premise that the existing building will remain in use as a school, and room live loads will not change. We have reviewed the existing Beal Early Childhood Center School in accordance to Chapter 34 of the Massachusetts State Building Code, Eighth Edition and the International Existing Building Code, 2009 Edition. We have reviewed the general conditions of the building, as well as the structural modifications that will need to be addressed as part of the renovation to increase the public safety of the building. This report, in its entirety, shall be used as the basis for the renovation. The following items are meant to highlight conditions or deficiencies noted in the report, but do not limit the work required.

General Information:

- Existing building area is 33,000 ft^2.
- The proposed renovation/addition will produce a finished building of approximately 120,000-130,000 ft^2 (to be verified with final student population and MSBA space requirements).
- The existing roof membrane should be reviewed for regular maintenance or replacement.
- Any structural work associated with the renovation/addition shall conform to the International Existing Building Code, as amended by the Massachusetts State Building Code, and specifically any additional requirements for Level 3 work.
- Should the renovation project be abandoned and an entirely new building be considered, the new building design shall be in accordance with the Massachusetts State Building Code, current edition.

1922 Building Existing Conditions:

- Exterior veneer in average condition and requires general maintenance, including repointing and repair of deteriorating lintels.
- Masonry bearing walls are unreinforced terra cotta tiles, and/or unreinforced brick, and appear to be in generally good condition. Walls appear adequate for existing layout, but would not be easy to modify, or adjust for differing loading conditions.
- Concrete foundation walls at daylight basement area require repairs of a few cracks to limit water infiltration.
- Wood floor framing was not exposed to view, but ceilings and floors appeared to be in generally good condition. Floor joist bending stresses appear to be approximately 1,200-1,400 psi assuming a live load of 50 psf and dead load of 25 psf.
- Roof appears to be designed to support snow loads of 30 psf, or less, which is less than the 38.5 psf current snow load in Shrewsbury, and will need to be reinforced at renovations that affect the roof framing.

Structural Requirements for Renovation/Addition:

- Geotechnical exploration will be required for any new construction, as well as any structural foundation work to the existing building.
- Roof snow loads:
    - Original: Unknown, computations of existing framing estimate at 30 psf.
    - Renovation: 38.5 psf plus drift caused by any additions or new roof elements.
    - Additions: In accordance with Massachusetts State Building Code.
- Lateral load resisting system requires significant modification to conform to current Code requirements if the existing structure is modified to create new openings in masonry walls.
    - New shear walls or bracing systems are required to provide a regularly spaced and organized system layout, in accordance with accepted engineering practices.

    - Existing interior and exterior bearing walls can remain in service as unreinforced masonry shear walls, but will need to be adequately connected to the roof diaphragm to avoid being a seismic hazard.
- Unreinforced masonry partitions (interior) are built-up to the ceiling framing, but are not adequately connected to the roof diaphragms to resist seismic loads. We recommend remedial action be taken during the construction phase to install new anchors and sheathing to adequately create a load path from the roof to the masonry partitions.
- The adequacy of the roof diaphragm is unknown and will need to be reviewed as part of further investigation during the design phase. The original roof structure consisted of wood boards, and should be reinforced with rated plywood sheathing, assuming that plywood sheathing was not installed during previous renovations.
- Additions should be structurally isolated from the existing building to reduce the seismic upgrade requirements of the existing building, if possible. Also, additions should be situated to avoid causing snow drifts on the existing building, otherwise reinforcement of the existing roof will be required.

Based on our review of the existing conditions, as well reviewing Chapter 34 of the Massachusetts State Building Code, it is our professional opinion that the existing building is capable of being structurally renovated and reused as a school. It should be understood that the building could require upgrading of the seismic force-resisting system and installing new structural framing to support new equipment and updated snow loads if existing structural systems are modified or impacted by the renovation.

While it may be structurally possible to renovate the buildings, it may not be financially feasible due to the extent of the renovations required. Should the Town of Shrewsbury choose to renovate the building, it should be done with the understanding that structural upgrades noted in this report will only bring the building up to the minimum standards of the Building Code for existing buildings, and will not meet the Building Code requirements for new buildings. The requirements noted in this report will <u>not</u> increase the gravity load capacity of the structure, which will limit the flexibility of any renovation.

Beal Early Childhood School - Shrewsbury, Ma.
FP Existing Conditions – 9-29-17

BUILDING DESCRIPTION

General:

The Beal Early Childhood School (Beal) is located at 1 Maple Ave, Shrewsbury, Ma. 01545. The building was constructed in 1922 as a junior / senior high school.

It is block and brick exterior-walled-building with wood framed floor and roof structure. Interior finishes are in general non-combustible, though the original construction documents (OCDs) show the building interior-wall framing is wood, combustible construction,

Spaces containing combustible interior finishes include the gym, (which has wood-paneling to various heights along the walls and a wood floor), the 2, wooden, interior stairways, a wooden basement exit ramp, a wood-lined, 1st-floor custodial closet, and a raised wood-platform in the SE corner kindergarten class on the 1st floor. The interior stairs, basement exit ramp, and the raised kindergarten platform also contain combustible, concealed spaces below.

There are also 2 wooden, exterior fire-escapes,

The building has a basement plus a 1st and 2nd floor above. The basement is mostly below-grade-with-window-wells in the front of the building, and mostly above grade in the rear. The wood-framed attic is un-used, and accessible only thru 1 small stairwell hatch. There are ventilation shafts running full height of the building in every classroom. Though the OCDs show these as metal lined, it is likely they contain some exposed wood.

NFPA 13 would consider all concealed spaces containing any exposed wood as "combustible concealed spaces" requiring sprinkler protection.

Current total building area is approximately 32,000 gross square feet.

The highest floor level (2nd floor) is well under 30' above the lowest fire department access. The peak of the mostly flat roof is approximately 35 ft above grade. The building's main entrance is about 350 feet from the closest hydrant located at the corner of Maple Ave and Hascall St.

Fire Protection:

According to Bob Tozeski, City Water Dept. Supervisor, the Maple Ave. main is an 8" line, fed off of a 16" Main St. main. There are no drawings showing the water feed to the school,

Bob Tozeski also stated the flow test done on 10-24-14 for the construction of the new (nearby) Shrewsbury library is the most recent flow test for that area. That test showed a

static pressure of 51 psi, with a residual pressure of 46 psi with 1126 gpm flowing. The library site is at a higher elevation than the Beal school, so available pressure at Beal can be expected to be slightly better than this. These are sufficient to service a new FP system for the existing building

Other than the 1 near-by city hydrant, there is no existing fire protection in the building. The existing water service into the building serves only the plumbing system and is undersized for a dual plumbing / FP service.

If the building is renovated or newly constructed, sprinklers will be required through-out, and a new, FP service will be required into the building. Standpipes would not be required in the original building, due to the low height of the highest floor.

Ceilings:

In most classrooms and corridors, hung acoustical ceilings have been added below the original plaster ceilings. In many cases, the plaster above the hung ceiling is partially missing or completely removed, leaving the wood-lathed exposed. Classroom closets, restrooms, the kitchen, locker rooms, etc. all have inaccessible hard ceilings.

New FP piping could be readily run above the hung ceilings. Where ceilings are plaster, FP piping would either have to be run exposed, or new ceilings installed.

Due to the exposed wood lathe above all hung ceilings we checked, sprinklers would be required both above and below the ceilings.

Special Protection:

There are several wood-construction exterior canopies. 1 canopy extends just over 4' from the building, so would require dry sidewall sprinklers (piped off of the main wet sprinkler system) to protect the area underneath.

The main entrance vestibule appears to have no heat, so that would also need to be protected by dry sidewall sprinklers, or have heat added.

The exposed-wood-framed attic would require a dry-sprinkler-system through-out.

The 1st floor, wood-lined, custodial closet also has no ceiling, so is open to the above ceiling area. That space would require additional sprinklers above it's open top.

Other areas requiring 2 levels of sprinkler protection include (at minimum): above and under the wood basement exit ramp, above and under the classroom raised-wood-platform(s), above and under the 2 wood stairwells, and above and under a small wood platform in the custodial area.

Hazard Levels:

Classrooms, offices, hallways, gymnasiums, and cafeterias are generally considered "Light hazard" relative to fire-suppression. Light Hazard areas require the lowest level of sprinkler protection. Being an elementary school, there are no science-room gas supplies.

Many rooms designated as "storage rooms" on the OCDs have since been converted to other uses such as classrooms or meeting rooms. The storage rooms that still exist are generally small (well under 1,000 sqft), with materials stored under 12' high. Most of these areas would be considered "miscellaneous storage", and designed as an OH2 occupancy. Storage rooms with shelving over 30" deep (aisle to aisle), have a higher hazard rating – which depends on the type of materials stored. .

Other "Ordinary hazard" areas would include (group 1) the main kitchen, kitchen service areas, and (group 2) mechanical and electrical rooms, and densely packed storage-areas.

Storage:

Storage is a critical issue that should be addressed as part of any renovation or new construction. When a building has insufficient storage space, other spaces not intended or designed for storage can end up being used for storage. The current staff appears to be diligent in keeping most storage rooms well-organized and neat. There seems to be insufficient storage space, however, as we also noted storage under stairs and in mechanical spaces. Storage leaking into such areas violates code. Storage in the basement mechanical spaces is not well organized, and appears to be "spill-over" from already full storage rooms.

Storage height is another important aspect of the storage issue. Sprinklers require between 18" and 3' clearance between the sprinkler deflector and the top of storage (depending on the type of sprinkler and type of stored material). When storage space is insufficient, storage often extends right up to the ceiling or roof deck. Materials stored in this way would obstruct a sprinkler's water flow, potentially keeping it from reaching the fire. This would also be a code violation.

If a new Fire Protection system is installed, it is important that the use of every room to be sprinkled be clearly defined. Storage rooms require a higher level of sprinkler protection than offices, classrooms, electrical rooms or non-combustible mechanical spaces, so it is important that storage be confined to designated storage rooms, and not leak into other spaces having a lesser level of protection.

A storage plan should both include an assessment of "who needs to store what" and "how much should be stored", as well as an assessment of available storage areas, and the maximum storage height permitted in each space.

On our 8-9-17 site visit, we looked at every room, and did not observe any storage extending up over 12' in height. This is good, and will help minimize FP hazard levels and costs.

We did not observe any flammable or combustible liquids stored in the school – which will also help minimize FP hazard levels and costs..

One storage issue of concern is the amount of stored plastic materials. Foam and plastic are made from oil, so are, generally speaking, highly flammable. Plastic storage must be kept below 5' in height to be considered an "ordinary hazard". When plastics are stored above 5' in height, the storage area becomes an "extra hazard" (EH) level room. EH protection requires approximately twice the total design water flow as OH protection, increasing piping and equipment costs.

2 storage rooms off of the gym contain stored plastic materials to 9 ft and 10 ft in height. In addition, most classroom teachers are using numerous small plastic bins to organize their teaching materials. In some rooms these were kept below the 5 ft height limit. In some rooms plastic bins are also stacked on top of other furniture, so extend almost to the ceiling. These are the only spaces we saw that might be considered "Extra hazard".

Flammability standards:

527 CMR (State Fire prevention code) sets flammability requirements for furniture, and window coverings (drapes, blinds, etc). We noted a few rooms with curtains covering the front of open shelving that appeared to be "home-made". These would likely not meet any flammability standards.

Local Requirements:

According to the Shrewsbury Fire Department's fire prevention officer Deputy Chief Bruce Card, the city has no special fire protection requirements beyond State and NFPA requirements.

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September 11, 2017

Ms. Kathryn Crockett, AIA, LEED® AP
Lamoureux • Pagano Assoc., Arch.
108 Grove Street, Suite 300
Worcester, MA 01605

Re: Mechanical Systems Survey and Recommendations at the Beal School in Shrewsbury, MA

Dear Ms. Crockett:

The following is a summary report outlining our preliminary observations and comments regarding the status of the existing HVAC, plumbing and fire suppression systems at the Beal School in Shrewsbury, MA. In addition, we have made preliminary general recommendations for further consideration as part of a general renovation project.

EXISTING CONDITIONS INSPECTION & RECCOMMENDATIONS

Several weeks ago we performed a brief site inspection of the existing building. Our visual observations along with information provided by facility personnel, when applicable regarding the current building systems operating status were used extensively in assembling this report.

Condition of existing system segments has been classified in three (3) ways as follows:

Rating - Good: System segment appears to be in good operational condition and complies with most current codes and standards and well suited for present and future use.

Rating - Fair: System segment appears to be in fair operational condition with some aspects which may not comply with current codes and/or standards and may not be well suited for present and future use.

Rating - Poor: System segment appears to be in poor operational condition, may not comply with many current codes and standards and is not suited for present and future use. In general these systems have exceeded their useful expected service life.

<u>FIRE PROTECTION</u> Rating = Poor

Existing Conditions and Deficiencies:

There is no fire suppression system serving the building.

Recommendations:

A building wide fire suppression system should be installed during any renovation project.

PLUMBING

Fixtures: Rating = Poor

The existing buildings plumbing systems do not appear adequate in quantity for the current occupancy use and are of varying age. However, several of the fixtures did comply to some extent with ADA/MAAB guidelines for accessible fixtures.

Existing water closets are a mix of floor mount flush valve type and tank type with a majority of the student fixtures on the basement and 1st floor being flush valve type and student fixtures on the 2nd floor as well as a staff restroom on the 1st floor being tank type. The single staff restroom on the 1st floor had a tank style toilet which had been removed from it outlet flange and was out of service. Urinals are of the wall hung type and lavatories are of the wall hung style with 2 handle lever faucet. Many of the fixtures do not comply with current low water use codes and standards.

Although some of the restrooms attempted to comply with accessibility regulations to some degree many failed. Potential compliance deficiencies as well as some general restroom fixture count deficiencies were noted were as follows:

1. On the basement level, the girls and boys accessible water closets were too close to the wall at 16.5” to fixture centerline as opposed to the required 18”.

2. On the basement level, the girls and boys accessible water closets were too high complying with adult handicap height of 19” but not elementary school height which would be lower.

3. On the basement level, the girls and boys accessible water closets were too high even exceeding adult handicap height at over 19”. Elementary school handicap height would be lower

4. Staff restroom in basement level had an accessible water closets which was too far from the wall at 25” to fixture centerline as opposed to the required 18”.

5. One of the two first-floor staff restrooms had its water closet removed and was out of service.

6. All staff toilets were of the unisex type with only one on the basement level and one on the first floor. Uni-sex toilets do not count towards the required men’s and woman’s fixture counts and as such to comply with code the two (2) first floor staff restrooms

should be labeled as men's and woman's and be made accessible. Their location on the first floor would place them within two floor intervals of the basement level and the second levcl thereby satisfying code requirements. Any additional staff restrooms such as the one on the basement level could then be listed as uni-sex.

Many of the public use lavatory sinks do not have metered (self-closing) faucets as generally required by code. In addition, public lavatory faucets do not have limit stops or tempering valves to insure hot water does not exceed 110°F for scald prevention.

Most classrooms have stainless steel sinks for hand washing. Many of these sinks are fitted with deck faucets and many a drinking bubbler attachment. The sink height varied throughout the building however none appeared to be fully compliant with accessibility codes. If the sinks are used by students proper tempering control for scald prevention is essential.

There is an electric water cooling drinking fountain located on both the first and second floor. Neither of these fixtures comply fully with accessibility requirements.

The kitchen in the building is very limited with only a 3-bay scullery sink and a hand wash sink. Typically, board of health regulations would require a 2-bay food prep. sink as well. The 3-bay sink has no grease trap which would be required by the plumbing code. Future major renovations may also mandate the need for an exterior grease trap.

We noted two Janitors use type sinks both in the basement level. One is located in the boiler room and has cold and hot water faucets with vacuum breakers. The other sink located adjacent to the basement bathrooms was a fiberglass style unit which had a faucet with hose in the sink without a vacuum breaker. A vacuum breaker would be required to minimize the possibility of siphon through the hose. Current code would require a Janitors sink on each floor.

Fixtures vary in age many being of the older non-water saving type and some meeting the 1.6 GPF req. of water closets. Apparently maintenance is routinely performed on faucets, toilet fill valves, etc.. as needed. If a renovation requires removal of the fixtures, upgrade of these fixtures to water conserving type shall be required.

Cold Water Service: Rating = Fair

A 2" cold water line enters the building in the area of the basement level teachers lounge. The service runs through a 2" compound style water meter prior to feeding the buildings domestic water loads. There is no backflow preventer or pressure reducing valve installed on the incoming water service. In facilities such as this where there could be various potential sources of cross contamination, a backflow preventer may be required to protect the municipal water supply. A pressure reducer would be required if the incoming water supply pressure exceeded 80 psi. Local requirements should be confirmed with the water department and plumbing inspector.

The only backflow preventer we noticed was a 1" reduced pressure zone style unit located in

the boiler room. The backflow preventer is piped to the boiler feed tank as well as each of the two boilers.

We noted most of the piping in the building appears to be copper. Due to the age of the building there is a high probability that the water service could have lead containing solder in the fittings as well as drinking fountains that may have lead containing components. Although not a large source of lead contamination it should be tested and monitored and if found to be a problem, components should be replaced. In general, there were no outward signs of failure during the day of our site inspection.

Domestic Hot Water Service: Rating = Fair

The domestic hot water needs of the building are supported by one (1) A.O. Smith #BT-80-300 gas-fired water heater. The water heater has a rated input capacity of 75,100 BTUH and a tank capacity of 80-gallons. The unit is in good condition with an estimated age of 5 years. Reuse of this unit could be considered during a renovation project however we suspect its capacity may be lower than required especially if all classroom fixtures are to have working sinks.

Current code would require differing water temperatures at different types of fixtures. Lavatory sinks and sinks for young student use must not discharge hot water at a temperature exceeding 110-112°F for safety reasons, whereas service fixtures (janitor's sinks) are required to have hot water temperatures in excess of 120°F for sanitation reasons. The current system appears to supply a single temperature water to the building which, with the absence of lavatory and student use fixture mixing valves, should be 110°F +/- however this would not properly support the service sinks or the 3-bay sink. Any upgrade must consider a central duel mixing valve station or local mixing at lavatory sinks. Lavatory sinks with limit stops and/or local mixing for lavatory sinks is the favored approach. Storage tanks should be kept at temperatures of 135° F to 140°F so as to prevent the possibility of bacteria growth within the tanks.

Drainage Systems: Rating = Fair

Most of the sanitary drainage piping is concealed from view, however what we were able to see was primarily of the no-hub cast iron type. The sanitary sewer lines run below the slab and exit the building to a municipal sewer system.

We were unable to access the roof during our site inspection however it would appear that the roof storm water is drained via roof drains connecting to internal leaders. The lines presumably exit the building and connect to a municipal storm water system. Emergency overflow drains may need to be added if the roof has a parapet or cannot otherwise support the weight of water due to a blocked primary roof drain.

Besides those items noted herein and elsewhere in this report, we noticed no other outward signs of failure in either the sanitary sewer system or the storm drainage system during our site inspection.

Natural Gas Service: Rating = Good

A natural gas service is located at the front corner of the building and enters the basement level through a storage room into the buildings boiler room. The exterior service entrance consists of a 1.5" elevated pressure gas line increasing to a 2" and running through a gas meter then a pressure reducer prior to increasing in size to 4" and entering the building. The 4" service feeds the gas loads in the building which include the heating boilers and the domestic hot water heater. The gas is distributed to the building by Eversource.

Recommendations:

Pending final master plan programming the proposed recommendations are as follows:

1. Provide tempering mixing valves on lavatory sinks and student use sinks as needed to insure occupant safety.
2. Replace water coolers with new ADA compliant type providing additional coolers where needed. High consideration should be given to coolers with bottle fill capabilities.
3. Where restrooms are renovated, replace original vintage water closet fixtures with new ultra low flush (1.28 GPF) water conserving units with automatic battery-powered flush valves.
4. During renovations, replace original vintage cold water and hot water piping with new type with 0 lead materials.
5. Where restrooms are renovated, Replace original vintage urinals with new ultra low flush (0.125 GPF) water conserving units with automatic battery-powered flush valves.
6. Where restrooms are renovated, replace original vintage lavatories with low flow style with automatic battery-powered faucets with mixing adjustment (tempering valves noted in #1 may not be required if this options is taken pending proper fixture selection).
7. Provide accessible staff restrooms on the 1st floor.
8. Provide Janitors sink on the 1st and 2nd floors.
9. Provide backflow prevention on building water service, Janitor sinks and at other fixtures requiring such.

<u>HVAC</u>

Boiler Plant: Rating = Poor

The heating needs for the building are supported by two (2) HB Smith model #350 Mills cast iron sectional low-pressure steam boilers. The boilers are over 30-years of age and have exceeded their useful service life as defined by the ASHRAE. As such, any future renovation should consider their replacement.

Each boiler is fitted with a dual fuel oil/gas Powerflame burner with a rated maximum input

capacity of 4,650,000 BTUH however the boilers rated input capacity of 2,954,000 BTUH which limits the capacity of the burner. The burners currently are fueled only by natural gas with oil supply being capped off.

According to facility personnel, the building was once supported by an underground fuel oil tank which has since been removed. Old caped oil lines were noted protruding through the foundation wall. There are also two (2) 330-gallon oil tanks located within the boiler room. These tanks appear to have no oil in them and have been capped and abandoned in their current location.

Much of the steam condensate from the building discharges to a duplex style condensate pump. This pump then discharges to an elevated boiler feed tank with duplex pumps. Each pump is piped to a respective boiler to support its water feed needs.

Each boiler is flue vented to a masonry chimney. The condition of the masonry chimney is unknown. The gas water heater is also vented to this chimney.

Combustion air for the boiler room is supplied from a ducted wall louver arrangement with low duct in room. There are no motorized dampers on the duct which would be required by current energy codes. A high louver section appears to have been boarded off.

The boilers, boiler feed pump and nearby piping appear to be relatively old and although in workable condition would be prime candidates for replacement during any substantial renovation.

Piping Distribution System: Rating = Fair/Poor

Steam and steam condensate from the boiler plant is distributed throughout the building via a 2-pipe distribution system. The system primarily supports steam fin-tube radiation located throughout the building. Traps appear to be of the thermostatic type and the float and thermostatic type depending on what they service. Many traps show limited signs of maintenance. Inadequate trap maintenance results in inefficient system operation allowing active steam to discharge into the condensate system which can also result in noisy steam hammer.

Ventilation & Misc. HVAC: Rating = Poor

Ventilation to most areas of the building is extremely limited. An old abandoned 100% outdoor air system located in the basement. The system consisted of a large fan which has since been removed along with a steam radiator connecting to ductwork routed throughout the basement which connects to numerous vertical chases leading to wall grilles in classrooms within the building. In addition, exhaust grilles in most rooms are ducted to passive air shafts which at one time had active steam radiators to induce airflow out of the building. These shafts, had at one time exited the roof however, according to facility personnel these shafts have since been sealed off at the roof level. The entire system in inactive and has been

abandoned in place.

As such most rooms are limited to natural ventilation via windows. The American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) Ventilation Standard 62 along with the building code, requires outdoor air levels of between 11 to 20 cfm per person dependent on occupancy classification and space use. Technically, operable windows in certain areas may satisfy the natural ventilation requirements of the Commonwealth of Massachusetts State Building Code. However, although this may be adequate for lightly populated areas, we feel that for spaces such as classrooms, proper indoor air quality can only be achieved through positive outdoor air ventilation. Natural ventilation relies on occupants to control their air quality levels manually by opening and closing windows. Since most space pollutants are odorless, we feel it is unrealistic to expect occupants to gauge the contamination level of the indoor air and open a window in the cold of winter to obtain proper air quality.

The basement level boys and girls restrooms have a ducted exhaust system however it was unclear if this system was operational. Staff restrooms on the basement and 1st floor had no exhaust ventilation which is required by code. Boys restroom on the 1st floor had an in ceiling exhaust fan ducted to the exterior however the girls restroom had none. Regardless of whether the restroom has an operable exterior window, active exhaust ventilation is required in all restrooms.

The kitchen hood exhaust system is does not comply with the Mechanical code or NFPA 96 for use as a grease type hood. Its primary deficiencies in this regarded is that the exhaust duct is not welded the hood has no suppression system and the sidewall fan is in a wooden box. There are no grease making appliances or cooking appliance of any type under the hood at the time of our walkthrough and as such some of this may not be required. The hood may be effective as a heat capture and rejection hood for sealed ovens in it current configuration otherwise it would require upgrade.

Controls: Rating = Poor

There is limited controls within the building. The steam plant is controlled by a Heat Timer controller which typically looks at outdoor air temperature, indoor air temperature as well as return condensate temperature to optimize the boiler plant to support the building load. Otherwise much of the system operates utilizing local controls such as non-electric thermostatic valves for the fin-tube radiation.

Recommendations:

The radiators as well as the buildings piping distribution system have exceeded their useful service life the entire heating distribution system should be replaced during a renovation project.

The building should be provided with a central ventilation system to provide the code required outdoor ventilation air to each space. We recommend the building be converted to a hot water

based hydronic distribution system consisting of new fin-tube radiation and piping supported by pumps on energy saving variable speed drives.

Also, all new systems should be tied to a complete building wide energy management system incorporating energy saving routines such as demand ventilation reset, room by room occupancy control, intelligent start/stop, etc… should be implemented.

If you have any questions regarding this report please do not hesitate to call.

Sincerely,
Seaman Engineering Corporation

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President

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12 September 2017

Beal Early Childhood Center School

1 Maple Avenue
Shrewsbury, MA 01545

RE: Existing Electrical Systems Review

Prepared by: Thomas F. Lutynski

SUMMARY

ART has completed site surveys and reviewed available drawings for the existing Beal Early Childhood Center School in Shrewsbury, Massachusetts, built in 1922. We have developed a Good/Fair/Poor rating system for the various electrical systems.

The rating system was developed to give a concise, overall assessment for each system. In general, a system rated "Good" typically is up to date with current codes and well suited for current and future space intent. A "Fair" rated system may have some equipment in need of replacement or portions not suited for current or future space programming. Systems that are rated "Poor," are not well served for current or future space programming, and are outdated or obsolete. There are many reasons fair or poor ratings, including but not limited to age, current code compliance and maintenance.

The Massachusetts State Building Code 780 CMR requires all buildings and structures and all parts thereof, both existing and new, and all systems and equipment therein which are regulated by the State Building Code to be maintained in a safe, operable and sanitary condition. All service equipment, means of egress, devices and safeguards which are required by the State Building Code in a building or structure, or which were required by a previous statute in a building or structure, when erected, altered or repaired, shall be maintained in good working order. It is unknown whether any of the existing systems have been maintained or tested per the manufacturer's recommendations or system standards over the years they have been in service.

BUILDING ELECTRICAL SYSTEMS

1. Electrical Service:

The existing electrical service is rated 400 Amperes, 208/120 Volt, 3-phase, 4-wire. The primary electrical service originates at the riser pole on the street and runs underground to a padmount transformer outside the building. The service conductors are installed in a 4-inch conduit and terminate into a fusible main disconnect switch. The main disconnect switch feeds a distribution panelboard consisting of thirteen (13) switch and fuse units with no spare capacity. The service equipment is by Westinghouse and original to the building. The service equipment is past its useful working life.

Rating: Poor

2. Normal Distribution

Most panelboards in the building are by Bryant and GE, some original and some installed during various renovations. The panelboards are located throughout the building in electrical rooms and hallways, and are circuit breaker type. The branch circuit panelboards are past their useful life. Several different types of wiring methods were observed namely wires in raceway, metal clad (MC) cable, and armored cable (AC). It appears that some of the feeder and branch circuits utilize the conduit as the grounding path and do not have a dedicated grounding conductor. The grounding can become ineffective due to rust and bad connections between conduits and boxes over time. It is recommended that the electrical distribution equipment be replaced together with all branch circuit wiring due to age.

Rating: Poor

3. General Purpose Power

The general-purpose power in the building is inadequate. The classrooms have inadequate number of receptacle outlets. Additional outlets have been installed in some rooms over the years in surface raceways. The branch circuits most likely utilize the conduit as the grounding path and do not have a dedicated equipment grounding conductor. The grounding can become ineffective due to rust and bad connections between conduits and boxes over time. New wiring devices and branch wiring is recommended.

Rating: Poor

4. Emergency /Standby Power

The building is not equipped with an emergency generator.

Rating: N/A

5. Egress & Exit Lighting

The egress and exit lighting is provided via self-contained battery backup units. The overall coverage of exit signs appears to be adequate, though none exist in the classrooms. Exit signs are a combination of both original to the building and some newer types. New code compliant egress and exit lighting is recommended.

Rating: Inadequate

6. Lighting & Controls

The lighting in the building is a mixture of various fluorescent fixtures (recessed, surface, pendant, etc.) with both T8 and T12 fluorescent lamps. The lighting system is inefficient and does not meet current energy codes. Lighting control is by wall mounted switches in classrooms and common areas. More than any other parts of the building, classrooms have been renovated with new but outdated recessed fluorescent flat prismatic lense troffers. Network control of lighting is not provided.

Rating: Poor

7. Telecommunications Cabling Infrastructure/Equipment

An underground multi-strand fiber optic cable from a street utility pole enters the basement mechanical space and terminates in a fiber optic cable patch panel. Several strands of the fiber optic cable are routed from this patch panel to a first-floor telecom room consisting of a single, floor mounted rack with patch panels and an UPS system. This room neither complies with clearances required by BICSI (Building Industry Consulting Service International) nor does the room have adequate HVAC services. The outgoing cables are CAT 5 for data and voice communications. Wi-Fi access points (WAPS) are located throughout the building comprising the wireless data network.

An underground multi-conductor telephone cable feeds a first floor 66-block punch down point in the same telecom room, and is distributed by CAT 5 cable to telephone jacks throughout the building.

Rating: Fair

8. Fire Alarm System

The fire alarm control panel is a Simplex 4002 eight-zone (6 active) panel with a radio master box connection to the Shrewsbury Fire Department. The system is tone-visual type. The fire alarm control panel is located at the main entrance. The fire alarm panel is in good condition but current codes require a voice evac type system instead of a tone-visual type. The visual signaling devices are

inadequate and do not comply with NFPA-72 standards for visual notification. Overall coverage of the automatic fire detection devices appears to be good. A new code compliant fire alarm system is recommended.

Rating: Fair

9. Public Address (PA) and Clock Systems

The PA system is a Bogen with a model CA-21 (privacy/talk/press to call) switch and speaker in each classroom, and head end equipment in the main office.

A general PA system does not exist.

The clock system is comprised of individual battery operated clocks with no system functions.

Rating: Poor

10. Audio-Video Systems

Each classroom has an Epson BrightLink 485Wi interactive projector which model has since been discontinued. Future programming needs will require upgrades to the projectors and interactive boards.

Rating: Fair

11. Video Surveillance, Access Control & Intrusion Detection Systems

The intrusion detection system is by Brivo. The system comprises an alarm panel and door contacts. The system monitors some door contacts, but the coverage is inadequate for the entire building.

The video surveillance system is comprised of one ceiling mounted indoor camera at the first-floor main corridor intersection, and one exterior camera at the rear corner of the building. Additional video surveillance cameras and motion sensors in all rooms with widows accessible on the ground level are recommended.

Rating: Poor

Beal Early Childhood Center – Narrative - 8/9/17

Food Service Design Consultant Colburn and Guyette conducted a walk-through of the kitchen and servery at the Beal Early Childhood Center to review the existing conditions. Beal Early Childhood Center located in Shrewsbury, MA is a kindergarten and 1st grade school with a 2016 population of approximately 320 students. Currently there are two options being considered. Option 1 is for a population of 750 students, and Option 2 is for a population of 790 students.

The current kitchen/servery space is 600 sq./ft. (The kitchen space includes the kitchen, food prep areas, pot washing, servery, refrigerated storage and dry storage). At the current population of approximately 320 students, MSBA guidelines allow for 1,620 sq./ft. (1,600 sq./ft. per the first 300 students, and 1 sq./ft. per each additional student). This shows the existing kitchen/servery is undersized by 1,020 sq./ft. per MSBA guidelines.

Option 1 is for 750 students, MSBA guidelines allow for 2,050 sq./ft. (1,600 sq./ft. per the first 300 students, and 1 sq./ft. per each additional student).

Option 2 is for 790 students, MSBA guidelines allow for 2,090 sq./ft. (1,600 sq./ft. per the first 300 students, and 1 sq./ft. per each additional student).

SERVERY:

The existing servery is a single linear service line consisting of a 3-Pan Cold Well and a 3-Pan Hot Well abutting one another and a separate single cashier counter. The sneeze guard at both hot and cold servings are designed for self-service. Per NSF Standard 2, elementary school are not to use self-service sneeze guards. The exception to this standard is if the food is wrapped or packaged. There is no floor sink at the serving line to accept the indirect waste from the cold and hot food wells. There is an indirect waste hose that is loosely attached to the equipment. It was not clear how the condensate waste from the hot and cold wells is eliminated. The outlet for the cold and hot wells is a box stubbed up in the floor. This is typically a dangerous practice when floors are required to be mopped. If either Option 1 or 2 are chosen, then a longer, or additional serving lines will be required. All sneeze guards will meet NSF Standard 2 for elementary schools. All electrical and plumbing connection will happen within the serving line cabinets. Menu offerings will help dictate serving line. A second cashier station may be required as well. (Staffing needs to be considered).

COOKING EQUIPMENT:

The cooking equipment looks to be in good shape. There is a single Blodgett electric convection oven and a Toastmaster electric 2-Burner. The main issue with the existing cooking equipment is that it is not located under the exhaust hood. Regardless that each piece is electric. The local authorities are concerned with cooking equipment that can produce "grease laden" vapor. Both the convection oven and 2-burner can produce grease laden vapor. The convection oven and the 2-Burner should be located beneath an exhaust hood. If either Option 1 or 2 are chosen, then additional cooking equipment will be needed. Types and amount will be determined by the menu.

There is an existing two-sided island exhaust hood. Currently there is no cooking equipment below the hood. The exhaust hood did not have the typical fire suppression nozzle drops. Also, I did not see a fire suppression system associated with the hood. A new exhaust hood & fire suppression system should be purchased to meet code. The associated duct and fan system should be evaluated by the engineering team for code compliance. The air volume should be calculated / measured and these volumes should be compared to current code requirements for the cooking equipment below. If either Option 1 or 2 are chosen, then a new exhaust hood(s), associated exhaust fan(s) and fire suppression system(s) should be purchased to meet code.

KITCHEN STORAGE:

There is a mobile heated cabinet for prepared food storage. There should be a conversation with the kitchen operator to verify if this is enough for heated back-up storage in the existing kitchen/servery. If either Option 1 or 2 are chosen, then additional hot holding equipment may need to be provided.

Two (2) 2-Door Reach-In Refrigerators and one (1) 2-Door Reach-In Freezer make up the refrigerated storage. All three units look to be in good condition. There should be a conversation with the kitchen operator to verify if this is enough refrigerated storage for the existing student population and delivery schedule. If either Option 1 or 2 are chosen, then a walk-in cooler and/or freezer should be provided in addition to reach-in refrigerated storage. Sizing to be determined by number of students, menu and delivery schedule.

The existing dry storage is five (5) full-height shelving units of varying lengths. Approximately 96 linear feet. If either Option 1 or 2 are chosen, then a dedicated dry storage room should be considered. For a kitchen/servery of 2,000 sq./ft., a dedicated dry storage room of approximately 160 sq./ft. is recommended. This can vary with delivery schedule.

FOOD PREP AREA:

The existing food prep area consists of two 60”x30” stainless steel work tables. Neither table has a prep sink as required by the Health Department. The tables do not have convenience outlets. The food prep area does not have a designated handsink. If either Option 1 or 2 are chosen, then adequate food prep/work tables will be provided. A prep table w/sinks will be provided. If food waste disposals are allowed they should be provided. Convenience outlets will be provided at tables. Handsinks will be provided to satisfy the Health Department.

DISHROOM/POT WASHING:

The existing pot washing area has a 3-Bay Pot Sink with a drain board at the right end only. Per the Food Code, a Pot Sink is required to have a drain board at each end of the table. The existing pot wash area does not have a mechanical dishmachine. There is an existing handsink in the pot wash area. There is also a pot/pan shelf for clean items. If either Option 1 or 2 are chosen, then a 3-Bay Pot Sink with drainboards at each end will be provided to satisfy the Health Department. A designated handsink will be provided. Adequate clean pot/pan shelving will be provided. Depending on the of operation some type dishmachine should be considered. Also, a mop sink/chemical storage should be provided.

WALLS/CEILING/FLOOR:

Per the Food Code: walls, ceiling surfaces and floor must be "smooth, durable and easily cleanable." The ceiling in the kitchen and servery appears to meet this requirement. I did not see any defects in the ceiling tiles. The existing walls are made up of bricks, concrete blocks and gyp board. The concrete blocks are painted and didn't appear to have any chipping or peeling. The bricks are painted as well but did have areas of chipping and peeling. The gyp board was painted in some locations and had what looked like FRP in other locations. The areas with the FRP looked good. One location at the electrical panels had a hole in the wall that should be repaired. The floors are a painted concrete. Most of the flooring looked acceptable. Some locations had minor chipping. If either Option 1 or 2 are chosen all walls, ceilings and floors will meet the Food Code.

Summary:

Option 1 – 750 Students:

1. Provide new serving line(s) that incorporates hot wells, refrigerated cold wells and additional cashier stations to expedite students through the serving and check-out lines.

2. Purchase additional cooking equipment to handle increase in meals provided.

3. Provide new, properly sized, exhaust hood(s) to meet code. Have HVAC engineer check for code compliance.

4. Provide walk-in cooler and walk-in freezer space to support increase in meals provided.

5. Provide adequately sized designated Dry Storage Room to support increase in meals provided.

6. Provide food prep area with adequate amount of prep/work tables. Provide one table with prep sinks to meet Health Department requirements.

7. Provide appropriate amount of handsinks.

8. Provide dishroom/pot washing with 3-Bay Pot Sink that will meet Health Department requirements. Provide appropriate dishmachine if necessary.

9. At some point prior to opening this facility, the health department will need to do a final inspection. We recommend that the health department be contacted early in the process to avoid last minute issues that could be costly to resolve and that could delay the opening. While the health department most likely will not do an initial walk-through, they will need to do a plan review as part of the construction permitting process. This means that the foodservice space needs to be documented and presented to the health

department's plan reviewer. This is recommended so that any issues that the health department may have can be identified in advance and can be resolved prior to the final inspection (which usually happens just before the scheduled opening).

Option 2 – 790 Students:

1. Provide new serving line(s) that incorporates hot wells, refrigerated cold wells and additional cashier stations to expedite students through the serving and check-out lines.

2. Purchase additional cooking equipment to handle increase in meals provided.

3. Provide new, properly sized, exhaust hood(s) to meet code. Have HVAC engineer check for code compliance.

4. Provide walk-in cooler and walk-in freezer space to support increase in meals provided.

5. Provide adequately sized designated Dry Storage Room to support increase in meals provided.

6. Provide food prep area with adequate amount of prep/work tables. Provide one table with prep sinks to meet Health Department requirements.

7. Provide appropriate amount of handsinks.

8. Provide dishroom/pot washing with 3-Bay Pot Sink that will meet Health Department requirements. Provide appropriate dishmachine if necessary.

9. At some point prior to opening this facility, the health department will need to do a final inspection. We recommend that the health department be contacted early in the process to avoid last minute issues that could be costly to resolve and that could delay the opening. While the health department most likely will not do an initial walk-through, they will need to do a plan review as part of the construction permitting process. This means that the foodservice space needs to be documented and presented to the health department's plan reviewer. This is recommended so that any issues that the health department may have can be identified in advance and can be resolved prior to the final inspection (which usually happens just before the scheduled opening).

We hope that this information is helpful and look forward to providing further assistance on this project. Please contact our office if you have any questions or if you need any additional information or assistance.

Report prepared by:
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3.1.4 EVALUATION OF EXISTING CONDITIONS

D. Assessment of the Facility for the Presence of Hazardous Materials

FINAL REPORT
FOR
HAZARDOUS MATERIALS IDENTIFICATION
STUDY
AT THE
BEAL EARLY CHILDHOOD CENTER
SHREWSBURY, MASSACHUSETTS

PROJECT NO: 217 312.00

Survey Dates:
September 1-8, 2017

CONDUCTED BY:

UNIVERSAL ENVIRONMENTAL CONSULTANTS
12 Brewster Road
Framingham, MA 01702

UEC universal environmental consultants

September 11, 2017

Mr. Sean Brennan
Lamoureux Pagano Associates
108 Grove Street
Worcester, MA 01605

Reference: Report for Hazardous Materials Identification Study
Beal Early Childhood Center, Shrewsbury, MA

Dear Mr. Brennan:

Thank you for the opportunity for Universal Environmental Consultants (UEC) to provide professional services.

Enclosed please find the report for the hazardous materials identification study at the Beal Early Childhood Center, Shrewsbury, MA.

Please do not hesitate to call should you have any questions.

Very truly yours,

Universal Environmental Consultants

_____
Ammar M. Dieb
President

UEC:\217 312.00\Report.DOC

Enclosure

1.0 INTRODUCTION:

Universal Environmental Consultants (UEC) has been providing comprehensive asbestos services since 2001 and has completed projects throughout New England. We have completed projects for a variety of clients including commercial, industrial, municipal, and public and private schools. We maintain appropriate asbestos licenses and staff with a minimum of twenty five years of experience.

UEC was contracted by Lamoureux Pagano Associates to conduct the following services at the Beal Early Childhood Center, Shrewsbury, Massachusetts:

- Asbestos Containing Materials (ACM) determination inspection and sampling;
- Polychlorinated Biphenyls (PCB's)-Electrical Equipment and Light Fixtures inspection;
- PCB's in Caulking inspection;
- Lead Based Paint (LBP) inspection;
- Mercury in Rubber Flooring inspection and sampling;
- Airborne Mold inspection and sampling;
- Radon sampling;
- Other hazardous materials inspection.

The scope of work included the inspection of accessible ACM, collection of bulk samples from materials suspected to contain asbestos, determination and quantities of types of ACM found and cost estimates for remediation. A comprehensive survey per the Environmental Protection Agency (EPA) NESHAP regulation would be required prior to any renovation or demolition activities.

Bulk samples analyses for asbestos were performed using the standard Polarized Light Microscopy (PLM) Method in accordance with EPA standard. Bulk samples were collected by a Massachusetts licensed asbestos inspector Mr. Leonard J. Busa (AI-030673) and analyzed by a Massachusetts licensed laboratory Asbestos Identification Laboratory, Woburn, MA.

Airborne mold samples were analyzed by an EPA approved laboratory EMSL, Woburn, MA.

Radon samples were analyzed by an EPA licensed laboratory AccuStar, Medway, MA.

Samples results are attached.

2.0 FINDINGS:

Asbestos Containing Materials (ACM):
The regulations for asbestos inspection are based on representative sampling. It would be impractical and costly to sample all materials in all areas. Therefore, representative samples of each homogenous area were collected and analyzed or assumed.

All suspect materials were grouped into homogenous areas. By definition a homogenous area is one in which the materials are evenly mixed and similar in appearance and texture throughout. A homogeneous area shall be determined to contain asbestos based on findings that the results of at least one sample collected from that area shows that asbestos is present in an amount greater than 1 percent in accordance with EPA regulations. Per the Department of Environmental Protection (DEP) any amount of asbestos found must be disposed as asbestos.

No additional suspect or accessible ACM were found during this survey. Hidden ACM may be found during the renovation and demolition activities.

Number of Samples Collected:
Thirty three (33) bulk samples were collected from materials suspected of containing asbestos, including:

Type and Location of Suspect Material

1. Vinyl floor tile at first floor hallway closet
2. Mastic for vinyl floor tile at first floor hallway closet
3. 9” x 9” Vinyl floor tile at main office closet
4. Mastic for 9” x 9” vinyl floor tile at main office closet
5. Vinyl floor tile under carpet at classroom 2
6. Mastic for vinyl floor tile under carpet at classroom 2
7. Carpet glue at classroom 2
8. 1’ x 1’ Acoustical wall tile above ceiling type I at classroom 2
9. 1’ x 1’ Acoustical wall tile type I at library
10. 1’ x 1’ Acoustical wall tile above ceiling type II at classroom 10
11. 1’ x 1’ Acoustical wall tile above ceiling type II at classroom 5
12. Wall joint compound at bathroom by classroom 7
13. Wall joint compound at classroom 10
14. Ceiling plaster at basement hallway by cafeteria
15. Ceiling plaster at basement ramp
16. Ceiling plaster at stairwell
17. Wall plaster at first floor hallway janitor closet
18. Wall plaster at first floor hallway by classroom 7
19. Ceiling plaster at basement custodian office
20. Black sink coating at basement hallway
21. Old linoleum floor covering at second floor bathroom
22. Glazing caulking for window in metal door at basement stairwell
23. Interior window glazing caulking at main office
24. Mud on boiler# 1 behind metal jacket at boiler room
25. Mud on boiler# 2 behind metal jacket at boiler room
26. Exterior window framing caulking
27. Exterior window framing caulking
28. Glazing caulking for exterior window
29. Glazing caulking for exterior window
30. Glazing caulking for exterior window
31. Suspended acoustical ceiling tile at classroom 6
32. Suspended acoustical ceiling tile at classroom 4
33. Glazing caulking for window in wood door at copy room

Sample Results:

Type and Location of Suspect Material	Sample Result
1. Vinyl floor tile at first floor hallway closet	15% Asbestos
2. Mastic for vinyl floor tile at first floor hallway closet	10% Asbestos
3. 9” x 9” Vinyl floor tile at main office closet	20% Asbestos
4. Mastic for 9” x 9” vinyl floor tile at main office closet	No Asbestos Detected
5. Vinyl floor tile under carpet at classroom 2	10% Asbestos
6. Mastic for vinyl floor tile under carpet at classroom 2	10% Asbestos
7. Carpet glue at classroom 2	No Asbestos Detected
8. 1’ x 1’ Acoustical wall tile above ceiling type I at classroom 2	No Asbestos Detected
9. 1’ x 1’ Acoustical wall tile type I at library	No Asbestos Detected
10. 1’ x 1’ Acoustical wall tile above ceiling type II at classroom 10	No Asbestos Detected
11. 1’ x 1’ Acoustical wall tile above ceiling type II at classroom 5	No Asbestos Detected
12. Wall joint compound at bathroom by classroom 7	No Asbestos Detected
13. Wall joint compound at classroom 10	No Asbestos Detected
14. Ceiling plaster at basement hallway by cafeteria	No Asbestos Detected
15. Ceiling plaster at basement ramp	No Asbestos Detected

16. Ceiling plaster at stairwell	No Asbestos Detected
17. Wall plaster at first floor hallway janitor closet	No Asbestos Detected
18. Wall plaster at first floor hallway by classroom 7	No Asbestos Detected
19. Ceiling plaster at basement custodian office	No Asbestos Detected
20. Black sink coating at basement hallway	2% Asbestos
21. Old linoleum floor covering at second floor bathroom	No Asbestos Detected
22. Glazing caulking for window in metal door at basement stairwell	No Asbestos Detected
23. Interior window glazing caulking at main office	No Asbestos Detected
24. Mud on boiler# 1 behind metal jacket at boiler room	No Asbestos Detected
25. Mud on boiler# 2 behind metal jacket at boiler room	No Asbestos Detected
26. Exterior window framing caulking	5% Asbestos
27. Exterior window framing caulking	5% Asbestos
28. Glazing caulking for exterior window	No Asbestos Detected
29. Glazing caulking for exterior window	2% Asbestos
30. Glazing caulking for exterior window	No Asbestos Detected
31. Suspended acoustical ceiling tile at classroom 6	No Asbestos Detected
32. Suspended acoustical ceiling tile at classroom 4	No Asbestos Detected
33. Glazing caulking for window in wood door at copy room	No Asbestos Detected

Observations and Conclusions:

The condition of ACM is very important. ACM in good condition does not present a health issue unless it is disturbed. Therefore, it is not necessary to remediate ACM in good condition unless it will be disturbed through renovation, demolition or other activity.

Refer to the AHERA Management Plan for condition of ACM.

1. Pipe insulation was previously found to contain asbestos.
2. Hard joint insulation was previously found to contain asbestos.
3. Tank insulation was previously found to contain asbestos.
4. Duct insulation was previously found to contain asbestos.
5. Insulation/rope inside boilers was assumed to contain asbestos.
6. Vinyl floor tile at first floor was found to contain asbestos.
7. Mastic for vinyl floor tile was found to contain asbestos.
8. 9” x 9” Vinyl floor tile was found to contain asbestos.
9. Vinyl floor tile under carpet was found to contain asbestos.
10. Mastic for vinyl floor tile under carpet was found to contain asbestos.
11. Black sink coating was found to contain asbestos.
12. Exterior window framing caulking was found to contain asbestos.
13. Glazing caulking for exterior window was found to contain asbestos.
14. Door framing caulking was assumed to contain asbestos.
15. Paper/glue under hardwood floor was assumed to contain asbestos.
16. Glue holding blackboard was assumed to contain asbestos.
17. Roofing material was assumed to contain asbestos. Roofing material does not have to be removed by a licensed asbestos contractor. However, the Demolition/Roofing Contractor must comply with OSHA regulation during demolition and with state regulations for proper disposal. A non-traditional abatement plan would have to be prepared and submitted to the DEP for approval
18. Damproofing on foundation/exterior walls was assumed to contain asbestos. The demolition contractor will have to segregate the ACM from non-ACM building surfaces for proper disposal. A non-traditional abatement plan would have to be prepared and submitted to the DEP for approval.
19. Underground sewer pipes were assumed to contain asbestos.
20. All other suspect materials were found not to contain asbestos. Hidden ACM may be found during renovation and demolition activities.

Polychlorinated Biphenyls (PCB's)-Electrical Equipment and Light Fixtures:
Observations and Conclusions
Visual inspection of various equipments such as light fixtures, thermostats, exit signs and switches was performed for the presence of PCB's and mercury. Ballasts in light fixtures were assumed not to contain PCB's since there were labels indicating that "No PCB's" was found. Tubes in light fixtures, thermostats, signs and switches were assumed to contain mercury. It would be very costly to test those equipments and dismantling would be required to access. Therefore, the above equipments should be disposed in an EPA approved landfill as part of the demolition project.

PCB's in Caulking Material:
Observations and Conclusions
Building caulking was assumed to contain PCB's. PCB's are manmade chemicals that were widely produced and distributed across the country from the 1950s to 1977 until the production of PCB's was banned by the US Environmental Protection Agency (EPA) law which became effective in 1978. PCB's are a class of chemicals made up of more than 200 different compounds. PCB's are non-flammable, stable, and good insulators so they were widely used in a variety of products including: electrical transformers and capacitors, cable and wire coverings, sealants and caulking, and household products such as television sets and fluorescent light fixtures. Because of their chemical properties, PCB's are not very soluble in water and they do not break down easily in the environment. PCB's also do not readily evaporate into air but tend to remain as solids or thick liquids. Even though PCB's have not been produced or used in the country for more than 30 years, they are still present in the environment in the air, soil, and water and in our food. EPA requires that all construction waste including caulking be disposed as PCB's if PCB's level exceed 50 mg/kg (ppm). An abatement plan might also be required.

Lead Based Paint (LBP):
Observations and Conclusions
A school is not considered a regulated facility. All LBP activities performed, including waste disposal, should be in accordance with applicable Federal, State, or local laws, ordinances, codes or regulations governing evaluation and hazard reduction. These requirements can be found in OSHA 29 CFR 1926-Construction Industry Standards, 29 CFR 1926.62-Construction Industry Lead Standards, 29 CFR 1910.1200-Hazards Communication, 40 CFR 261-EPA Regulations. According to OSHA, any amount of LBP triggers compliance.

Mercury in Rubber Flooring:
Observations and Conclusions:
No rubber flooring exists in the school.

Airborne Mold:
Airborne mold testing was performed utilizing Zefon International Incorporated's Air-O-Cell® sampling device following all manufacturer supplied recommended sampling procedures. Air-O-Cell® is a direct read total particulate air sampling device. It works using the inertial impaction principle similar to other spore trap devices. It is designed for the rapid collection and analysis of airborne particulate including bioaerosols. The particulate includes fibers (e.g. asbestos, fiberglass, cellulose, clothing fibers) opaque particles (e.g. fly ash, combustion particles, copy toner, oil droplets, paint), and bioaerosols (e.g. mold spores, pollen, insect parts, skin cell fragments).[1]

The method involves drawing a known quantity of air through a sterile sampling cassette. Subsequent to sampling, the cassette is sealed and transferred to a microbiology laboratory under chain of custody protocol for microscopic analysis. This method counts both viable and nonviable mold spores.

AIRBORNE MOLD and PARTICULATE

Lab ID #	Location	Total Mold Counts/M^3	Pollen	Insect Fragment	Hyphal Fragments
131704027-0001	Curriculum Coordinator	3,124	ND	ND	ND

[1] Zefon International Inc. www.zefon.com

Lab ID #	Location	Total Mold Counts/M^3	Pollen	Insect Fragment	Hyphal Fragments
131704027-0002	Teacher's Lounge	3,697	ND	40	ND
131704027-0003	OP/PT Room	3,940	ND	ND	ND
131704027-0004	Basement Half-Day K	5,124	ND	7	ND
131704027-0005	Basement Full-Day K	4,227	20	20	ND
131704027-0006	First floor Girl's Room	4,024	ND	ND	ND
131704027-0007	Nurse Office	2,924	ND	ND	ND
131704027-0008	Second Floor Grade 1	3,041	ND	ND	20
131704027-0009	Second Floor Grade 1	1,760	ND	ND	ND
131704027-0010	Second Floor Grade 1	1,707	ND	ND	20
131704027-0011	Outside*	40	ND	ND	ND

AIRBORNE MOLD and PARTICULATE
(Subjective Scales)

Lab ID #	Location	Skin Fragment Density (SFD)	Fibrous Particulates (FP)	Total Background Particulate (TBP)
131704027-0001	Curriculum Coordinator	2	1	2
131704027-0002	Teacher's Lounge	2	1	2
131704027-0003	OP/PT Room	1	1	2
131704027-0004	Basement Half-Day K	2	1	2
131704027-0005	Basement Full-Day K	1	1	2
131704027-0006	First floor Girl's Room	2	1	2
131704027-0007	Nurse Office	2	1	2
131704027-0008	Second Floor Grade 1	2	1	2
131704027-0009	Second Floor Grade 1	1	1	2
131704027-0010	Second Floor Grade 1	2	1	2
131704027-0011	Outside*	1	1	1

Legend:
ND - Not Detected
*: Rainy and cloudy weather.

Observations and Conclusions:
There are currently no guidelines or standards promulgated by a government agency or widely recognized scientific organizations for the interpretation of airborne mold spore levels. The most commonly employed tool used to assess if mold growth is occurring and there is amplification in a structure is to evaluate the indoor levels and species as well as to compare levels and species of mold outdoors to indoors. Typically, if there were more molds indoors, and/or if species were present indoors which were not present outdoors, then growth and amplification is likely occurring and further evaluation and perhaps remediation is recommended.

The indoor airborne mold spore concentrations were higher than the outside sample. However, based on comparisons with historical data from projects of similar type, building utilization, geographic location and season, the indoor airborne levels are considered average. Indoor mold spore counts in the summer are typically in the 3,500-7,500-spores/cubic meter range.

Pollen, insect fragments and Hyphal fragments were either not detected or present in the samples. Hyphal fragment is a non-reproductive part of the mold.

Total background particulate on all samples was assessed as "1-2" on a scale of 1-5 where 1 is low and 5 is high. Skin fragment density on all samples was assessed as "1-2" on a scale of 1-4 where 1 is low and 4 is high. The total background levels are measured to determine airborne dust not related to airborne mold. Skin fragments are measured to determine proper housing cleaning.

No visible mold growth was found during the survey.

Radon:

Number of Samples Collected
Ten (10) air samples were collected at the following locations:

Location of Material

1. Cafeteria
2. Special Education Room
3. Media Library
4. Teacher's Lounge
5. Teacher's Work Room
6. Curriculum Coordinator Room
7. Storage Room
8. PO/PT Room
9. Half Day K
10. Full Day K

Location of Material	Sample Result
1. Cafeteria	0.6 pCi/L
2. Special Education Room	1.6 pCi/L
3. Media Library	0.4 pCi/L
4. Teacher's Lounge	0.4 pCi/L
5. Teacher's Work Room	0.9 pCi/L
6. Curriculum Coordinator Room	1.2 pCi/L
7. Storage Room	1.2 pCi/L
8. PO/PT Room	1.7 pCi/L
9. Half Day K	0.7 pCi/L
10. Full Day K	0.8 pCi/L

Observations and Conclusions:
The measured radon concentrations were found to be much lower than the EPA guideline of 4.0-pCi/L.

No further action is required.

3.0 COST ESTIMATES:

The cost includes removal and disposal of all accessible ACM, other hazardous material and an allowance for removal of inaccessible or hidden ACM that may be found during renovation or demolition project.

Location	Material	Approximate Quantity	Cost Estimate ($)
Throughout	Various Types of Flooring and Mastic	15,000 SF	75,000.00
	Blackboards/Tackboards	70 Total	14,000.00
	Sinks	10 Total	1,000.00
	Pipe and Hard Joint Insulation	300 LF	6,000.00
	Hidden Pipe and Hard Joint Insulation	Unknown	15,000.00
	Miscellaneous Hazardous Materials	Unknown	5,000.00
	Light Fixtures	Unknown	25,000.00
Gymnasium	Hardwood Floor and Paper	3,600 SF	36,000.00
Boiler Room	Pipe and Hard Joint Insulation	280 LF	5,600.00
	Boiler Insulation	200 SF	4,000.00
	Duct Insulation	230 SF	4,600.00
	Tank Insulation	60 SF	1,200.00
	Boilers	2 Total	15,000.00
Exterior	Windows	267 Total	66,750.00
	Doors	9 Total	1,800.00
Estimated costs for NESHAP Inspection and Testing Services			8,500.00
Estimated costs for Design, Construction Monitoring and Air Sampling Services			27,170.00
		TOTAL:	**$ 310,000.00**

4.0 DESCRIPTION OF SURVEY METHODS AND LABORATORY ANALYSES:

Asbestos:
Asbestos samples were collected using a method that prevents fiber release. Homogeneous sample areas were determined by criteria outlined in EPA document 560/5-85-030a. Bulk material samples were analyzed using PLM and dispersion staining techniques with EPA method 600/M4-82-020.

The samples were analyzed by a Massachusetts licensed laboratory Asbestos Identification Laboratory, Woburn, MA.

Airborne Mold:
The samples were analyzed by an EPA approved laboratory EMSL, Woburn, MA.

Radon:
Radon samples were analyzed by an EPA licensed laboratory AccuStar, Medway, MA.

5.0 LIMITATIONS AND CONDITIONS:

This report has been completed based on visual and physical observations made and information available at the time of the site visits, as well as an interview with the Owner's representatives. This report is intended to be used as a summary of available information on existing conditions with conclusions based on a reasonable and knowledgeable review of evidence found in accordance with normally accepted industry standards, state and federal protocols, and within the scope and budget established by the client. Any additional data obtained by further review must be reviewed by UEC and the conclusions presented herein may be modified accordingly.

This report and attachments, prepared for the exclusive use of Owner for use in an environmental evaluation of the subject site, are an integral part of the inspections and opinions should not be formulated without reading the report in its entirety. No part of this report may be altered, used, copied or relied upon without prior written permission from UEC, except that this report may be conveyed in its entirety to parties associated with Owner for this subject study.

Inspected By:

Leonard J. Busa
Asbestos Inspector

Asbestos Identification Laboratory

165 New Boston St., Ste 227
Woburn, MA 01801
781-932-9600

Web: www.asbestosidentificationlab.com
Email: mikemanning@asbestosidentificationlab.com

Batch: 25640

Lab Code: 200919-0

September 07, 2017

Ammar Dieb
Universal Environmental Consultants
12 Brewster Road
Framingham, MA 01702

Project Number:
Project Name: Beal Early Childhood Center, Shrewsbury MA
Date Sampled: 2017-09-01
Work Received: 2017-09-05
Work Analyzed: 2017-09-06

Analysis Method: BULK PLM ANALYSIS EPA/600/R-93/116

Dear Ammar Dieb,

Asbestos Identification Laboratory has completed the analysis of the samples from your office for the above referenced project .

The information and analysis contained in this report have been generated using the EPA /600/R-93/116 Method for the Determination of Asbestos in Bulk Building Materials. Materials or products that contain more than 1% of any kind or combination of asbestos are considered an asbestos containing building material as determined by the EPA. This Polarized Light Microscope (PLM) technique may be performed either by visual estimation or point counting. Point counting provides a determination of the area percentage of asbestos in a sample. If the asbestos is estimated to be less than 10% by visual estimation of friable material, the determination may be repeated using the point counting technique. The results of the point counting supersede visual PLM results. Results in this report only relate to the items tested. This report may not be used by the customer to claim product endorsement by NVLAP or any other U.S. Government Agency.

Laboratory results represent the analysis of samples as submitted by the customer. Information regarding sample location, description, area, volume, etc., was provided by the customer. Asbestos Identification Laboratory is not responsible for sample collection activities or analytical method limitations. Unless notified in writing to return samples, Asbestos Identification Laboratory discards customer samples after 30 days. Samples containing subsamples or layers will be analyzed separately when applicable. Reports are kept at Asbestos Identification Laboratory for three years. This report shall not be reproduced, except in full, without the written consent of Asbestos Identification Laboratory.

- NVLAP Lab Code: 200919-0
- Massachusetts Certification License: AA000208
- State of Connecticut, Department of Public Health Approved Environmental Laboratory Registration Number: PH-0142
- State of Maine, Department of Environmental Protection Asbestos Analytical Laboratory License Number: LB-0078(Bulk) LA-0087(Air)
- State of Rhode Island and Providence Plantations. Department of Health Certification: AAL-121
- State of Vermont, Department of Health Environmental Health License AL934461

Thank you Ammar Dieb for your business.

Michael Manning
Owner/Director

September 07, 2017

Ammar Dieb
Universal Environmental Consultants
12 Brewster Road
Framingham, MA 01702

Project Number:
Project Name: Beal Early Childhood Center, Shrewsbury MA
Date Sampled: 2017-09-01
Work Received: 2017-09-05
Work Analyzed: 2017-09-06

Analysis Method: BULK PLM ANALYSIS EPA/600/R-93/116

FieldID / LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
1 / 289365	Floor Tile	1st Floor Hall Closet	tan	Non-Fibrous 85	Detected Chrysotile 15
2 / 289366	Black Mastic # 1	1st Floor Hall Closet	black	Non-Fibrous 90	Detected Chrysotile 10
3 / 289367	9" Floor Tile	Main Office Closet	black	Non-Fibrous 80	Detected Chrysotile 20
4 / 289368	BL (M) # 3	Main Office Closet	black	Non-Fibrous 100	None Detected
5 / 289369	Floor Tile under Carpet	Classroom # 2	tan	Non-Fibrous 90	Detected Chrysotile 10
6 / 289370	BL (M) # 5	Classroom # 2	black	Non-Fibrous 90	Detected Chrysotile 10
7 / 289371	Carpet Glue on # 5	Classroom # 2	yellow	Non-Fibrous 100	None Detected
8 / 289372	Non-Susp. 1 X 1 PW at Wall	Classroom # 2 (AC)	multi	Cellulose 90 Non-Fibrous 10	None Detected
9 / 289373	Non-Susp. 1 X 1 PW at Wall	Library	multi	Cellulose 90 Non-Fibrous 10	None Detected
10 / 289374	Suspect 1 X 1 at Wall	Classroom # 10 (AC)	multi	Mineral Wool 75 Non-Fibrous 25	None Detected
11 / 289375	Suspect 1 X 1 at Wall	Classroom # 5 (AC)	multi	Mineral Wool 75 Non-Fibrous 25	None Detected
12 / 289376	Joint Compound (JC)	Bathroom Wall by Classroom # 7	white	Non-Fibrous 100	None Detected
13 / 289377	JC	Classroom 10 Wall (from AC)	white	Non-Fibrous 100	None Detected
14 / 289378	Ceiling Plaster (CP)	Basement Hall by Cafe	white	Non-Fibrous 100	None Detected

FieldID / LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
15 / 289379	CP	Basement Ramp	multi	Non-Fibrous 100	None Detected
16 / 289380	CP	Stairwell @ underside of Stairs by # 13	white	Non-Fibrous 100	None Detected
17 / 289381	Wall Plaster (WP)	1st Floor Hall Janitor's Closet	multi	Non-Fibrous 100	None Detected
18 / 289382	WP	1st Floor Hall by Classroom 7	gray	Non-Fibrous 100	None Detected
19 / 289383	CP	Basement Cust. Office	white	Non-Fibrous 100	None Detected
20 / 289384	Black Sink dp	Basement Hall	black	Cellulose 10 Non-Fibrous 88	**Detected** **Chrysotile 2**
21 / 289385	Old Linoleum	2nd Floor Bathroom	tan	Cellulose 10 Synthetic 5 Non-Fibrous 85	None Detected
22 / 289386	Glaze for Window in Metal Door	Basement Stairwell by Teacher's Lounge	white	Other 2 Non-Fibrous 98	None Detected
23 / 289387	Int. Window Glaze	Main Office Window	tan	Non-Fibrous 100	None Detected
24 / 289388	Mud on Boiler, behind Metal Jacketing	Boiler # 2	gray	Mineral Wool 20 Non-Fibrous 80	None Detected
25 / 289389	Mud on Boiler, behind Metal Jacketing	Boiler # 1	tan	Mineral Wool 50 Non-Fibrous 50	None Detected
26 / 289390	Window Frame Caulk	Rear of School, Exterior	multi	Non-Fibrous 95	**Detected** **Chrysotile 5**
27 / 289391	Window Frame	Lunch Side Tables, Exterior	multi	Non-Fibrous 95	**Detected** **Chrysotile 5**
28 / 289392	Glaze for Exterior Window	1st Floor Classroom, Exterior	white	Non-Fibrous 100	None Detected
29 / 289393	Glaze for Exterior Window	Rear of School, Exterior	white	Non-Fibrous 98	**Detected** **Chrysotile 2**
30 / 289394	Glaze for Exterior Window	Lunch Side, Exterior	white	Non-Fibrous 100	None Detected
31 / 289395	(New) SAT	Classroom # 6	multi	Mineral Wool 30 Cellulose 50 Non-Fibrous 20	None Detected
32 / 289396	(New) SAT	Classroom # 4	multi	Mineral Wool 30 Cellulose 50 Non-Fibrous 20	None Detected

FieldID / LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
33 / 289397	Glaze for Window in Wood Door	Copy Room	brown	Non-Fibrous 100	None Detected

Thursday 07

Analyzed by:

End of Report

Batch: 25640

10 2

CHAIN OF CUSTODY

Universal Environmental Consultants
12 Brewster Road
Framingham, MA 01702
Tel: (508) 628-5486 - Fax: (508) 628-5488
adieb@uec-env.com

Town/City: Shrewsbury, ma Building Name Beal Early Childhood Center

Sample	Result	Description of Material	Sample Location
1		Floor tile	1st FL hall closet
2		Black mastic #1	" "
3		9" Floor tile	main office closet
4		BL (m) #3	" " "
5		Floor tile under carpet	rm #2
6		BL (m) #5	" "
7		carpet glue on #5	" "
8		non-susp. 1x1 pw [WALL AT]	rm #2 (ac)
9		non-susp. 1x1 pw [WALL AT]	Library
10		suspect 1x1 [WALL AT]	rm #10 (ac)
11		suspect 1x1 wall [AT]	rm #5 (ac)
12		Joint Compound (JC)	Bathrm wall by rm #7
13		JC	rm 10 wall (from ac)
14		ceiling plaster (CP)	Bsmt hall by cafe
15		CP	Bsmt ramp
16		CP	stairwell @ underside of stairs by #13
17		wall plaster (wp)	1st FL hall jan closet
18		WP	1st FL hall by rm 7
19		CP	Bsmt cust office
20		Black sink dp	Bsmt hall

Reported By: [signature] Date: 9-1-17 Due Date: 48 hr

Received By: [signature] Date: 9/5/17

2 of 2

CHAIN OF CUSTODY

Universal Environmental Consultants
12 Brewster Road
Framingham, MA 01702
Tel: (508) 628-5486 - Fax: (508) 628-5488
adieb@uec-env.com

Town/City: Shrewsbury, MA Building Name Beal Early Childhood Center

Sample	Result	Description of Material	Sample Location
21		old linoleum	2nd Fl. bathrm
22		glaze for win in metal door	Bsmt stairwell by Teach. Lounge
23		ext. vinyl	main office window
24		mud on boiler, behind metal jacketing	Boiler #2
25		mud on boiler, behind metal jacketing	Boiler #1
26		window frame caulk	rear of school EXTERIOR
27		win fr	lunch side tables
28		glaze for exterior win	1ST Fl. crm
29		gl. for ext. win	rear of school
30		gl. for ext. win	lunch side
31		(new) SAT	crm - 6
32		(new) SAT	crm - 4
33		glaze for win in wood door	copy rm

Reported By: [signature] Date: 9-1-17 Due Date: 48 hr

Received By: Date:

131704027

24hr TAT

AIR SAMPLING DATA SHEET

Date: 9.5.17 Project Number: – Project Location: Beal Early Childhood Center

Work Area: throughout school Contractor: –

Project Monitor Name[1]: Colleen Canning License Number: AM900566 Type of Sampling: Mold

Project Monitor Signature: Colleen Canning Samples Analysis By[2]: License Number:

Sample #	Type B, G, C	Location of Sample	Start Time	Stop Time	Run Time (Total Min)	Flow Rates Start	Flow Rates Stop	Flow Rates Ave.	Volume (Liters)	Fibers/Field	Distribution (F/mm²)	Concentration (F/CC)
1		23561043 curriculum cordinator	15:42	15:52	10	15	15	15	150			
2		23560086 teacher's lounge	15:49	15:59	10	15	15	15	150			
3		op/pt 23561160	15:54	16:04	10	15	15	15	150			
4		basement half day K 23561052	16:00	16:10	10	15	15	15	150			
5		basement full day K 23560983	16:05	16:15	10	15	15	15	150			
6		1st floor 23561057 girls room	16:22	16:32	10	15	15	15	150			
7		nurse office 23560895	16:25	16:35	10	15	15	15	150			
8		2nd floor - Grade 1 23561157	16:37	16:47	10	15	15	15	150			
9		2nd floor - grade 1 23560885	16:42	16:52	10	15	15	15	150			
10		2nd floor - grade 1 23561107	16:49	16:59	10	15	15	15	150			

Type: **B:** Background; **G:** General Area; **C:** Clearance.
Flow Rates: **PCM:** Up to 16; **TEM:** Up to 9.5.
Distribution: (Fibers/Field)/0.00785. If results less than 7 F/mm², then write < LOD

[1]: I certify that the above samples were collected in accordance with all applicable guidelines.
[2]: I certify that the above samples were analyzed in accordance with all applicable guidelines.

RECEIVED SEP 06 2017 By dl 14:12

WI

Universal Environmental Consultants

Page 1 Of 2

OrderID: 131704027

131704027

AIR SAMPLING DATA SHEET

Date: 9.5.17 Project Number: — Project Location: Beal Early Childhood Center

Work Area: through out school Contractor: —

Project Monitor Name[1]: Colleen Canning License Number: am900506 Type of Sampling: mold

Project Monitor Signature: Colleen Canning Samples Analysis By[2]: _____ License Number: _____

Sample #	Type B, G, C	Location of Sample	Start Time	Stop Time	Run Time (Total Min)	Flow Rates Start	Flow Rates Stop	Flow Rates Ave.	Volume (Liters)	Fibers/Field	Distribution (F/mm²)	Concentration (F/CC)
11		outside 23560949	17:02	17:12	10	15	15	15	150			

Type: **B:** Background; **G:** General Area; **C:** Clearance.
Flow Rates: **PCM:** Up to 16; **TEM:** Up to 9.5.
Distribution: (Fibers/Field)/0.00785. If results less than 7 F/mm², then write < LOD

[1]: I certify that the above samples were collected in accordance with all applicable guidelines.
[2]: I certify that the above samples were analyzed in accordance with all applicable guidelines.

RECEIVED SEP 06 2017 By ll 1412

Universal Environmental Consultants

OrderID: 131704027

EMSL Analytical, Inc.

5 Constitution Way, Unit A Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

http://www.EMSL.com / bostonlab@emsl.com

EMSL Order: 131704027
Customer ID: UEC63
Customer PO:
Project ID:

Attn: Ammar Dieb
Universal Environmental Consultants
12 Brewster Road
Framingham, MA 01702

Phone: (617) 984-9772
Fax: (508) 628-5488
Collected: 09/05/2017
Received: 09/06/2017
Analyzed: 09/07/2017

Project: Beal Early Childhood Center

Test Report: Air-O-Cell(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods EMSL 05-TP-003, ASTM D7391)

Lab Sample Number:	131704027-0001			131704027-0002			131704027-0003		
Client Sample ID:	1			2			3		
Volume (L):	150			150			150		
Sample Location	Curriculum Cordinator			Teacher's Lounge			OP/PT		
Spore Types	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**
Alternaria	1	20	0.6	-	-	-	2	40	1
Ascospores	11	240	7.7	4	90	2.4	5	100	2.5
Aspergillus/Penicillium	-	-	-	6	100	2.7	8	200	5.1
Basidiospores	90	2000	64	81	1800	48.7	118	2580	65.5
Bipolaris++	1*	7*	0.2	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	37	810	25.9	75	1600	43.3	41	900	22.8
Curvularia	-	-	-	-	-	-	1	20	0.5
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	2	40	1.3	3	70	1.9	5	100	2.5
Myxomycetes++	-	-	-	1	20	0.5	-	-	-
Pithomyces	-	-	-	1*	7*	0.2	-	-	-
Rust	1*	7*	0.2	2*	10*	0.3	-	-	-
Scopulariopsis	-	-	-	-	-	-	-	-	-
Stachybotrys	-	-	-	-	-	-	-	-	-
Torula	-	-	-	-	-	-	-	-	-
Ulocladium	-	-	-	-	-	-	-	-	-
Bispora	-	-	-	-	-	-	-	-	-
Botrytis	-	-	-	-	-	-	-	-	-
Cercospora	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Oidium	-	-	-	-	-	-	-	-	-
Total Fungi	**143**	**3124**	**100**	**173**	**3697**	**100**	**180**	**3940**	**100**
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	22	-	-	22	-	-	22	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	2	-	-	2	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	2	-	-	2	-	-	2	-

Bipolaris++ = Bipolaris/Drechslera/Exserohilum
Myxomycetes++ = Myxomycetes/Periconia/Smut

No discernable field blank was submitted with this group of samples.

Steve Grise, Laboratory Manager
or other approved signatory

High levels of background particulate can obscure spores and other particulates leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA AIHA-LAP, LLC --EMLAP Accredited #180179

Initial report from: 09/07/2017 11:25:04

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com

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EMSL Order: 131704027
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Attn: Ammar Dieb
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Framingham, MA 01702

Phone: (617) 984-9772
Fax: (508) 628-5488
Collected: 09/05/2017
Received: 09/06/2017
Analyzed: 09/07/2017

Project: Beal Early Childhood Center

Test Report: Air-O-Cell(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods EMSL 05-TP-003, ASTM D7391)

Lab Sample Number:	131704027-0004			131704027-0005			131704027-0006		
Client Sample ID:	4			5			6		
Volume (L):	150			150			150		
Sample Location	Basement Half-Day K			Basement Full-Day K			1st Floor Girls Room		
Spore Types	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**
Alternaria	-	-	-	1*	7*	0.2	-	-	-
Ascospores	7	200	3.9	11	240	5.7	11	240	6
Aspergillus/Penicillium	-	-	-	1	20	0.5	-	-	-
Basidiospores	122	2660	51.9	72	1600	37.9	112	2440	60.6
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	98	2100	41	103	2250	53.2	56	1200	29.8
Curvularia	-	-	-	-	-	-	1*	7*	0.2
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	4	90	1.8	6	100	2.4	3	70	1.7
Myxomycetes++	1	20	0.4	2*	10*	0.2	-	-	-
Pithomyces	1*	7*	0.1	-	-	-	1*	7*	0.2
Rust	1*	7*	0.1	-	-	-	-	-	-
Scopulariopsis	-	-	-	-	-	-	-	-	-
Stachybotrys	-	-	-	-	-	-	-	-	-
Torula	-	-	-	-	-	-	-	-	-
Ulocladium	-	-	-	-	-	-	-	-	-
Bispora	-	-	-	-	-	-	-	-	-
Botrytis	1	20	0.4	-	-	-	-	-	-
Cercospora	1	20	0.4	-	-	-	1	20	0.5
Nigrospora	-	-	-	-	-	-	2	40	1
Oidium	-	-	-	-	-	-	-	-	-
Total Fungi	**236**	**5124**	**100**	**196**	**4227**	**100**	**187**	**4024**	**100**
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	1*	7*	-	1	20	-	-	-	-
Pollen	-	-	-	1	20	-	-	-	-
Analyt. Sensitivity 600x	-	22	-	-	22	-	-	22	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	2	-	-	1	-	-	2	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	2	-	-	2	-	-	2	-

Bipolaris++ = Bipolaris/Drechslera/Exserohilum
Myxomycetes++ = Myxomycetes/Periconia/Smut

No discernable field blank was submitted with this group of samples.

Steve Grise, Laboratory Manager
or other approved signatory

High levels of background particulate can obscure spores and other particulates leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

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Phone: (617) 984-9772
Fax: (508) 628-5488
Collected: 09/05/2017
Received: 09/06/2017
Analyzed: 09/07/2017

Project: Beal Early Childhood Center

Test Report: Air-O-Cell(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods EMSL 05-TP-003, ASTM D7391)

Lab Sample Number:	131704027-0007			131704027-0008			131704027-0009		
Client Sample ID:	7			8			9		
Volume (L):	150			150			150		
Sample Location	Nurse Office			2nd Floor - Grade 1			2nd Floor - Grade 1		
Spore Types	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**
Alternaria	1*	7*	0.2	-	-	-	-	-	-
Ascospores	5	100	3.4	5	100	3.3	1	20	1.1
Aspergillus/Penicillium	-	-	-	9	200	6.6	-	-	-
Basidiospores	72	1600	54.7	66	1400	46	56	1200	68.2
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	52	1100	37.6	53	1200	39.5	24	520	29.5
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	1	20	0.7	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	4	90	3.1	1	20	0.7	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces	1	20	0.7	1*	7*	0.2	1	20	1.1
Rust	1*	7*	0.2	1*	7*	0.2	-	-	-
Scopulariopsis	-	-	-	-	-	-	-	-	-
Stachybotrys	-	-	-	-	-	-	-	-	-
Torula	-	-	-	-	-	-	-	-	-
Ulocladium	-	-	-	-	-	-	-	-	-
Bispora	-	-	-	2	40	1.3	-	-	-
Botrytis	-	-	-	1	20	0.7	-	-	-
Cercospora	-	-	-	1*	7*	0.2	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Oidium	-	-	-	1	20	0.7	-	-	-
Total Fungi	**136**	**2924**	**100**	**142**	**3041**	**100**	**82**	**1760**	**100**
Hyphal Fragment	-	-	-	1	20	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	22	-	-	22	-	-	22	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	2	-	-	2	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	2	-	-	2	-	-	2	-

Bipolaris++ = Bipolaris/Drechslera/Exserohilum
Myxomycetes++ = Myxomycetes/Periconia/Smut

No discernable field blank was submitted with this group of samples.

Steve Grise, Laboratory Manager
or other approved signatory

High levels of background particulate can obscure spores and other particulates leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA AIHA-LAP, LLC --EMLAP Accredited #180179

Initial report from: 09/07/2017 11:25:04

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com

EMSL Analytical, Inc.

5 Constitution Way, Unit A Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

http://www.EMSL.com / bostonlab@emsl.com

EMSL Order: 131704027
Customer ID: UEC63
Customer PO:
Project ID:

Attn: Ammar Dieb
Universal Environmental Consultants
12 Brewster Road
Framingham, MA 01702

Phone: (617) 984-9772
Fax: (508) 628-5488
Collected: 09/05/2017
Received: 09/06/2017
Analyzed: 09/07/2017

Project: Beal Early Childhood Center

Test Report: Air-O-Cell(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods EMSL 05-TP-003, ASTM D7391)

Lab Sample Number:	131704027-0010			131704027-0011		
Client Sample ID:	10			11		
Volume (L):	150			150		
Sample Location	2nd Floor - Grade 1			Outside		
Spore Types	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**
Alternaria	1*	7*	0.4	-	-	-
Ascospores	-	-	-	-	-	-
Aspergillus/Penicillium	-	-	-	-	-	-
Basidiospores	46	1000	58.6	1	20	50
Bipolaris++	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-
Cladosporium	31	680	39.8	-	-	-
Curvularia	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-
Myxomycetes++	1	20	1.2	1	20	50
Pithomyces	-	-	-	-	-	-
Rust	-	-	-	-	-	-
Scopulariopsis	-	-	-	-	-	-
Stachybotrys	-	-	-	-	-	-
Torula	-	-	-	-	-	-
Ulocladium	-	-	-	-	-	-
Bispora	-	-	-	-	-	-
Botrytis	-	-	-	-	-	-
Cercospora	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-
Oidium	-	-	-	-	-	-
Total Fungi	**79**	**1707**	**100**	**2**	**40**	**100**
Hyphal Fragment	1	20	-	-	-	-
Insect Fragment	-	-	-	-	-	-
Pollen	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	22	-	-	22	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	2	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-
Background (1-5)	-	2	-	-	1	-

Bipolaris++ = Bipolaris/Drechslera/Exserohilum
Myxomycetes++ = Myxomycetes/Periconia/Smut

No discernable field blank was submitted with this group of samples.

Steve Grise, Laboratory Manager
or other approved signatory

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AccuStar
Laboratoire Professionnel D'analyse du Radon Depuis 1984

Radon in Air

NELAC NY 11769
NRPP 101193 AL
NRSB ARL0017

EPA Method #4 02-R-92-004
Liquid Scintillation
NRPP Device Code 8088
NRSB Device Code 12193

Laboratory Report for:

Universal Environmental Consultant
12 Brewster Road
Framingham MA 01702

Property Tested:

Beal Early Childhood Center
1 Maple Avenue
Shrewsbury MA

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result (pCi/L)
2162154	3486318	09/05/2017 3:07 pm	09/08/2017 6:57 am	Basement Cafeteria	0.6
2162155	3486317	09/05/2017 3:09 pm	09/08/2017 6:58 am	Basement Special Education	1.6
2162156	3486316	09/05/2017 3:11 pm	09/08/2017 6:59 am	Basement Media Library	0.4
2162157	3486319	09/05/2017 3:13 pm	09/08/2017 7:00 am	Basement Teacher's Lounge	0.4
2162158	3486314	09/05/2017 3:15 pm	09/08/2017 7:02 am	Basement Teacher's Workroom	0.9
2162159	3486320	09/05/2017 3:18 pm	09/08/2017 7:03 am	Basement Curriculum Coordinator	1.2
2162160	3486315	09/05/2017 3:19 pm	09/08/2017 7:05 am	Basement Storage	1.2
2162161	3486312	09/05/2017 3:22 pm	09/08/2017 7:07 am	Basement OP/PT	1.7
2162162	3486311	09/05/2017 3:25 pm	09/08/2017 7:09 am	Basement Half Day K	0.7
2162163	3486313	09/05/2017 3:27 pm	09/08/2017 7:10 am	Basement Full Day K	0.8

Comment: Universal Environmental Consultant was emailed a copy of this report.

Test Performed By: Colleen Canning

Distributed by: Universal Environmental Consultant

Date Received: 09/08/2017 Date Logged: 09/08/2017 Date Analyzed: 09/11/2017 Date Reported: 09/11/2017

Report Reviewed By: Michele Cleveland Report Approved By: _____

Shawn Price, Director of Laboratory Operations, AccuStar Labs

Disclaimer:

The uncertainty of this radon measurement is ~+/- 10 %. Factors contributing to uncertainty include statistical variations, daily and seasonal variations in radon concentrations, sample collection techniques and operation of the dwelling. Interference with test conditions may influence the test results.

This report may only be transferred to a third party in its entirety. Analytical results relate to the samples AS RECEIVED BY THE LABORATORY. Results shown on this report represent levels of radon gas measured between the dates shown in the room or area of the site identified above as "Property Tested". Incorrect information will affect results. The results may not be construed as either predictive or supportive of measurements conducted in any area of this structure at any other time. AccuStar Labs, its employees and agents are not responsible for the consequences of any action taken or not taken based upon the results reported or any verbal or written interpretation of the results.

3.1.4 EVALUATION OF EXISTING CONDITIONS

E. Supporting Documents

1. Utility Summary
2. AHERA 3-Year Re-Inspection Report

UTILITY SUMMARY

	Electricity	Gas	Water
	SELCO (kWh)	Eversource (therms)	Town (Gallons)
July 2016	7,040	10	
August 2016	5,960	10	39,000
September 2016	8,320	21	
October 2016	10,080	50	
November 2016	9,600	114	61,000
December 2016	8,760	409	
January 2017	8,760	420	
February 2017	9,520	342	54,000
March 2017	7,480	380	
April 2017	9,760	128	
May 2017	7,840	71	95,000
June 2017	9,480	33	
Totals	**102,600 (kWh)**	**1,988 (therms)**	**249,000 (gallons)**

SHREWSBURY PUBLIC SCHOOLS

2016
AHERA THREE-YEAR
RE-INSPECTION REPORT
FOR THE
BEAL SCHOOL
1 MAPLE AVENUE

UNIVERSAL ENVIRONMENTAL CONSULTANTS
12 Brewster Road
Framingham, MA 01702

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SECTION 2
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SECTION 3
Operation and Maintenance Plan

SECTION 4
EPA AHERA Regulation

CERTIFIED PERSONNEL INFORMATION

INSPECTOR INFORMATION

INSPECTOR NAME: Jason Becotte

CONSULTING FIRM: Universal Environmental Consultants

STATE OF ACCREDITATION: Massachusetts

ACCREDITATION NUMBER: AI-034963, Expire January 2017

I certify as an inspector that I have re-inspected the said building in accordance with AHERA regulations 40 CFR Part 763 Section 763.88.

INSPECTOR SIGNATURE: Jason Becotte

DATE: November 14, 2016

MANAGEMENT PLANNER INFORMATION

MANAGEMENT PLANNER NAME: Leonard Busa

CONSULTING FIRM: Universal Environmental Consultants

STATE OF ACCREDITATION: Massachusetts

ACCREDITATION NUMBER: AP-030673, Expire 2017

I certify as a Management Planner that I have reviewed this re-inspection report for the said building in accordance with AHERA regulations 40 CFR Part 763 Section 763.88.

MANAGEMENT PLANNER SIGNATURE: Leonard Busa

DATE: November 21, 2016

DESIGNATED PERSON INFORMATION

NAME: Robert Cox

ADDRESS: 100 Maple Avenue, Shrewsbury, MA

TRAINING FACILITY: IEE/Commonwealth of Massachusetts

DATE OF TRAINING: May 15, 1989 and June 3, 2006

Robert A. Cox

Signature of Designated Person

DESIGNATED PERSON (DP) ASSURANCES

In accordance with 40 CFR § 763.93(i) of the Environmental Protection Agency (EPA) Asbestos Containing Building Material (ACBM) in Schools regulation, the undersigned Local Education Agency (LEA) Designated Person (DP) hereby certifies that the following general responsibilities of the LEA under 40 CFR § 763.84 have been or will be met:

1. Ensure that the activities of any person, who perform inspections, re- inspections, and periodic surveillance, develop and update management plans, and develop and implement response actions, including operations and maintenance, are carried out in accordance with Part 763, Subpart E.
2. Ensure that all custodial and maintenance employees are properly trained as required by Part 763, Subpart E and other applicable Federal and/or State regulations (e.g., the Occupational Safety and Health Administration asbestos standard for construction, the EPA worker protection rule, or applicable State regulations).
3. Ensure that workers and building occupants, or their legal guardians, are informed at least once each school year about inspections, response actions, and post-response action activities, including periodic re-inspection and surveillance activities that are planned or in progress.
4. Ensure that short-term workers (e.g., telephone repair workers, utility workers, or ex terminators) who may come in contact with asbestos in a school are provided information regarding the locations for ACBM and suspected ACBM assumed to be Asbestos Containing Materials (ACM).
5. Ensure that warning labels are posted in accordance with § 40 CFR 763.95.
6. Ensure that management plans are available for inspection and notification of such availability has been provided as specified in the management plan under § 40 CFR 763.93(g).
7. Designate a person to ensure that requirements under § 763.84 are properly implemented and ensure that the designated person receives adequate training to perform duties assigned under § 763.84. Such training shall provide, as necessary, basic knowledge of: health effects of asbestos; detection, identification, and assessment of ACM; options for controlling ACBM; asbestos management programs; relevant Federal and State regulations concerning asbestos, including those in Part 763, Subpart E and those of the Occupational Safety and Health Administration and the U.S. Environmental Protection Agency.
8. Consider whether any conflict of interest may arise from the inter-relationship among accredited personnel and whether that should influence the selection of accredited personnel to perform activities under Part 763, Subpart E.

1.0 INTRODUCTION:

On October 22, 1986, President Reagan signed into law an amendment to the Toxic Substance Control Act requiring schools to determine the presence of asbestos containing building materials in all school buildings. That amendment, called the Asbestos Hazard Emergency Response Act (AHERA) required that all school buildings be visually inspected by accredited inspectors and that bulk samples of suspected materials are taken where the material was not assumed to be asbestos. It further required that management plans be created for each individual building and that the maintenance and custodial personnel receive training. The plan must be implemented and the training must be completed by July 9, 1989. This document is the Asbestos Management Plan, which provides the means and the methods to effectively deal with asbestos containing building materials.

The AHERA regulation also requires that each school building be re-inspected every three years encompassing the following actions:

1. Visually re-inspect, and reassess, under 40 CFR Part 763 Section 763.88, the condition of all friable known or assumed ACBM.
2. Visually inspect material that was previously considered non-friable ACBM and touch the material to determine whether it has become friable since the last inspection or re-inspection.
3. Identify any homogeneous areas with material that has become friable since the last inspection or re-inspection.
4. For each homogeneous area of newly friable material that is already assumed to be ACBM, bulk samples may be collected and submitted for analysis in accordance with 40 CFR Part 763 Section 763.86 and 40 CFR Part 763 Section 763.87.
5. Assess, under 40 CFR Part 763 Section 763.88, the condition of the newly friable material in areas where samples are collected and newly friable materials in areas that are assumed to be ACBM.
6. Reassess, under 40 CFR Part 763 Section 763.88, the condition of friable known or assumed ACBM previously identified.

All findings in this re-inspection report must be included in the original AHERA Management Plan.

2.0 SUMMARY:

A. Inspection:

All known or assumed to be ACBM homogeneous areas were taken from the existing Management Plans and previous re-inspection reports or obtained during the inspection. Each of the ACBM homogeneous[1] areas found in the existing Management Plans were reviewed and reassessed by the accredited inspector licensed in the State of Massachusetts. The reassessment was conducted by physically examining the ACBM or suspect materials to determine friability and level of damage. These assessments can be found in the Inspection Spread Sheets, which also includes ACBM, which found to be physically damaged that might requires corrective actions.

B. Inspection Spread Sheets of Asbestos Containing Materials:

The assessment chart contains homogeneous areas', type of material, location of material, classification of ACBM, friability and AHERA Assessment as follows:

AHERA ASSESSMENT CATEGORIES

CATEGORY 1	Damaged or significantly damaged thermal system insulation ACM
CATEGORY 2	Damaged friable surfacing ACM
CATEGORY 3	Significantly damaged friable surfacing ACM
CATEGORY 4	Damaged or significantly damaged friable miscellaneous ACM
CATEGORY 5	ACBM with potential for damage
CATEGORY 6	ACBM with potential for significant damage
CATEGORY 7	Any remaining friable ACBM or friable suspected ACBM

C. LEA Responsibilities:

The following requirements must be implemented as part of the EPA AHERA regulations.

- The LEA must designate a person who will be responsible of all AHERA requirements. The DP must have the required training (8 hours) that has to be performed at an EPA approved training provider.
- All custodians must have required training (2 hours).
- Surveillance inspections of all Schools must be performed every six months by either a licensed asbestos inspector or the DP.
- All Schools must be inspected every three years and the Management Plans updated by a licensed asbestos inspector.
- Parents and teachers must be notified on a yearly basis of the presence of the AHERA Management Plans.
- Three year inspections of all Schools must be performed by a licensed asbestos inspector.

[1] Homogeneous Area: Classification type for materials of similar appearance and texture. That is, materials throughout the facility that appear to be the same are grouped as one homogeneous area.

3.0 GLOSSARY OF TERMS

ABIH	American Board of Industrial Hygiene
Abatement	Any work done to minimize asbestos hazards including removal, encapsulation, and enclosure
Acoustical Insulation	Insulation used for the control of sound
Acoustical Tile	A finishing material in a building usually found in the ceiling or walls for the purpose of noise control.
AIHA Accredited Laboratory	A certification given by the AIHA to an analytical laboratory that has successfully participated in the "Proficiency Analytical Testing" program for quality control as established by the National Institute for Occupational Safety and Health
Airborne Asbestos Analysis	Determination of the amount of asbestos fibers suspended in a given amount of air
Air Monitoring	The process of measuring the airborne fiber concentration of a specific quantity of air over a given amount of time
Air Plenum	Any space used to convey air in a building or structure, the space above a suspended ceiling is often used as an air plenum.
Air Sample	Sample of air taken for the purpose of determining a quantity of material found in the air.
Ambient Air	The surrounding air or atmosphere in a given area under normal conditions.
Approved Landfill	A site for the disposal of asbestos containing and other hazardous materials that are being removed
Asbestos	A generic name given to a number of naturally occurring hydrated mineral silicates that possess a unique crystalline structure, are incombustible in air, and are separable into fibers. Asbestos includes the Asbestiform varieties of Chrysotile (serpentine); Crocidolite (riebeckite); Amosite (cummingtonite-grunerite); Anthophyllite; and Actinolite.
Asbestos Abatement	Procedures to control fiber release from asbestos—containing materials in buildings.
Asbestos Exposure Assessment System	A decision tool which can be used to determine the extent of the asbestos hazard that exists in a building, and which can also be used to develop corrective actions.

Asbestos Fibers	Fibers greater than 5 microns long and a length to width ratio of at least 3:1, generated from an asbestos containing material.
Asbestos Standard	Refer to the OSHA requirements in the general industry standards regarding asbestos exposure (29 CFR 1910.1001), and EPA National Emission Standard for Hazardous Air Pollutants (NESHAP) (40 CFR 61, subpart 14) or Asbestos Abatement Projects (40 CFR Part 763) applicable for public employees
Asbestosis	A non-malignant, progressive, irreversible lung disease caused by the inhalation of asbestos dust and characterized by diffuse fibrosis. This disease usually occurs after high level exposures.
Atmosphere Supplying Respirators	Respiratory protection devices which exclude workplace air altogether and provide clean air from some independent source.
Bid	A statement of the price at which a contractor will complete a given project
Bulk Sample	Physical sample of the material (i.e., piece of covering or ceiling material). This is in contrast to an air sample where the air itself is sampled for fibers. Bulk samples are taken to determine if a material contains asbestos
Cancer	A cellular tumor which normally leads to premature death of its host unless controlled.
Ceiling Concentration	The maximum allowable level of toxic material that can be present at any given point in time
CFM	Cubic feet per minute
Clean Area	The first stage of the decontamination enclosure system in which workers prepared to enter the work area.
Contract Specifications	A set of guidelines that a contractor must follow when conducting an asbestos abatement job.
DEP	Department of Environmental Protection
Dirty Area	Any area in which the concentration of airborne asbestos fibers exceeds 0.01-f/cc, or where there is visible asbestos residue.
DLS	Department of Labor Standards
Electron Microscopy	A method of asbestos sample analysis which utilizes an electron beam to differentiate between fibers.

4.0 RESOURCES REQUIRED FOR THE LEA

The following are estimated costs required to carry out re-inspections, operation and maintenance, periodic surveillance and training and all related costs.

The annual estimated cost is $600.00.

5.0 RESOURCES REQUIRED TO-COMPLETE RESPONSE ACTIONS:

The following are estimated costs to properly remove and dispose of all ACBM, to properly remove or repair and dispose of damaged ACBM in the building in accordance with federal and state regulations. All abatement activities will be performed by Massachusetts licensed asbestos abatement contractors under the supervision of Massachusetts licensed asbestos project monitor. All asbestos abatement activities must be designed by a Massachusetts licensed asbestos designer. The estimated costs do not include replacement.

An EPA NESHAP regulation inspection must be performed should renovations or demolitions takes place. The listed costs do not apply since additional ACBM might be found on the exterior of the building and in concealed locations.

Various activities might be performed by in house trained personnel. Refer to the O&M Plan.

The estimated cost to remove and dispose of all accessible ACBM in the building is $165,000.00. The estimated cost for design, construction monitoring and air sampling is $45,000.00.

The estimated cost to remove/or repair and dispose of damaged ACBM in the building is $0.00. The estimated cost for design, construction monitoring and air sampling is $0.00

6.0 OBSERVATIONS AND RECOMMENDATIONS:

A Massachusetts licensed asbestos inspector was on site to perform the AHERA Third Year Re-Inspection. Please refer to this page in conjunction with the spreadsheets located in section two of this report for information regarding the location, condition, and recommended response actions for ACBM located throughout the building. Refer to O&M Program for preventive measures.

- All ACBM was found to be in good condition.
- Refer to the original management plan and previous inspection reports for suspect materials previously sampled.

7.0 DATES FOR RECOMMENDED RESPONSE ACTIONS:

ACBM in the building were found to be in good condition. Continue O&M activities and insure that no ACBM is being disturbed. Remove ACBM as needed.

LEA DESIGNATED PERSON RESPONSIBILITY

The LEA shall be responsible for the following:

1. Arranging and coordinating training for all faculty and staff with annual updates for new personnel.
2. Arranging for abatement procedures called for in the abatement recommended actions.
3. Complying with all state, OSHA, or EPA rules or regulations regarding asbestos abatement activities.
4. Routine maintenance activities by in-house personnel.
5. Coordinating and overseeing work done by outside contractors if the possibility exists that ACBM can be disturbed by this work.
6. Establishment of a respiratory protection program for "Asbestos Maintenance" in accordance with OSHA recommendations.
7. Procurement and maintenance of specialized equipment and supplies needed for implementation of this plan.
8. Monitoring of all asbestos containing materials in the building.
9. Ensure that all asbestos waste generated at the school is packaged, transported, and disposed of in accordance with EPA requirements and that the necessary chain of custody documentation is maintained.
10. Warnings, notifications, and record keeping as outlined in U.S. EPA Regulations 40 CFR Part 763.
11. Maintenance of all medical records required by OSHA for any school employees involved in in-house repair or removal of ACBM.
12. Updating existing management program every six months.
13. Labeling Asbestos Containing Building Materials.

A. RESOURCES NEEDED:

EQUIPMENT:

- HEPA vacuum
- Half-face respirator
- Emergency repair tool kit
- Disposable type suits
- 6-mil polyethylene sheeting
- Asbestos labeled bags

SUPPORT PERSONNEL:

- Licensed Consultant
- Trained Maintenance Personnel

B. NOTIFICATION:

The LEA is responsible for informing all building occupants annually of the asbestos control program at the school. Notification serves two purposes: It alerts affected parties to a potential hazard in the building; and it provides basic information on avoiding the hazard. Building occupants, employees, and others who are aware of the presence of ACBM are less likely to disturb the material and cause fiber release. It is recommended to post in the school's web site.

C. PERIODIC SURVEILLANCE:

At least once every six months, the LEA or his/her designee will conduct periodic surveillance in each building that contains asbestos-containing thermal system insulation. Each person performing periodic surveillance shall:

1. Visually inspect all areas that have been identified as ACBM

2. Record the data of the surveillance, his or her name, and any changes in the condition of ACBM
3. Submit to the Asbestos Control Manager a copy of such a record or report for inclusion into the management plan or permanent asbestos file

D. RE-INSPECTION:

1. Re-inspection of friable and non-friable ACBM every three years
2. Inspection by an accredited inspector
3. Re-inspection shall include:
   A. Visual re-inspection of all friable ACBM and newly friable ACBM
   B. Re-assessment of all friable ACBM
   C. Recheck all previously non-friable ACBM to determine if they have become friable
   D. Identify newly friable materials
   E. Collect and submit samples of newly friable ACBM if previously assumed to be ACBM
   F. Assess under 763.88, newly friable ACBM
   G. Reassess condition of previously identified friable ACBM
   H. Record and submit:
      1. Re-inspection report
      2. Inventory of homogeneous areas. Exact sample site locations
      3. Description of manner used to determine sample site locations

E. RECORDKEEPING:

The O&M plan contains the specifications and forms for keeping records regarding any repair or removal work involving ACBM. The record keeping procedure assures that:

1. Major repair work carried out by outside contractor is documented
2. Minor repair work by qualified in-house worker is documented
3. Monitoring of remaining asbestos is recorded
4. Personnel records for training and medical monitoring are kept

In general, this record keeping system must track two types of data: data on the physical condition of the ACBM's and actions taken on those ACBM's; the data associated with the personnel involved with the asbestos management program.

Tracking of the ACBM's maybe thought of as the tracking of physical inventory. The condition of the material recorded at intervals (record of the inspection and surveillance), that recording of substantive changes in material status (removal, enclosure or encapsulation), various required reports to governing bodies (notices of abatement and disposal actions to the EPA) and the recording of a new audited inventory in the context of the 3-year re-inspection.

Personnel tracking require: identity; training; medical monitoring; and exposure of the individual to be recorded on a form (which is to be on file for a period of at least 30 years). The following record formats and descriptions are intended as generalized basic examples of the type of records required for daily use.

LIST OF REQUIRED RECORDKEEPING (763.94)

1. Records location
   A. Removal records retention
   B. Records as part of the management plan

2. For each preventive measure:
   A. Detailed written description of measure or action including,
      1. Location of measure or action
      2. Methods used
      3. Reasons for selecting the measure of action
      4. Name and addresses of all contractors involved
   B. Identification of person taking clearance air samples
      1. Locations where samples were collected
      2. Date of collection
      3. Name and address of analysis lab
      4. Date of analysis
      5. Method of analysis
      6. Name and signature of person performing the analysis
      7. Statement that lab meets 763 .90(1) (2) (ii)
3. For each person required to be trained under 763.92(a) (1) and (2):
   A. Name and job title.
   B. Date training completed
   C. Location of training
   D. Hours of training
4. For each periodic surveillance under 763 .91 (c):
   A. Name of person performing surveillance
   B. Date of surveillance
   C. Any changes in the conditions of materials
5. For each cleaning under 763.91(d):
   A. Name of each person performing cleaning
   B. State and completion dates
   C. Locations
   D. Description of activity
   E. Method of used
6. For each time an O&M activity is performed under 763.91(d):
   A. Name of each person performing activity
   B. State and completion dates
   C. Locations
   D. Description of activity
   E. Measure used
   F. Locations of storage/disposal site
7. For each time that a major asbestos activity under 763.9 1(a) is performed:
   A. Name, signature, state of accreditation, number of persons performing activities.
   B. Start and completion dates,
   C. Locations and description of activity.
   D. Methods used.
   E. Location of storage disposal site.
   F. Results of any air sampling analysis performed.
8. For each fiber release episode under 763.91(f):
   A. Date and location of the episode,
   B. Method of repair,
   C. Preventive measures taken.
   D. Name of each person performing work.
   E. Location of storage/disposal site.

THIRD YEAR RE-INSPECTION SPREADSHEETS

The regulations require that this report provide a considerable quantity of specific data related to asbestos containing materials within buildings. The information contained in these spreadsheets provides a condensed, easy to use summary of much of that data. It indicates whether or not the various building materials contain asbestos. If they do, the spreadsheets indicate where the asbestos is located, what kind of asbestos it is, and most importantly, what actions are recommended to be taken. The measures include both scheduled action by asbestos abatement contractors as well as day to day activities by the building's custodial and maintenance personnel.

You should find these spreadsheets easy to use and very helpful. To assist you in its use, the following pages provide column by column explanations of the spreadsheets.

HOMOGENEOUS AREA:
This column defines the various homogeneous areas throughout the building. It is important that you understand the concept of a homogeneous area. It is really very simple. By definition a homogeneous area is one in which the materials, are evenly mixed and similar in appearance and texture throughout. All that means is that the materials appear to be the same. Therefore, during the survey, all the materials throughout the school that appeared to be the same were grouped into homogeneous areas. For example, a given building may have had a white, speckled 2' x 2' suspended ceiling in several of the classrooms. Therefore, one homogeneous area was described as 2' x 2' suspended ceiling and its area was comprised of every school classroom in which that suspended ceiling was present. Another example is hard joints on pipe insulation. Generally, hard, joints on pipe insulation are similar in texture and appearance. Therefore, all joints on a particular type of pipe were considered one homogeneous area.

As you can see a homogeneous area is just the means by which similar materials are grouped. The importance of the homogeneous area is that it provides a method to determine whether or not a material contains asbestos without having to sample every building material in every room. When homogeneous areas have been defined, representative samples of that material are taken and tested to determine whether or not they contain asbestos. Based on those test results, it can logically be presumed whether or not all the material in a given homogeneous area does or does not contain asbestos.

Turning to the spreadsheet you will see that in the first column each homogeneous area is assigned a number starting with 1. The number of homogeneous areas in each building will vary depending on how many types of building materials there are.

DESCRIPTION:
This column provides a brief description of what each homogeneous area is and lists all the areas within the building in which that material is present. For example, a description of one homogeneous area may be "Joint Insulation". Then under that description, will be a listing of all the rooms in the school in which that joint insulation is present.

SAMPLE NUMBER:
This column is for the sample number. The number is comprised of three numbers divided by dashes. The first number identifies the date the sample was taken. The second number identifies the each individual sample number taken in the specific building. For each homogeneous area, the sample numbers are listed only in the rooms where actual samples were taken. For all the other rooms within a homogeneous area where there is no sample number listed, there was no sample taken. However, because the materials are in the same homogeneous area, it is assumed that the materials are similar.

ASBESTOS TYPE:
If there is asbestos present, this column defines the percentage of asbestos and the type asbestos. These are defined by a number and a four letter abbreviation. The number is the percentage of asbestos and the four letter abbreviation represents the type of asbestos. In the lower left hand corner of each spreadsheet there is a legend

which explains what each abbreviation stands for. For example, CHRY stands for Chrysotile. If no asbestos was found in the sample, "0%" or "ND" is listed in the column. Please note that only the specific samples taken indicate the type and percentage of asbestos. For all other areas within a homogeneous area where no specific sample was taken, the material is either assumed positive or negative based on the results of the actual samples.

MATERIAL:
The next three columns describe the material by the following criteria:
Type:
This column identifies the type of material as "S" for Surfacing, "T" for Thermal or "M" for Miscellaneous. Surfacing materials include such items as acoustical spray, wall and ceiling plaster, and spray on fireproofing. Thermal materials include such items as hard joints, boiler insulation, and duct insulation. Miscellaneous materials include such items as suspended acoustical tile and vinyl floor tile.
Location:
This column places the location of the sample into two broad categories. Either "AC" for above ceiling or "BC" for below the ceiling;
Quantity:
This column represents the quantity of material present. In the case of pipe insulation the quantity is linear feet. In case of hard joints the quantity is for each joint.

FRIABILITY:
If a material contains asbestos, this column indicates whether the material is friable or non-friable. A friable material is one that contains 1% or more of asbestos by weight and can be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable materials are all other types of asbestos containing materials.

It is important to remember that the danger of asbestos is when the fibers become airborne. Therefore, the friable asbestos is potentially more dangerous than the non-friable asbestos. In this column each material containing asbestos is defined by "F" for friable or "NF" for non-friable.

AHERA ASSESSMENT CATEGORIES:
This column indicates the assessments made in accordance with EPA guidelines.

RECOMMENDATIONS:
This column indicates the recommended action and dates to complete the work (if needed).

AHERA ASSESSMENT CATEGORIES

CATEGORY 1	Damaged or significantly damaged thermal system insulation ACM
CATEGORY 2	Damaged friable surfacing ACM
CATEGORY 3	Significantly damaged friable surfacing ACM
CATEGORY 4	Damaged or significantly damaged friable miscellaneous ACM
CATEGORY 5	ACBM with potential for damage
CATEGORY 6	ACBM with potential for significant damage
CATEGORY 7	Any remaining friable ACBM or friable suspected ACBM

6-MONTH SURVEILLANCE

INFORMATION

NAME: _____

CONSULTING FIRM/LEA: _____

ACCREDITATION NUMBER (If Applicable): _____

I certify that I have performed a surveillance inspection of the said building in accordance with AHERA regulations 40 CFR Part 763.

SIGNATURE: _____

DATE: _____

COMMENTS: _____

12-MONTH SURVEILLANCE

INFORMATION

NAME: _____

CONSULTING FIRM/LEA: _____

ACCREDITATION NUMBER (If Applicable): _____

I certify that I have performed a surveillance inspection of the said building in accordance with AHERA regulations 40 CFR Part 763.

SIGNATURE: _____

DATE: _____

COMMENTS: _____

18-MONTH SURVEILLANCE

INFORMATION

NAME: _____

CONSULTING FIRM/LEA: _____

ACCREDITATION NUMBER (If Applicable): _____

I certify that I have performed a surveillance inspection of the said building in accordance with AHERA regulations 40 CFR Part 763.

SIGNATURE: _____

DATE: _____

COMMENTS: _____

24-MONTH SURVEILLANCE

INFORMATION

NAME: _____

CONSULTING FIRM/LEA: _____

ACCREDITATION NUMBER (If Applicable): _____

I certify that I have performed a surveillance inspection of the said building in accordance with AHERA regulations 40 CFR Part 763.

SIGNATURE: _____

DATE: _____

COMMENTS: _____

30-MONTH SURVEILLANCE

INFORMATION

NAME: _____

CONSULTING FIRM/LEA: _____

ACCREDITATION NUMBER (If Applicable): _____

I certify that I have performed a surveillance inspection of the said building in accordance with AHERA regulations 40 CFR Part 763.

SIGNATURE: _____

DATE: _____

COMMENTS: _____

BUILDING: BEAL SCHOOL

HOM. AREA	DESCRIPTION	SAMPLE NO.	ASBESTOS %	ASBESTOS TYPE	MATERIAL TYPE	MATERIAL LOCATION	MATERIAL QUANTITY	FRIABILITY	2016 AHERA ASSESSMENT 40 CFR 763.88	COMMENTS	RECOMMENDATIONS REFER TO REPORT FOR DATES AND COST ESTIMATES
1	**PIPE AND HARD JOINT INSULATION**										
	B-11		PREVIOUSLY	T	BC	2	LF	NF	5		O&M
	B-10		FOUND OR	T	BC	14	LF	NF	5		O&M
	BOILER ROOM		ASSUMED	T	BC	150	LF	NF	5		O&M
	BOILER ROOM STORAGE ROOM		POSITIVE	T	BC	170	LF	NF	5		O&M
	B-09			T	BC	2	LF	NF	5		O&M
	BASEMENT MAIN CORRIDOR			T	BC	18	LF	NF	5		O&M
	HIDDEN			T	BC	UNKNOWN		NF	5		O&M
2	**9'X 9' VINYL FLOOR TILE ASSUMED UNDER CARPET**										
	UNDER CARPETS		PREVIOUSLY FOUND OR ASSUMED POSITIVE	M	BC	20,000	SF	NF	5		O&M
3	**LINOLEUM FLOOR COVERING**										
	SECOND FLOOR BATHROOM		PREVIOUSLY	M	BC	160	SF	NF	5		O&M
	FIRST FLOOR BATHROOM		FOUND OR ASSUMED POSITIVE	M	BC	160	SF	NF	5		O&M
4	**EXPOSED 9' X 9' VINYL FLOOR TILE**										
	STAIRWELL LANDINGS		PREVIOUSLY	M	BC	80	SF	NF	5		O&M
	ROOM 18		FOUND OR	M	BC	210	SF	NF	5		O&M
	NURSE BATHROOM		ASSUMED	M	BC	50	SF	NF	5		O&M
	ROOM 7		POSITIVE	M	BC	20	SF	NF	5		O&M

ASBESTOS TYPE
CHRY Chrysotile
AMOS Amosite
ACTI Actinolite
ANTH Anthophyllite
CROC Crocidolite
ND No Asbestos Detected

QUANTITY
SF Square Feet
LF Linear Feet
TO Total
EA Each

MATERIAL LOCATION (LOC.)
AC Above Ceiling
BC Below Ceiling

BUILDING: BEAL SCHOOL

HOM. AREA	DESCRIPTION	SAMPLE NO.	ASBESTOS % TYPE	MATERIAL TYPE	MATERIAL LOCATION	MATERIAL QUANTITY	FRIABILITY	2016 AHERA ASSESSMENT 40 CFR 763.88	COMMENTS	RECOMMENDATIONS REFER TO REPORT FOR DATES AND COST ESTIMATES
5	TANK INSULATION									
	BOILER ROOM		PREVIOUSLY FOUND OR ASSUMED POSITIVE	T	BC	70 SF	NF	5		O&M
6	DUCT INSULATION									
	BOILER ROOM		PREVIOUSLY FOUND OR ASSUMED POSITIVE	T	BC	120 SF	NF	5		O&M
7	9'X 9' VINYL FLOOR TILE MASTIC ASSUMED UNDER CARPET									
	UNDER CARPET		ASSUMED POSITIVE	M	BC	20,000 SF	NF	5		O&M
8	LINOLEUM FLOOR COVERING GLUE									
	SECOND FLOOR BATHROOM		ASSUMED	M	BC	160 SF	NF	5		O&M
	FIRST FLOOR BATHROOM		POSITIVE	M	BC	160 SF	NF	5		O&M
10	EXPOSED 9' X 9' VINYL FLOOR TILE MASTIC									
	STAIRWELL LANDINGS		ASSUMED	M	BC	80 SF	NF	5		O&M
	ROOM 18		POSITIVE	M	BC	210 SF	NF	5		O&M
	NURSE BATHROOM			M	BC	50 SF	NF	5		O&M
11	WHITE 12" X 12" VINYL FLOOR TILE									
	NURSE		ASSUMED	M	BC	300 SF	NF	5		O&M
	LOBBY		POSITIVE	M	BC	150 SF	NF	5		O&M
	STAIRWELLS			M	BC	100 SF	NF	5		O&M

ASBESTOS TYPE
CHRY Chrysotile
AMOS Amosite
ACTI Actinolite
ANTH Anthophyllite
CROC Crocidolite
ND No Asbestos Detected

QUANTITY
SF Square Feet
LF Linear Feet
TO Total
EA Each

MATERIAL LOCATION (LOC.)
AC Above Ceiling
BC Below Ceiling

BUILDING: BEAL SCHOOL

HOM. AREA	DESCRIPTION	SAMPLE NO.	ASBESTOS %	ASBESTOS TYPE	MATERIAL TYPE	MATERIAL LOCATION	QUANTITY	FRIABILITY	2016 AHERA ASSESSMENT 40 CFR 763.88	COMMENTS	RECOMMENDATIONS REFER TO REPORT FOR DATES AND COST ESTIMATES
12	WHITE 12" X 12" VINYL FLOOR TILE MASTIC										
	NURSE		ASSUMED		M	BC	300 SF	NF	5		O&M
	LOBBY		POSITIVE		M	BC	150 SF	NF	5		O&M
	STAIRWELLS				M	BC	100 SF	NF	5		O&M
13	INTERIOR WINDOW CAULKING										
	FIRST FLOOR HALLWAY		ASSUMED		M	BC	70 TO	NF	5		O&M
	SECOND FLOOR HALLWAY		POSITIVE		M	BC	50 TO	NF	5		O&M
14	OLD HORSEHAIR PLASTER										
	CUSTODIAN ROOM		PREVIOUSLY		S	BC	600 SF				
	BASEMENT HALLWAY		TESTED		S	BC	1,200 SF				
	SECOND FLOOR		NEGATIVE		S	BC	1,200 SF				
	FIRST FLOOR				S	BC	8,000 SF				
	SECOND FLOOR				S	BC	8,000 SF				
15	WHITE SINK COATING										
	B-1		ASSUMED		M	BC	1 TO	NF	5		O&M
	B-8		POSITIVE		M	BC	1 TO	NF	5		O&M
	B-9				M	BC	1 TO	NF	5		O&M
	ROOM 2				M	BC	1 TO	NF	5		O&M
	ROOM 3				M	BC	1 TO	NF	5		O&M
	ROOM 5				M	BC	1 TO	NF	5		O&M
	ROOM 10				M	BC	1 TO	NF	5		O&M
	ROOM 8				M	BC	1 TO	NF	5		O&M
	ROOM 9				M	BC	1 TO	NF	5		O&M
16	BLACK SINK COATING										
	BASEMENT HALLWAY		ASSUMED POSITIVE		M	BC	2 TO	NF	5		O&M

ASBESTOS TYPE
CHRY Chrysotile
AMOS Amosite
ACTI Actinolite
ANTH Anthophyllite
CROC Crocidolite
ND No Asbestos Detected

QUANTITY
SF Square Feet
LF Linear Feet
TO Total
EA Each

MATERIAL LOCATION (LOC.)
AC Above Ceiling
BC Below Ceiling

BUILDING: BEAL SCHOOL

HOM. AREA	DESCRIPTION	SAMPLE NO.	ASBESTOS %	ASBESTOS TYPE	MATERIAL TYPE	MATERIAL LOCATION	MATERIAL QUANTITY	FRIABILITY	2016 AHERA ASSESSMENT 40 CFR 763.88	COMMENTS	RECOMMENDATIONS REFER TO REPORT FOR DATES AND COST ESTIMATES
17	2' X 4' SUSPENDED ACOUSTICAL CEILING TILE										
	B-1		PREVIOUSLY		M	BC	600 SF				
	B-11		TESTED		M	BC	350 SF				
	B-8		NEGATIVE		M	BC	600 SF				
	B-9				M	BC	600 SF				
	B-7				M	BC	150 SF				
	CAFETERIA/KITCHEN				M	BC	1,800 SF				
	LIBRARY				M	BC	700 SF				
	NURSE				M	BC	300 SF				
	ROOM 2				M	BC	600 SF				
	ROOM 3				M	BC	600 SF				
	ROOM 4				M	BC	600 SF				
	FIRST FLOOR HALLWAY				M	BC	1,200 SF				
	OFFICES				M	BC	400 SF				
	ROOM 5				M	BC	600 SF				
	ROOM 6				M	BC	600 SF				
	ROOM 7				M	BC	600 SF				
	ROOM 18				M	BC	200 SF				
	ROOM 16				M	BC	600 SF				
	ROOM 15				M	BC	600 SF				
	ROOM 14				M	BC	600 SF				
	ROOM 12				M	BC	600 SF				
	ROOM 11				M	BC	600 SF				
	ROOM 10				M	BC	600 SF				
	ROOM 8				M	BC	600 SF				
	ROOM 9				M	BC	600 SF				
	ALL OTHER SUSPECT MATERIALS WERE FOUND NOT TO CONTAIN ASBESTOS FROM PREVIOUS REPORTS REFER TO THE MANAGEMENT PLAN FOR PREVIOUSLY SAMPLED MATERIALS										

ASBESTOS TYPE
CHRY Chrysotile
AMOS Amosite
ACTI Actinolite
ANTH Anthophyllite
CROC Crocidolite
ND No Asbestos Detected

QUANTITY
SF Square Feet
LF Linear Feet
TO Total
EA Each

MATERIAL LOCATION (LOC.)
AC Above Ceiling
BC Below Ceiling

OPERATIONS AND MAINTENANCE PLAN
BEAL SCHOOL

INTRODUCTION:
This operations and maintenance plan details each type of repair, removal, or maintenance activity that is likely to be necessary to keep asbestos containing building materials in good condition.

The following Asbestos Containing Building Material (ACBM) that is either, previously found, found or assumed to contain asbestos:

- Pipe and Hard Joint Insulation (Previously Found)
- 9"x 9" Vinyl Floor Tiles (Previously Found/Assumed)
- 9"x 9" Vinyl Floor Tiles Mastic (Assumed)
- Linoleum Floor Covering (Previously Found/Assumed)
- Linoleum Floor Covering Glue (Assumed)
- Tank Insulation (Previously Found/Assumed)
- Duct Insulation (Previously Found/Assumed)
- 12"x 12" Vinyl Floor Tiles (Assumed)
- 12"x 12" Vinyl Floor Tiles Mastic (Assumed)
- Damproofing on Sinks (Assumed)
- Interior Window Caulking (Assumed)

OBJECTIVE:
The three main objectives of an Operations and Maintenance (O&M) program are:

1. To clean up existing contamination
2. To minimize future fiber release by controlling access to asbestos containing building material (ACBM)
3. To maintain ACBM until it is eventually removed.

Since by law all but small quantities of ACBM must be removed from buildings before demolition, this O&M program is not a permanent solution. It is implemented as part of an overall asbestos management plan that has as its goal the elimination of asbestos exposure within the facility. The O&M program likewise is not a means by which full scale asbestos abatement is accomplished. Rather, intentional disruption of ACBM should be limited to repair or removal of small areas of significantly damaged ACBM, or small areas where removal is necessary to facilitate maintenance/renovation activities.

As long as ACBM remains in the building, the O&M plan must remain in effect. Unless the program is implemented properly, exposure of maintenance workers and building occupants may not decrease. ACBM may be disturbed by improper cleaning or repair methods. The O&M program should be established as soon as the presence of ACBM is confirmed or assumed to be present. It must address friable material as well as material about to become friable, such as transite board to be cut or drilled. The O&M includes a general set of procedures that apply to periodic inspection, building renovation, maintenance, cleaning and work done to maintain the material in good condition.

Though an O&M program may initially seem the most cost effective solution to an asbestos problem, there are many additional costs that must be taken into consideration. Money that could have been spent on removal must be spent on worker training, respirators, and health monitoring. These costs continue until the ACBM is removed. Asbestos removal is required during renovation or demolition.

Operation and Maintenance plans vary with the type of material present in the building. All maintenance activities are regulated under the EPA CFR 763.121 "Worker Protection Act", OSHA 29 CFR I926.E Asbestos Construction Standard, or Section 19 or the Occupational Health and Safety Act. Worker protection and safety requirements are of major importance if workers are exposed to the material in any way. Workers must be fit tested and respiratory equipment maintained. Medical examinations are also required in order to work with asbestos. These projects involve only areas that include less than three square or linear feet. Any larger project MUST be performed by a licensed contractor. Be certain that the LEA is aware of all activities involving ACBM. All outside contractors must also be notified of the location of asbestos containing material.

Building occupants and the parents of children must also be notified in writing. The following types of activities can be performed by in-house trained personnel:

- Normal maintenance HEPA vacuuming and wet wiping
- Repair or removal of pipe insulation.
- Removal of damaged vinyl asbestos tiles.
- Repair or removal of small quantities of ACBM on beams or above ceiling.
- Replacement of gasket or valve.
- Installation or removal of small section of drywall.
- Installation of electrical conduits through or near ACBM.
- Removal of small quantities of ACBM for maintenance activities.
- Removal of material that can be contained in one glove bag.
- Minor repairs to asbestos containing wallboard.
- Small repairs that can be performed in a mini—enclosure, including enclosure, encapsulation, and removal.

These activities must be used for maintenance or emergency repair, NOT just for removal. The following sections will explain how to perform each asbestos related activity. A sample form for documenting O&M activities is also included at the end of this section.

ORGANIZATIONAL STRUCTURE

The LEA Designated Person (DP) is responsible for the total implementation of this program and keeping the school board informed of all pertinent asbestos related activities. The DP is the main contact for any information on the asbestos control program. The responsibilities of the DP are included in this report.

NOTIFICATION OF OCCUPANTS

The DP is responsible for informing all building occupants, employees, parents, contractors, annually of the asbestos control program. Notification serves two purposes: it alerts affected parties to a potential hazard in the buildings, and it provides basic information on avoiding the hazard. Building occupants, employees, and others who are aware of the presence of ACBM are less likely to disturb the material and cause fiber release. All new employees and building occupants during their initial orientation shall be informed of the asbestos control program and locations of ACBM at this school.

LABELING

Labeling in areas where ACBM is located is required in the case of thermal system insulation in mechanical rooms. Labeling is not intended as general information. It serves as a final line of defense to prevent unprotected individuals from disturbing ACBM, or entering areas where repair or renovation activities involving ACBM are underway. Warning signs used in conjunction with small renovation or repair that involves the disruption of ACBM should be posted at the entrances and around the perimeter of the project and in accordance with OSHA Asbestos Standard for the Construction Industry (29 CFR l926.1101). Warning labels must be put on all asbestos containing thermal system insulation in mechanical rooms that say the following:

CAUTION
ASBESTOS HAZARDOUS
DO NOT DISTURB WITHOUT PROPER
TRAINING AND EQUIPMENT

All labels shall be prominently displayed in readily visible locations and shall remain posted until the ACBM that is labeled is removed.

TRAINING

Training of service (custodial and maintenance) workers is one of the most important aspects of an effective O&M plan. Training serves to establish proper awareness and understanding of work practices that are vital to the success of the program. All service workers should receive at least two hours of general awareness training. This training session should include, at a minimum, all the information outlined in the notification section. Service personnel who conduct any activities that will result in the disturbance of ACBM must receive 14 hours of additional training which should include cleaning techniques, appropriate practices for handling ACBM, the proper use of personal protective equipment, and hands on training. The training program should be conducted by the DP or a person trained in asbestos control.

RESPIRATORY PROTECTION

Any employer who requires or permits employees to wear a respirator must have a written respiratory protection program. This is required by OSHA in both of their asbestos standards (29 CFR 1910.1001 and 1926.1101) and respiratory regulations (29 CFR 1910.134). The written respiratory program establishes standard operating procedures for the use and maintenance of respiratory equipment. The OSHA regulations outline exactly what must be included in a written program. Minimum respiratory protection requirements include the use of a half-face HEPA filter negative pressure respirator. A higher degree of protection can be achieved using a full face mask or a power-assisted air purifying respirator (PAPR). It is preferable to use the highest level of protection possible when dealing with asbestos. Every worker who uses a respirator must have a medical exam and be fit tested. Never attempt to disturb asbestos without using properly fitted protective equipment. Personal exposure monitoring is required for workers to ensure that air levels are within the legal limits.

MEDICAL SURVEILLANCE

Employers are required to institute a medical surveillance program for all employees who are assigned to wear a negative-pressure respirator. All examinations and procedures must be performed by or under the supervision of a licensed physician at no cost to the employee. The purpose of the medical surveillance program is to establish an employee's fitness to wear a respirator, and to detect any changes in the gastrointestinal and cardiopulmonary systems as a result of working in asbestos contaminated areas. The OSHA regulation outlines what is required in the medical surveillance program.

PREVENTIVE MEASURES

The purpose of this is to eliminate the possibility of any disturbance and/or fiber release due to unknown activities. At a minimum the following should be implemented:

1. Do not dry clean or sweep.
2. Do not cut, penetrate, sand, drill, break, nail into the ACBM;
3. Do not hang plants, pictures, wires from the ACBM;
4. Do not place items against the ACBM;
5. Do not replace light fixtures where ACBM, such as plaster, fireproofing and tiles is found;
6. Should ACBM becomes damaged, seal, isolate the area and notify the consultant;

DESIGN AND AIR CLEARANCE REQUIREMENTS:

The work (greater than 3 LF or 3 SF) must be designed a Massachusetts licensed asbestos abatement designer and clearance air sampling is performed by a Massachusetts licensed project monitor. The purpose of the design is to include but not limited to the following:

- Scope of work;
- Location of work;
- Method to be utilized;
- Type of clearance air sampling;
- Scheduling and other related information.

CLEANING PROCEDURES

The cleaning activities described in this section are necessary for many different types of ACBM. This section is referenced in the spread sheets for homogenous areas of friable asbestos containing surfacing material, friable thermal system insulation and friable miscellaneous materials. No friable ACBM was found.

1. **Initial Cleaning**
   Unless the building has been cleaned within the previous 6 months, all areas of a school building where friable ACBM, damaged or significantly damaged thermal system insulation ACM, or friable suspected ACBM assumed to be ACM are present shall be cleaned at least once after the completion of the inspection required by Sec. 763.85(a) and before the initiation of any response action, other than O&M activities or repair, according to the following procedures:
   a. Do not dry clean or sweep.
   b. HEPA-vacuum or steam-clean all carpets.
   c. HEPA-vacuum or wet-clean all other floors and all other horizontal surfaces.

d. Dispose of all debris, filters, mop-heads, and cloths in sealed, leak-tight containers.

2. **Periodic Cleaning**
   Custodial staff should perform a thorough cleaning a minimum of once every three months where the friable ACBM was found (refer to spread sheet for locations). HEPA vacuum or steam clean all carpets, wet mop all other floors, and wipe all other horizontal surfaces with damp cloths. Dispose of debris, filters, mop heads, and cloths in sealed plastic bags according to EPA regulations. Report the presence of debris observed near ACBM to the DP immediately. If debris accumulates, cleaning should be performed more often and repair or removal should be completed to eliminate the hazard.
3. **Emergency Procedures**
   If an emergency occurs, immediately notify the LEA and restrict access to the area. Common emergencies include pipe leaks, boiler breakdowns, and water damage. Keep the phone number of a reliable local contractor for problems that may be larger than the in-house staff can handle. If you are not certain of the size or the extent of the damage, have a contractor and consultant look at it immediately.
4. **Specialized Cleaning Procedures**
   Special cleaning practices should be followed in buildings with ACBM. Cleaning up existing asbestos contamination within a building is one of the primary objectives of the O&M program. Things not to do when cleaning asbestos containing materials:
   a. Do not sand backing material.
   b. Do not dust with a wire brush.
   c. Do not dry sweep floors.
   d. Do not use an ordinary vacuum to clean up asbestos debris.
   c. Do not use any method that might disturb the ACBM.

The following precautions should always be used when cleaning ACBM:

- All dusting and mopping of the ACBM must be conducted using "wet" cleaning techniques (mops or cloths dampened with water or dust suppressant) or with special vacuum cleaners equipment with High Efficiency Particulate Air (HEPA) filters.
- Spray (mist) bottled of water or dust suppressant should be available and used to keep the mops and cloths damp.
- Cleaning materials (mop heads, cloths, etc.) should be washed after each cleaning, changed at regular intervals, and discarded as asbestos waste
- The materials should be placed in 6 mil plastic bags, the bags sealed and labeled:

"DANGER CONTAINS ASBESTOS FIBERS
AVOID
CREATING DUST
CANCER AND LUNG DISEASE HAZARD,"

And the bags deposited in an approved landfill. A disposal company could then transport the waste to an approved landfill periodically.

For each time that cleaning under Sec. 763.91(c) is performed, the local education agency shall record the name of each person performing the cleaning, the date of such cleaning, the locations cleaned, and the methods used to perform such cleaning.

MAINTENANCE OF VINYL FLOORING (VAT)

Proper upkeep, disturbance, and removal of vinyl asbestos flooring are explained in this section. This section is referenced in the spread sheets for all homogenous areas of asbestos containing vinyl asbestos flooring. Although the main emphasis of this section is for vinyl asbestos flooring, the practices described in subsection three and four for drilling and removing vinyl asbestos flooring are recommended procedures for all vinyl flooring. It must be remembered that even for vinyl flooring which lab analysis has determined to be asbestos free, the mastic used on it and on all vinyl base boards could contain asbestos and should never be made friable by sanding. Any vinyl flooring not identified by this inspection which may be revealed upon removal of carpeting should be considered to contain asbestos until lab analysis proves otherwise.

1. **Care of Vinyl Floor Tile (VAT)**
   Do not sand, abrade, wire brush or the use of any method that might release fibers of vinyl asbestos tiles (VAT). VAT are unlikely to release any fibers unless cut or sanded. Use HEPA attachments described in the section on cutting non friable materials. The adhesive that is used to stick floor tiles to the floor is likely to have asbestos in it also. Do not sand or wire

brush the adhesive. The best way to deal with VAT is to use regular detergent and floor wax. Keep a heavy layer of wax on the surface and that will act as an encapsulant. Use all procedures outlined in the sections for respiratory protection, protective clothing, and work area preparation. Remember that the adhesive probably has more asbestos than the tile itself. Dispose contaminated material and replace the tile with non-asbestos tile. Since the sharp tile edges could cut through a bag, wrap the tile in plastic and put them in a box. Wrap the box and put it in a bag or drum.

2. **Stripping/Waxing VAT**
   a. Wet methods must always be used when stripping, waxing, or buffing asbestos containing vinyl flooring.
   b. Never dry buff the asbestos-containing vinyl flooring.
   c. Always have a HEPA vacuum and respirators available if needed.
   d. If a HEPA vacuum is required, all filters, cleaning clothes, and debris should be disposed of as asbestos waste.
3. **Drilling of VAT**
   If it is necessary to drill into asbestos containing vinyl flooring (making the ACBM friable) the following precautions must be followed.
   a. Worker or workers should wear NIOSH/MSHS approved respirators equipped with HEPA filter cartridges.
   b. Wet wipe the area to be drilled.
   c. Use a HEPA vacuum adjacent to the drilling operation to pick up fibers and debris as the drilling occurs.
   d. Dispose of any debris as asbestos waste as outlined in the previous section.
   e. Clean up area as outlined above.
4. **Removing or Repairing VAT**
   a. To remove small sections of floor tiles, dry ice or heat from a portable heater can be applied to the tops of the tiles, and then the tiles can be pried up.
   b. Use a 'wet' or solvent method to remove and clean the adhesive.
   c. Do not sand the adhesive from the base flooring.
   d. A HEPA vacuum or wet-wiping should be used to clean up as outlined above.
   e. All tiles, cloths, and debris must be disposed of as asbestos waste.

MAINTENANCE FOR THERMAL INSULATION

Maintenance activities affecting asbestos containing thermal system insulation generally involve plumbing-type repairs. Frequently the ACBM must be removed to provide access to the valve, flange, or related system part needing maintenance. The extent of special work practices is tailor to reflect the likelihood that the ACBM will be disturbed and that asbestos fibers will be released. Four categories of potential disturbance are defined: (1) contact with ACBM is very unlikely, (2) accidental disturbance of ACBM is possible, (3) disturbance of ACBM is intended or likely - small disturbances (under three (3) feet of thermal system insulation), and (4) disturbance of ACBM is intended or likely large disturbances (greater than three (3) feet of thermal system insulation).

1. **Contact with ACBM Unlikely**
   Repairs which can be performed without contacting or disturbing the ACBM require only normal care, good workmanship, and respirators. A HEPA vacuum should be available for use if required.
2. **Accidental Disturbance of ACBM Possible**
   Maintenance tasks that involve no direct contact with ACBM may cause accidental disturbance. Vibrations created by maintenance activities in one part of a piping network will be transmitted to other parts. Vibrations could then cause fibers to be released from insulation which is exposed or not in good condition. If in doubt about the possibility of fiber release, thoroughly inspect the asbestos—containing material before undertaking the maintenance or repair work. Then, either correct the problem before starting, or assume that the maintenance work may cause accidental disturbance and fiber release. In this case, the following procedures should be used:
   a. Approval should be obtained from the DP before beginning work. The DP or supervisor should make an initial visit to the work site.
   b. The work should be scheduled after normal working hours, if possible, or access to the work area should be controlled: doors should be locked from the inside and signs posted to prevent unauthorized persons from entering the work area
   (e.g., MAINTENANCE WORK IN PROGRESS, DO NOT ENTER"). Note emergency exits must remain in operation.
   c. The air-handling system should be shut off or temporarily modified to prevent the distribution of any released fibers to areas outside the work site.
   d. A 6-mil polyethylene plastic drop cloth should be placed beneath the location of the maintenance work, extending at least 10 feet beyond all sides of the work site.

e. Plastic sheets (6-mil polyethylene) should be cut and taped around any asbestos containing insulation which might be accidentally disturbed. The plastic should be misted with amended water before sealing with tape. Workers should wear full respiratory protection and protective clothing.
f. After the maintenance work is completed, all tools, ladders, and other equipment should be HEPA-vacuumed or wiped with a damp cloth. Special care should be taken when removing the plastic from the insulation to minimize disturbance of ACBM dust or debris that may have fallen from the insulation.
g. If any debris is apparent on the drop cloth, floor, or elsewhere, it should be HEPA-vacuumed.
h. The plastic drop cloth should be wiped with a dampen cloth, carefully folded, and discarded as asbestos waste.
i. All clothes, vacuum bags/filters, and other disposable materials should be discarded in sealed and labeled plastic bags as asbestos waste.
j. Workers should HEPA-vacuum respirators and protective clothing at the work site. The clothing should then be discarded as asbestos waste. If the ACBM was disturbed during the course of the work, the workers should leave their respirators on, proceed to a shower room, shower with respirators on, and clean their respirators while in the shower.

3. **Small Disturbance of ACBM Intended**

Where less than 3 feet of asbestos containing thermal system insulation must be removed to maintain or repair the thermal system, the following procedures should be used:

a. Approval should be obtained from the DP before beginning work. The DP or supervisor should make an initial visit to the work site.
b. The work should be scheduled after normal working hours, if possible, or access to the work area should be controlled: doors should be locked from the inside and signs posted to prevent unauthorized persons from entering the work area (e.g. "MAINTENANCE WORK IN PROGRESS, DO NOT ENTER"). Note, emergency exists must remain in operation.
c. The air-handling system should be shut off or temporarily modified to prevent the distribution of any released fibers to areas outside the work site.
d. Maintenance workers should wear at least air-purifying respirators with HEPA filters and protective clothing (suit, hood, and boots) in case of a fiber release accident.
e. The asbestos containing thermal system insulation should be removed as necessary for the repairs, and the repairs made using standard glove bag techniques where possible (refer to the EPA publication: "Asbestos-in-Building Technical Bulletin: Abatement of Asbestos containing Pipe Insulation," 1986-2 and the OSHA Construction Industry Rule). Glove bags are fastened around the part to be repaired, the insulation is removed with knives and saws to make the part accessible, and the repairs are made using tools contained in the glove bag tool pouch.
f. At the conclusion of the work, Maintenance workers should clean their clothing using a HEPA vacuum and wet wiping.
g. All glove bags and any other used materials (including disposable clothing) should be discarded as asbestos waste, if the ACBM was disturbed during the course of the work; the workers should leave their respirators on, proceed to a shower room, shower with respirators on, and clean their respirators while in the shower.
h. Non asbestos insulating material can be installed as necessary to replace insulation which was removed.

4. **Large Disturbance of ACBM Intended**

When more than 3 feet of asbestos containing thermal system insulation must be removed to maintain or repair the thermal system, this is considered to be a large scale disturbance of ACBM and glove bags are not feasible. With this situation an outside contractor should be hired for the removal project before the maintenance work begins.

If maintenance personnel are to conduct the asbestos removal, they must be thoroughly trained in removal techniques as required by OSHA. If the maintenance activities are likely to cause disturbance of ACBM on pipes, boilers, or ducts at sites other than just those undergoing repair (due to vibration, etc.), then the entire room or area must be isolated and large-scale asbestos removal procedures employed. These include: construction of containment barriers and ventilation system: use of protective clothing, and "type C" respirators by workers; proper disposal of asbestos debris; and proper cleanup of the work site followed by clearance air monitoring.

MAINTENANCE OF SINKS

Do not scrape, cut or remove the sinks unless removed intact. Retain the services of a licensed contractor for proper disposal.

MAINTENANCE OF INTERIOR WINDOW CAULKING

Do not remove or scrape the ACBM. For removal (quantities >3 LF) retain the services of a licensed contractor. The ACBM would still have to be disposed properly.

PROCEDURES FOR FIBER RELEASE EPISODES

As long as ACBM remains in the building, a fiber release episode could occur. A fiber release episode is when the ACBM becomes damaged in such a way as to release asbestos fibers to the atmosphere. Knowing the procedures necessary to control a fiber release episode is essential in any building which contains ACBM. Reference to this section is recommended for all homogenous areas of asbestos containing friable surfacing material and thermal system insulation including pipe, joint, tank, duct, and boiler insulation, that are listed on the spread sheets of section four. Building custodial and maintenance staff should refer to this section to prevent a fiber release episode and to be thoroughly prepared for procedures should one occur. Custodial and maintenance workers should report to the DP the presence of debris on the floor, water or physical damage to the ACBM, or any other evidence of possible fiber release. Fiber release episodes can also occur during maintenance or renovation projects. The DP should assign a suitably trained in—house team to clean up debris and make repairs as soon as possible. For fiber release episodes of asbestos containing thermal system insulation the following procedures should be used.

1. Workers should wear at minimum air purifying respirators with HEPA filters.
2. Debris should be thoroughly saturated with water or amended water using a mister with a very fine spray. The debris should then be placed in a labeled 6-mil plastic bag for disposal and the floor should be cleaned with dampen cloths or a mop, or the debris can be collected with, a HEPA vacuum cleaner.
3. Read the HEPA vacuum manual to thoroughly understand its operation before using it. Ask the sales representative for a detailed demonstration of how to use the HEPA vacuum. Always empty the vacuum under controlled conditions, remove the filter after dampening it and treat all waste as contaminated material. Misuse of a HEPA vacuum can cause a major contamination problem.
4. All debris and materials used in the cleanup should be discarded as asbestos waste.
5. Workers should vacuum their disposable suits, if used, before leaving the work site and discard them as asbestos waste.
6. The damaged ACBM should be repaired with asbestos-free spackling, plaster, cement, insulation, re-wettable fiberglass or sealed with latex paint or an encapsulant.
7. Each fiber release episode should be documented and a report should be filed in this management plan or in the permanent asbestos file.

GLOVEBAG REMOVAL PROCEDURES FOR REPAIR OR MAINTENANCE

This section explains the proper procedures for glove bag removal of ACBM. All homogenous areas of asbestos containing pipe and joint insulation recorded of the spread sheets reference this section of the O&M plan. Custodial and maintenance personnel should review this section if glove bagging is necessary to access an area where repair of maintenance is required. Remember, glove bag removal involves only areas less than 3 square or linear feet and can be done only for maintenance purposes not for the sake of removal alone.

The work area must be secured according to the section on work area preparation. All persons not involved in the procedure must leave the site and warning signs must be posted. Try to perform the work when the building is unoccupied. Building occupants are very curious as to whether this type of operation could be harmful. The work area floor must be covered with plastic in~ case of breakage. Be generous with the plastic it is a lot less expensive to be cautious with protection than to clean up a contaminated area. The glove bag must fully cover the three feet or less to be removed, since the bag cannot be moved once it is in place. All tools such as wire cutters, bone saw, nylon brush and knife are to be placed in the pouch that is inside the bag. The tools are reached by using the gloves.

Inspect the work area and determine the location boundaries of the work to be accomplished. Be sure it is not over three feet! Cut the sides of the glove bag down far enough to place it over the pipe. Support the bottom of the glove bag to prevent the weight of the debris and water from causing the bag to leak or break. Always be as cautious as possible when dealing with asbestos.

Attach the top seam of the glove bag by taping with heavy duct tape. Use several different pieces overlapping each other instead of one long piece. Staple the tape at intervals of two or three inches. Fold the taped flap over on itself and tape again. Tape the bottom seam of the bag also. These precautions can prevent a costly and dangerous fiber release.

Tape the openings on each side of the glove bag where the pipes protrude. Put several layers of duct tape to ensure that there is no fiber release. The glove bag must then be smoke tested to ensure that there are no leaks. An aspirator bulb filled with smoke is inserted into an opening precut by the manufacturer. The same opening will be used to insert a sprayer wand used to wet the material. If there is not opening on the glove bag, cut a small hole through a duct tape patch and insert the smoke tube. The duct tape patch ensures that the bag will not rip along that opening. Patch any area that leaks with duct tape. Upon insuring that the bag is air-tight, insert the spray wand and HEPA vacuum hose into either hole made by the manufacturer or self-placed patched hole. Duct tape the equipment into the holes securely. The holes should be in the upper 1/3 of the bag so it is easy to wet, the material. Use the best quality glove bags possible which will have, reinforced entry holes for the smoke tube, spray wand, and HEPA-VAC hose. Some bags even have zippers, which eliminates the cutting section. Fold the taped flap over it itself and tape again. Tape the bottom seam of the bag also.

Completely wet the section of pipe to be removed, however, do not fill the glove bag with water. The solution used to wet the material must be "amended water'. The solution can be obtained through asbestos supply companies (or soap can be used). The amended water ensures that the material is wetted as evenly as possible. Using a razor, knife, or bone saw, cut through to the pipe on both sides and remove the material as smoothly as possible. Use a retractable blade and always retract it when not in use being careful not to cut the bag open by mistake. A second person must keep the material wet using the wand. Soak the bare pipe and hand clean is using the rags and nylon brush that are in the pouch contained within the bag. Threaded areas of pipes and joint areas require particular attention to clean.

Wash down the interior of the glove bag and pipe section one final time to ensure that all debris is at the bottom of the bag. Place all tools into the hand part of one of the gloves. Pull the glove inside out, seal it with duct tape and cut between the sealed areas. Re-tape the glove and place it in a bucket of water. Later, the glove may be untied and the tools cleaned. Activate the HEPA vacuum and collapse the bag as much as possible. Do not collapse too much or the bag will be damaged. The HEPA vacuum should continue to run during the entire process of removing the glove bag.

Twist the glove bag closed and tape it shut. A disposal bag should be placed over the glove bag while it is still on the pipe. Carefully cut the glove bag from the pipe and place in the disposal bag. Dispose of properly as asbestos containing waste.

The ends of the pipe must be covered with re-wettable fiberglass. Cut a large enough piece to cover the area and dip it in a bucket of clean water. Wrap it around the end of the pipe and smooth until all openings are covered. Spray the bare pipe with encapsulant to lock down any remaining fibers. The pipe may be painted with heat resistant latex paint if desired.

REMOVAL OF ACBM

1. All removal or repair projects should be correctly and safely set up. These are minimum work practices required by state and federal law. Work may not be performed if the area exceeds three square or linear feet. You must have a contractor do the work if it exceeds these size limits. Refer back to this section whenever you plan to disturb asbestos containing material. The initial set up of any job that disturbs asbestos is as important as the actual removal itself. The following steps must be followed to ensure a safe project.

    a. Restrict entry by physical isolation or scheduling to ensure unauthorized persons do not enter the area.
    b. Post warning signs at all entrances to the site to prevent unauthorized entry.
    c. Shut off air handling equipment or modify all air conditioning, heating, ventilation systems, etc. Restrict air movement (fans, windows).
    d. Remove moveable objects and cover remaining items with plastic. Duct tape 6-mill plastic over any remaining surfaces and duct tape to provide an air-tight seal. Decontaminate any objects that have debris by wet-wiping and HEPA vacuuming.
    e. Isolate the work area by sealing and taping vents, windows, air conditioners, ducts, drains, grills, windows, and doors etc. with plastic. If the building is occupied, the entrances to the work area must be sealed and caulked with plywood, gypsum board or a solid material. Plastic does not qualify as a critical barrier. Glove bag operations are exempt from this requirement. Ceramic tiles on floors, walls or ceiling that are impervious (no cracks, holes, fissures) need not be covered. If there is uncertainty regarding permeability, put up plastic.
    f. Cover walls and ceilings with plastic sheeting with seams and joints sealed with duct tape to make an impervious barrier to the floor, ceiling, wall etc. Two layers of plastic are required for the floor and walls with an overlap of 12" on the wall. The wall covering must overlap the floor.
    g. Ground fault circuit interrupters must always be used when working in a WET environment.
    h. Clean fixtures and equipment in the work area using proper cleaning methods.

i. Properly dispose of all ACBM in properly labeled, leak proof containers.

2. Asbestos projects that involve less than 25 square or linear feet require the use of a change room that is used as the sole entrance and exit to the facility. Before leaving the removal area to enter the change room HEPA vacuum and wet wipe the protective clothing. All other equipment must be decontaminated by wet-wiping and HEPA vacuuming or by wrapping the material in two layers of 6 mil plastic or put in a drum with a locking lid. Glove bag operations are exempt from this requirement. Use of a changing room is applicable to removal of surface material where a glove bag cannot be used.
3. Read the HEPA vacuum manual to thoroughly understand its operation before using it. Ask the sales representative for a detailed demonstration of how to use the HEPA vacuum. Always empty the vacuum under controlled conditions, remove the filter after dampening it and treat all waste as contaminated material. Misuse of a HEPA vacuum can cause a major contamination problem.
4. Any material that is enclosed must be clearly identified in the building records. The enclosure must be airtight wooden structures must be made with tongue and groove construction and caulked. Gypsum board seams must be taped. Drills and other tools should have a HEPA attachment and all electrical conduits, telephone lines, etc. must be moved so there is no reason to re-enter the area. If this cannot be accomplished, the area should not be contained. Any wrapped material such as a boiler or pipe must be labeled as asbestos. Suspended ceilings cannot quality as enclosure since it is not airtight.
5. Liquid Encapsulant must be applied with an airless sprayer and are not to be used on severely damaged or deteriorating surfaces.
6. Asbestos must be wet when it is disturbed in any way. The material must be wet enough to keep the dust down, but not wet enough to cause the water to leak out of the project area. A surfactant must be used, as this increases the ability of the water to penetrate the fibers. During the project, dispose of asbestos as it accumulates in double 6-mil labeled bags or drums with locking lids. Do not remove the material and leave it on the floor. When working at heights do not throw debris to the ground, have another individual put the debris in the disposal container.

DISPOSAL OF ASBESTOS WASTE

Proper disposal of asbestos containing material is an important procedure for the wellbeing of the environment. This section of the O&M plan is referenced for all asbestos containing material that was sampled and all material assumed to be ACBM that is recorded on the spread sheets. Always refer to this section when disposing of asbestos waste. All asbestos containing materials, waste, bags and equipment (such as mop heads or air filters) must be disposed of in a labeled 6-mu polyethylene bag. The bag must be placed in a sealed impermeable container such as a drum. Water used for cleaning must be either filtered or placed in an impermeable container. A single drum may be used until it is full. The drum must be disposed of at a licensed landfill and a disposal receipt with the location obtained to prove that the waste was disposed of it legally. An interim storage area must be secured and locked with only trained personnel having access to it.

Transportation must be done in closed trucks (not rented) and the truck wet cleaned after each use. The easiest way to dispose of small amounts of asbestos is to accumulate it and have a licensed contractor remove it. Find a local company willing to provide this service to you.

OUTSIDE SERVICE CONTRACTORS

If any outside contractor is employed to do work where the ACBM may be disturbed (such as periodic cleaning, major renovation, or pipe repairs), contracts with such companies should include provisions to ensure that the workers can and will follow appropriate work practices. The contractor should provide proof that his workers have been properly notified about ACBM in the building where the work is to take place (***see contractor acknowledgement form at the end of this section***). For a major renovation or removal the contractor should also provide copies of the respiratory protection, medical surveillance, and worker training documentation submitted to OSHA. Also, the contractor should provide historical air monitoring data with emphasis on projects similar to those likely to be encountered in the building for examples of previous projects.

PERIODIC SURVEILLANCE OF ACBM

At least once every six (6) months, the DP or his designee will conduct periodic surveillance in each building that contains asbestos. Each person performing periodic surveillance shall:

1. Visually inspect all areas that have been identified as asbestos containing.
2. Record the data of the surveillance, any changes in the conditions of the ACBM, and the name of the individual conducting the surveillance.

3. Submit to the DP a copy of such a record or report for inclusion into the management plan or permanent asbestos file.

The DP is responsible for compliance to this section. An example of the periodic surveillance form to be used is shown at the end of this section.

EQUIPMENT NEEDED

Every school should have on-site at least one HEPA vacuum cleaner to be used when needed. Also at least one half-mask air-purifying respirator for each worker who may be required to wear one will be needed. An asbestos emergency repair kit which contains the equipment and tools necessary for repair of damage asbestos containing insulation and asbestos disposal bags is also recommended. Disposable suits may also be needed for maintenance workers.

RECORDKEEPING

All written records discussed in this Operations and Maintenance program should be maintained as part of this management plan.

PERIODIC SURVEILLANCE REPORT

RETURN COMPLETED FORM TO ASBESTOS PROGRAM MGR.

PAGE___ OF___

DATE: ___ ___,____

Building Number and Name

ROOM Number and Name

Building Location

IF THE STATUS OF THE ACBM HAS CHANGED. THEN PHOTOGRAPH THE AREA AND RECORD THE PHOTOGRAPH NUMBER IN THE SPACE PROVIDED. NOTIFY THE ASBESTOS PROGRAM MANAGER CONCERNING THE CHANGE.

SAMPLE AREA/LOT OR SALIENT ID	SAMPLE AREA/LOT OR SALIENT DESCRIPTION	LAST MAT. COND.			CHANGE ?		NEW PHOTO NUMBER	NOTES
		T	DC	PD	YES	NO		

Signature of Person Completing Report

Title of Person Completing Report

* REFERS TO MATERIAL TYPE AND DAMAGE CATEGORIES
. T – MATERIAL TYPE AS:
. S – SURFACING
. M – MISCELLANEOUS
. T – THERMAL SYSTEM

DC – DAMAGE CONDITION
. ND – NO DAMAGE
. D – DAMAGE
. SD – SIGNIFICANT DAMAGE

PD – POTENTIAL DAMAGE CATEGORIES
. NPD – NO POTENTIAL DAMAGE
. PD – POTENTIAL DAMAGE
. PSD – POTENTIAL SIG. DAMAGE

OPERATIONS AND MAINTENANCE ACTIVITIES

BUILDING NAME: _____

ADDRESS: _____

ROOM NUMBER(s): _____

QUANTITY OF ACBM REMOVED OR REPAIRED: _____

ACTIVITY START DATE: _____ ACTIVITY END DATE: _____

DESCRIPTION OF METHOD(S) USED DURING O&M ACTIVITY:

PERSONNEL PERFORMING ACTIVITIES:

NAME: _____

SIGNATURE: _____ DATE: _____

NAME: _____

SIGNATURE: _____ DATE: _____

NAME: _____

SIGNATURE: _____ DATE: _____

STORAGE OR DISPOSAL SITE INFORMATION:

STORAGE / DISPOSAL SITE NAME: _____

ADDRESS: _____

_____

NOTE: ATTACH ALL WASTE SHIPMENT RECORDS

CONTRACTOR ACKNOWLEDGEMENT FORM

PART A (To be completed by the LEA Designated Person)

☐ No known Asbestos Containing Materials (ACM) will be impacted by the work required to be performed by the outside contractor(s).

☐ ACM may be impacted by the work required to be performed by the outside contractor(s). The outside contractor(s) has been notified as to the types and locations of ACM present. Notification has also been made with respect to proper work procedures as included in the inspection report Operations and Maintenance Program.

LEA Designated Person: _____

Signature: _____ Date: _____

PART B (To be completed by the Outside Contractor(s))

As an Outside Contractor I acknowledge that I have been informed about the ACM in the area in which contract work will be performed and that the statement in Part A of the form is accurate to the best of my knowledge.

Name of Employee: _____

Company: _____

Address: _____

_____

Telephone: _____

Signature: _____ Date: _____

EMPLOYEE TRAINING

NAME: _____ DATE: _____
SIGNATURE: _____ JOB TITLE: _____
BUILDING: _____
TRAINING PROVIDER: _____ COURSE TITLE: _____
ADDRESS: _____ COURSE LENGTH: _____
_____ CERTIFICATION NO: _____

NAME: _____ DATE: _____
SIGNATURE: _____ JOB TITLE: _____
BUILDING: _____
TRAINING PROVIDER: _____ COURSE TITLE: _____
ADDRESS: _____ COURSE LENGTH: _____
_____ CERTIFICATION NO: _____

NAME: _____ DATE: _____
SIGNATURE: _____ JOB TITLE: _____
BUILDING: _____
TRAINING PROVIDER: _____ COURSE TITLE: _____
ADDRESS: _____ COURSE LENGTH: _____
_____ CERTIFICATION NO: _____

NAME: _____ DATE: _____
SIGNATURE: _____ JOB TITLE: _____
BUILDING: _____
TRAINING PROVIDER: _____ COURSE TITLE: _____
ADDRESS: _____ COURSE LENGTH: _____
_____ CERTIFICATION NO: _____

AHERA RESPONSE ACTIONS RECORDS CHECKLIST

LOCAL EDUCATION AGENCY (LEA): _____

NAME OF SCHOOL: _____

ADDRESS: _____

DESIGNATED PERSON: _____

DESCRIPTION OF RESPONSE ACTION / PROJECT DESIGN:

- ☐ METHODS USED
- ☐ LOCATION OF RESPONSE ACTION
- ☐ START DATE
- ☐ COMPLETION DATE

PROJECT DESIGNER:

- ☐ NAME
- ☐ CERTIFICATION NUMBER

CONTRACTORS & WORKERS CONDUCTING ACTIVITY

- ☐ NAME
- ☐ ADDRESS
- ☐ CERTIFICATION NUMBER
- ☐ NAME / LOCATION OF STORAGE / DISPOSAL SITE

CLEARANCE DOCUMENTATION

- ☐ DATE VISUAL INSPECTION WAS CONDUCTED
- ☐ NAME OF PERSON PERFORMING VISUAL INSPECTION
- ☐ AIR SAMPLES COLLECTED AT COMPLETION OF RESPONSE ACTION USING AGGRESSIVE SAMPLING METHODS
- ☐ NAME, SIGNATURE AND CERTIFICATION NUMBER OF PROJECT MONITOR COLLECTING AIR SAMPLES
- ☐ DATE OF SAMPLE COLLECTION
- ☐ SAMPLE LOCATIONS
- ☐ AIR SAMPLES ANALYZED AT ACCREDITED LABORATORY
- ☐ LABORATORY NAME AND CERTIFICATION NUMBER
- ☐ ANALYSIS METHOD
  - ☐ PHASE CONTRAST MICROSCOPY (PCM)
  - ☐ TRANSMISSION ELECTRON MICROSCOPY (TEM)
- ☐ NAME AND SIGNATURE OF ANALYSTS
- ☐ RESULTS OF ANALYSIS (ATTACH LAB REPORT

SMALL SCALE, SHORT DURATION OPERATIONS AND MAINTENANCE ACTIVITIES CHECKLIST

LOCAL EDUCATION AGENCY (LEA): _____

NAME OF SCHOOL: _____

ADDRESS: _____

ROOM NUMBER: _____

QUANTITIES OF ACM (Removed or Repaired): _____

DESIGNATED PERSON: _____

DATE OF ACTIVITY: _____

METHOD USED: _____

NAME OF PERSON(S) PERFORMING WORK/CLEANING:

_____
(Name and Signature)

_____
(Name and Signature)

_____
(Name and Signature)

STORAGE OR DISPOSAL SITE: _____

_____
(Address and Phone Number)

INTRODUCTION:
This operations and maintenance plan details each type of repair, removal, or maintenance activity that is likely to be necessary to keep asbestos containing building materials in good condition.

TITLE 40

PROTECTION OF ENVIRONMENT

CHAPTER I - ENVIRONMENTAL PROTECTION AGENCY (CONTINUED)

PART 763 - ASBESTOS

Subpart E - Asbestos-Containing Materials in Schools

Section

763.80 Scope and purpose.
763.83 Definitions.
763.84 General local education agency responsibilities.
763.85 Inspection and re-inspections.
763.86 Sampling.
763.87 Analysis.
763.88 Assessment.
763.90 Response actions.
763.91 Operations and maintenance.
763.92 Training and periodic surveillance.
763.93 Management plans.
763.94 Recordkeeping.
763.95 Warning labels.
763.97 Compliance and enforcement.
763.98 Waiver; delegation to State.
763.99 Exclusions.

Subpart E - Asbestos-Containing Materials in Schools

Source: 52 FR 41846, Oct. 30, 1987, unless otherwise noted.

Sec. 763.80 Scope and purpose

(a) This rule requires local education agencies to identify friable and non-friable asbestos-containing material (ACM) in public and private elementary and secondary schools by visually inspecting school buildings for such materials, sampling such materials if they are not assumed to be ACM, and having samples analyzed by appropriate techniques referred to in this rule. The rule requires local education agencies to submit management plans to the Governor of their State by October 12, 1988, begin to implement the plans by July 9, 1989, and complete implementation of the plans in a timely fashion. In addition, local education agencies are required to use persons who have been accredited to conduct inspections, re-inspections, develop management plans, or perform response actions. The rule also includes recordkeeping requirements. Local education agencies may contractually delegate their duties under this rule, but they remain responsible for the proper performance of those duties. Local education agencies are encouraged to consult with EPA Regional Asbestos Coordinators, or if applicable, a State's lead agency designated by the State Governor, for assistance in complying with this rule.

(b) Local education agencies must provide for the transportation and disposal of asbestos in accordance with EPA's "Asbestos Waste Management Guidance." For convenience, applicable sections of this guidance are reprinted as Appendix D of this subpart. There are regulations in place, however, that affect transportation and disposal of

asbestos waste generated by this rule. The transportation of asbestos waste is covered by the Department of Transportation (49 CFR part 173, subpart J) and disposal is covered by the National Emissions Standards for Hazardous Air Pollutants (NESHAP) (40 CFR part 61, subpart M).

Sec. 763.83 Definitions
For purposes of this subpart:
Act means the Toxic Substances Control Act (TSCA), 15 U.S.C. 2601, et seq.

Accessible, when referring to ACM, means that the material is subject to disturbance by school building occupants or custodial or maintenance personnel in the course of their normal activities.
Accredited or accreditation when referring to a person or laboratory means that such person or laboratory is accredited in accordance with section 206 of Title II of the Act. Air erosion means the passage of air over friable ACBM which may result in the release of asbestos fibers.
Asbestos means the asbestiform varieties of: Chrysotile (serpentine); Crocidolite riebeckite); Amosite (cummingtonitegrunerite); Anthophyllite; Tremolite; and Actinolite. Asbestos-containing material (ACM) when referring to school buildings means any material or product which contains more than one percent (1%) asbestos.
Asbestos-containing building material (ACBM) means surfacing ACM, thermal system insulation ACM, or miscellaneous ACM that is found in or on interior structural members or other parts of a school building. Asbestos debris means pieces of ACBM that can be identified by color, texture, or composition, or means dust, if the dust is determined by an accredited inspector to be ACM.
Damaged friable miscellaneous ACM means friable miscellaneous ACM which has deteriorated or sustained physical injury such that the internal structure (cohesion) of the material is inadequate or, if applicable, which has delaminated such that its bond to the substrate (adhesion) is inadequate or which for any other reason lacks fiber cohesion or adhesion qualities. Such damage or deterioration may be illustrated by the separation of ACM into layers; separation of ACM from the substrate; flaking, blistering, or crumbling of the ACM surface; water damage; significant or repeated water stains, scrapes, gouges, mars or other signs of physical injury on the ACM. Asbestos debris originating from the ACBM in question may also indicate damage.
Damaged friable surfacing ACM means friable surfacing ACM which has deteriorated or sustained physical injury such that the internal structure (cohesion) of the material is inadequate or which has delaminated such that its bond to the substrate (adhesion) is inadequate, or which, for any other reason, lacks fiber cohesion or adhesion qualities. Such damage or deterioration may be illustrated by the separation of ACM into layers; separation of ACM from the substrate; flaking, blistering, or crumbling of the ACM surface; water damage; significant or repeated water stains, scrapes, gouges, mars or other signs of physical injury on the ACM. Asbestos debris originating from the ACBM in question may also indicate damage.
Damaged or significantly damaged thermal system insulation ACM means thermal system insulation ACM on pipes, boilers, tanks, ducts, and other thermal system insulation equipment where the insulation has lost its structural integrity, or its covering, in whole or in part, is crushed, water-stained, gouged, punctured, missing, or not intact such that it is not able to contain fibers. Damage may be further illustrated by occasional punctures, gouges or other signs of physical injury to ACM; the protective coverings/jackets; or exposed ACM ends or joints. Asbestos debris originating from the ACBM in question may also indicate damage.
Encapsulation means the treatment of ACBM with a material that surrounds or embeds asbestos fibers in an adhesive matrix to prevent the release of fibers, as the encapsulant creates a membrane over the surface (bridging encapsulant) or penetrates the material and binds its components together (penetrating encapsulant).
Enclosure means an airtight, impermeable, permanent barrier around ACBM to prevent the release of asbestos fibers into the air. Fiber release episode means any uncontrolled or unintentional disturbance of ACBM resulting in visible emission. Friable when referring to material in a school building means that the material, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure, and includes previously non-friable material after such previously non-friable material becomes damaged to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure.
Functional space means a room, group of rooms, or homogeneous area (including crawl spaces or the space between a dropped ceiling and the floor or roof deck above), such as classroom(s), a cafeteria, gymnasium,

hallway(s), designated by a person accredited to prepare management plans, design abatement projects, or conduct response actions.

High-efficiency particulate air (HEPA) refers to a filtering system capable of trapping and retaining at least 99.97 percent of all mono-dispersed particles 0.3 µm in diameter or larger.

Homogeneous area means an area of surfacing material, thermal system insulation material, or miscellaneous material that is uniform in color and texture.

Local education agency means:

(1) Any local educational agency as defined in section 198 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 3381).

(2) The owner of any nonpublic, nonprofit elementary, or secondary school building.

(3) The governing authority of any school operated under the defense dependent's education system provided for under the Defense Dependents' Education Act of 1978 (20 U.S.C. 921, et seq.).

Miscellaneous ACM means miscellaneous material that is ACM in a school building.

Miscellaneous material means interior building material on structural components, structural members or fixtures, such as floor and ceiling tiles, and does not include surfacing material or thermal system insulation.

Non-friable means material in a school building which when dry may not be crumbled, pulverized, or reduced to powder by hand pressure.

Operations and maintenance program means a program of work practices to maintain friable ACBM in good condition, ensure clean up of asbestos fibers previously released, and prevent further release by minimizing and controlling friable ACBM disturbance or damage.

Potential damage means circumstances in which:

(1) Friable ACBM is in an area regularly used by building occupants, including maintenance personnel, in the course of their normal activities.

(2) There are indications that there is a reasonable likelihood that the material or its covering will become damaged, deteriorated, or delaminated due to factors such as changes in building use, changes in operations and maintenance practices, changes in occupancy, or recurrent damage.

Potential significant damage means circumstances in which:

(1) Friable ACBM is in an area regularly used by building occupants, including maintenance personnel, in the course of their normal activities.
(2) There are indications that there is a reasonable likelihood that the material or its covering will become significantly damaged, deteriorated, or delaminated due to factors such as changes in building use, changes in operations and maintenance practices, changes in occupancy, or recurrent damage.
(3) The material is subject to major or continuing disturbance, due to factors including, but not limited to, accessibility or, under certain circumstances, vibration or air erosion.

Preventive measures means actions taken to reduce disturbance of ACBM or otherwise eliminate the reasonable likelihood of the material's becoming damaged or significantly damaged.

Removal means the taking out or the stripping of substantially all ACBM from a damaged area, a functional space, or a homogeneous area in a school building.

Repair means returning damaged ACBM to an undamaged condition or to an intact state so as to prevent fiber release.

Response action means a method, including removal, encapsulation, enclosure, repair, operations and maintenance that protect human health and the environment from friable ACBM.

Routine maintenance area means an area, such as a boiler room or mechanical room, that is not normally frequented by students and in which maintenance employees or contract workers regularly conduct maintenance activities.

School means any elementary or secondary school as defined in section 198 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 2854).

School building means:

(1) Any structure suitable for use as a classroom, including a school facility such as a laboratory, library, school eating facility, or facility used for the preparation of food.

(2) Any gymnasium or other facility which is specially designed for athletic or recreational activities for an academic course in physical education.
(3) Any other facility used for the instruction or housing of students or for the administration of educational or research programs.
(4) Any maintenance, storage, or utility facility, including any hallway, essential to the operation of any facility described in this definition of "school building" under paragraphs (1), (2), or (3).
(5) Any portico or covered exterior hallway or walkway.
(6) Any exterior portion of a mechanical system used to condition interior space.

Significantly damaged friable miscellaneous ACM means damaged friable miscellaneous ACM where the damage is extensive and severe.

Significantly damaged friable surfacing ACM means damaged friable surfacing ACM in a functional space where the damage is extensive and severe.

Surfacing ACM means surfacing material that is ACM.

Surfacing material means material in a school building that is sprayed-on, troweled-on, or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, or other purposes.

Thermal system insulation means material in a school building applied to pipes, fittings, boilers, breeching, tanks, ducts, or other interior structural components to prevent heat loss or gain, or water condensation, or for other purposes.

Thermal system insulation ACM means thermal system insulation that is ACM.

Vibration means the periodic motion of friable ACBM which may result in the release of asbestos fibers.

Sec. 763.84 General local education agency responsibilities

Each local education agency shall:

(a) Ensure that the activities of any persons who perform inspections, re-inspections, and periodic surveillance, develop and update management plans, and develop and implement response actions, including operations and maintenance, are carried out in accordance with subpart E of this part.
(b) Ensure that all custodial and maintenance employees are properly trained as required by this subpart E and other applicable Federal and/or State regulations (e.g., the Occupational Safety and Health Administration asbestos standard for construction, the EPA worker protection rule, or applicable State regulations).
(c) Ensure that workers and building occupants, or their legal guardians, are informed at least once each school year about inspections, response actions, and post-response action activities, including periodic re-inspection and surveillance activities that are planned or in progress.
(d) Ensure that short-term workers (e.g., telephone repair workers, utility workers, or exterminators) who may come in contact with asbestos in a school are provided information regarding the locations of ACBM and suspected ACBM assumed to be ACM.
(e) Ensure that warning labels are posted in accordance with Sec. 763.95.
(f) Ensure that management plans are available for inspection and notification of such availability has been provided as specified in the management plan under Sec. 763.93(g).
(g) (1) Designate a person to ensure that requirements under this section are properly implemented.
(2) Ensure that the designated person receives adequate training to perform duties assigned under this section. Such training shall provide, as necessary, basic knowledge of:
(i) Health effects of asbestos.
(ii) Detection, identification, and assessment of ACM.
(iii) Options for controlling ACBM.
(iv) Asbestos management programs.
(v) Relevant Federal and State regulations concerning asbestos, including those in this subpart E and those of the Occupational Safety and Health Administration, U.S. Department of Labor, the U.S. Department of Transportation and the U.S. Environmental Protection Agency.
(h) Consider whether any conflict of interest may arise from the interrelationship among accredited personnel and whether that should influence the selection of accredited personnel to perform activities under this subpart.

Sec. 763.85 Inspection and re-inspections.

(a) Inspection.

(1) Except as provided in paragraph (a)(2) of this section, before October 12, 1988, local education agencies shall inspect each school building that they lease, own, or otherwise use as a school building to identify all locations of friable and non-friable ACBM.

(2) Any building leased or acquired on or after October 12, 1988, that is to be used as a school building shall be inspected as described under paragraphs (a) (3) and (4) of this section prior to use as a school building. In the event that emergency use of an un-inspected building as a school building is necessitated, such buildings shall be inspected within 30 days after commencement of such use.

(3) Each inspection shall be made by an accredited inspector.

(4) For each area of a school building, except as excluded under Sec. 763.99, each person performing an inspection shall:

(i) Visually inspect the area to identify the locations of all suspected ACBM.

(ii) Touch all suspected ACBM to determine whether they are friable.

(iii) Identify all homogeneous areas of friable suspected ACBM and all homogeneous areas of non-friable suspected ACBM.

(iv) Assume that some or all of the homogeneous areas are ACM, and, for each homogeneous area that is not assumed to be ACM, collect and submit for analysis bulk samples under Secs. 763.86 and 763.87.

(v) Assess, under Sec. 763.88, friable material in areas where samples are collected, friable material in areas that are assumed to be ACBM, and friable ACBM identified during a previous inspection.

(vi) Record the following and submit to the person designated under Sec. 763.84 a copy of such record for inclusion in the management plan within 30 days of the inspection:

(a) An inspection report with the date of the inspection signed by each accredited person making the inspection, State of accreditation, and if applicable, his or her accreditation number.

(b) An inventory of the locations of the homogeneous areas where samples are collected, exact location where each bulk sample is collected, dates that samples are collected, homogeneous areas where friable suspected ACBM is assumed to be ACM, and homogeneous areas where non-friable suspected ACBM is assumed to be ACM.

(c) A description of the manner used to determine sampling locations, the name and signature of each accredited inspector who collected the samples, State of accreditation, and, if applicable, his or her accreditation number.

(d) A list of whether the homogeneous areas identified under paragraph (a)(4)(vi)(B) of this section, are surfacing material, thermal system insulation, or miscellaneous material.

(e) Assessments made of friable material, the name and signature of each accredited inspector making the assessment, State of accreditation, and if applicable, his or her accreditation number.

(b) Re-inspection.

(1) At least once every 3 years after a management plan is in effect, each local education agency shall conduct a re-inspection of all friable and non-friable known or assumed ACBM in each school building that they lease, own, or otherwise use as a school building.

(2) Each inspection shall be made by an accredited inspector.

(3) For each area of a school building, each person performing a re-inspection shall:

(i) Visually re-inspect, and reassess, under Sec. 763.88, the condition of all friable known or assumed ACBM.

(ii) Visually inspect material that was previously considered non-friable ACBM and touch the material to determine whether it has become friable since the last inspection or re-inspection.

(iii) Identify any homogeneous areas with material that has become friable since the last inspection or re-inspection.

(iv) For each homogeneous area of newly friable material that is already assumed to be ACBM, bulk samples may be collected and submitted for analysis in accordance with Secs. 763.86 and 763.87.

(v) Assess, under Sec. 763.88, the condition of the newly friable material in areas where samples are collected, and newly friable materials in areas that are assumed to be ACBM.

(vi) Reassess, under Sec. 763.88, the condition of friable known or assumed ACBM previously identified.
(vii) Record the following and submit to the person designated under Sec. 763.84 a copy of such record for inclusion in the management plan within 30 days of the re-inspection:
(a) The date of the re-inspection, the name and signature of the person making the re-inspection, State of accreditation, and if applicable, his or her accreditation number, and any changes in the condition of known or assumed ACBM.
(b) The exact locations where samples are collected during the re-inspection, a description of the manner used to determine sampling locations, the name and signature of each accredited inspector who collected the samples, State of accreditation, and, if applicable, his or her accreditation number.
(c) Any assessments or reassessments made of friable material, the name and signature of the accredited inspector making the assessments, State of accreditation, and if applicable, his or her accreditation number.
(d) General. Thermal system insulation that has retained its structural integrity and that has an undamaged protective jacket or wrap that prevents fiber release shall be treated as non-friable and therefore is subject only to periodic surveillance and preventive measures as necessary.

Sec. 763.86 Sampling

(a) Surfacing material. An accredited inspector shall collect, in a statistically random manner that is representative of the homogeneous area, bulk samples from each homogeneous area of friable surfacing material that is not assumed to be ACM, and shall collect the samples as follows:
(1) At least three bulk samples shall be collected from each homogeneous area that is 1,000 ft\2\ or less, except as provided in Sec. 763.87(c)(2).
(2) At least five bulk samples shall be collected from each homogeneous area that is greater than 1,000 ft\2\ but less than or equal to 5,000 ft\2\, except as provided in Sec. 763.87(c)(2).
(3) At least seven bulk samples shall be collected from each homogeneous area that is greater than 5,000 ft\2\, except as provided in Sec. 763.87(c)(2).
(b) Thermal system insulation.
(1) Except as provided in paragraphs (b) (2) through (4) of this section and Sec. 763.87(c), an accredited inspector shall collect, in a randomly distributed manner, at least three bulk samples from each homogeneous area of thermal system insulation that is not assumed to be ACM.
(2) Collect at least one bulk sample from each homogeneous area of patched thermal system insulation that is not assumed to be ACM if the patched section is less than 6 linear or square feet.
(3) In a manner sufficient to determine whether the material is ACM or not ACM, collect bulk samples from each insulated mechanical system that is not assumed to be ACM where cement or plaster is used on fittings such as tees, elbows, or valves, except as provided under Sec. 763.87(c)(2).
(4) Bulk samples are not required to be collected from any homogeneous area where the accredited inspector has determined that the thermal system insulation is fiberglass, foam glass, rubber, or other non-ACBM.
(c) Miscellaneous material. In a manner sufficient to determine whether material is ACM or not ACM, an accredited inspector shall collect bulk samples from each homogeneous area of friable miscellaneous material that is not assumed to be ACM.
(d) Non-friable suspected ACBM. If any homogeneous area of non-friable suspected ACBM is not assumed to be ACM, then an accredited inspector shall collect, in a manner sufficient to determine whether the material is ACM or not ACM, bulk samples from the homogeneous area of non-friable suspected ACBM that is not assumed to be ACM.

Sec. 763.87 Analysis

(a) Local education agencies shall have bulk samples, collected under Sec. 763.86 and submitted for analysis, analyzed for asbestos using laboratories accredited by the National Bureau of Standards (NBS). Local education agencies shall use laboratories which have received interim accreditation for polarized light microscopy (PLM)

analysis under the EPA Interim Asbestos Bulk Sample Analysis Quality Assurance Program until the NBS PLM laboratory accreditation program for PLM is operational.

(b) Bulk samples shall not be composited for analysis and shall be analyzed for asbestos content by PLM, using the "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" found at appendix E to subpart E of this part.

(c)
  (1) A homogeneous area is considered not to contain ACM only if the results of all samples required to be collected from the area show asbestos in amounts of 1 percent or less.
  (2) A homogeneous area shall be determined to contain ACM based on a finding that the results of at least one sample collected from that area shows that asbestos is present in an amount greater than 1 percent.

(d) The name and address of each laboratory performing an analysis, the date of analysis, and the name and signature of the person performing the analysis shall be submitted to the person designated under Sec. 763.84 for inclusion into the management plan within 30 days of the analysis. [52 FR 41846, Oct. 30, 1987, as amended at 60 FR 31922, June 19, 1995]

Sec. 763.88 Assessment

(a)
  (1) For each inspection and re-inspection conducted under Sec. 763.85 (a) and (c) and previous inspections specified under Sec. 763.99, the local education agency shall have an accredited inspector provide a written assessment of all friable known or assumed ACBM in the school building.
  (2) Each accredited inspector providing a written assessment shall sign and date the assessment, provide his or her State of accreditation, and if applicable, accreditation number, and submit a copy of the assessment to the person designated under Sec. 763.84 for inclusion in the management plan within 30 days of the assessment.

(b) The inspector shall classify and give reasons in the written assessment for classifying the ACBM and suspected ACBM assumed to be ACM in the school building into one of the following categories:
  (1) Damaged or significantly damaged thermal system insulation ACM.
  (2) Damaged friable surfacing ACM.
  (3) Significantly damaged friable surfacing ACM.
  (4) Damaged or significantly damaged friable miscellaneous ACM.
  (5) ACBM with potential for damage.
  (6) ACBM with potential for significant damage.
  (7) Any remaining friable ACBM or friable suspected ACBM.

(c) Assessment may include the following considerations:
  (1) Location and the amount of the material, both in total quantity and as a percentage of the functional space.
  (2) Condition of the material, specifying:
    (i) Type of damage or significant damage (e.g., flaking, blistering, water damage, or other signs of physical damage).
    (ii) Severity of damage (e.g., major flaking, severely torn jackets, as opposed to occasional flaking, minor tears to jackets).
    (iii) Extent or spread of damage over large areas or large percentages of the homogeneous area.
  (3) Whether the material is accessible.
  (4) The material's potential for disturbance.
  (5) Known or suspected causes of damage or significant damage (e.g., air erosion, vandalism, vibration, water).
  (6) Preventive measures which might eliminate the reasonable likelihood of undamaged ACM from becoming significantly damaged.

(d) The local education agency shall select a person accredited to develop management plans to review the results of each inspection, re-inspection, and assessment for the school building and to conduct any other necessary activities in order to recommend in writing to the local education agency appropriate response actions. The accredited person shall sign and date the recommendation, provide his or her State of accreditation, and, if

applicable, provide his or her accreditation number, and submit a copy of the recommendation to the person designated under Sec. 763.84 for inclusion in the management plan.

Sec. 763.90 Response actions

(a) The local education agency shall select and implement in a timely manner the appropriate response actions in this section consistent with the assessment conducted in Sec. 763.88. The response actions selected shall be sufficient to protect human health and the environment. The local education agency may then select, from the response actions which protect human health and the environment, that action which is the least burdensome method. Nothing in this section shall be construed to prohibit removal of ACBM from a school building at any time, should removal be the preferred response action of the local education agency.

(b) If damaged or significantly damaged thermal system insulation ACM is present in a building, the local education agency shall:
   (1) At least repair the damaged area.
   (2) Remove the damaged material if it is not feasible, due to technological factors, to repair the damage.
   (3) Maintain all thermal system insulation ACM and its covering in an intact state and undamaged condition.

(c)
   (1) If damaged friable surfacing ACM or damaged friable miscellaneous ACM is present in a building, the local education agency shall select from among the following response actions: encapsulation, enclosure, removal, or repair of the damaged material.
   (2) In selecting the response action from among those which meet the definitional standards in Sec. 763.83, the local education agency shall determine which of these response actions protects human health and the environment. For purposes of determining which of these response actions are the least burdensome, the local education agency may then consider local circumstances, including occupancy and use patterns within the school building, and its economic concerns, including short- and long-term costs.

(d) If significantly damaged friable surfacing ACM or significantly damaged friable miscellaneous ACM is present in a building the local education agency shall:
   (1) Immediately isolate the functional space and restrict access, unless isolation is not necessary to protect human health and the environment.
   (2) Remove the material in the functional space or, depending upon whether enclosure or encapsulation would be sufficient to protect human health and the environment, enclose or encapsulate.

(e) If any friable surfacing ACM, thermal system insulation ACM, or friable miscellaneous ACM that has potential for damage is present in a building, the local education agency shall at least implement an operations and maintenance (O&M) program, as described under Sec. 763.91.

(f) If any friable surfacing ACM, thermal system insulation ACM, or friable miscellaneous ACM that has potential for significant damage is present in a building, the local education agency shall:
   (1) Implement an O&M program, as described under Sec. 763.91.
   (2) Institute preventive measures appropriate to eliminate the reasonable likelihood that the ACM or its covering will become significantly damaged, deteriorated, or delaminated.
   (3) Remove the material as soon as possible if appropriate preventive measures cannot be effectively implemented, or unless other response actions are determined to protect human health and the environment. Immediately isolate the area and restrict access if necessary to avoid an imminent and substantial endangerment to human health or the environment.

(g) Response actions including removal, encapsulation, enclosure, or repair, other than small-scale, short-duration repairs, shall be designed and conducted by persons accredited to design and conduct response actions.

(h) The requirements of this subpart E in no way supersede the worker protection and work practice requirements under 29 CFR 1926.58 (Occupational Safety and Health Administration (OSHA) asbestos worker protection standards for construction), 40 CFR part 763, subpart G (EPA asbestos worker protection standards for public employees), and 40 CFR part 61, subpart M (National Emission Standards for Hazardous Air Pollutants—Asbestos).

(i) Completion of response actions.

(1) At the conclusion of any action to remove, encapsulate, or enclose ACBM or material assumed to be ACBM, a person designated by the local education agency shall visually inspect each functional space where such action was conducted to determine whether the action has been properly completed.

(2)

(i) A person designated by the local education agency shall collect air samples using aggressive sampling as described in appendix A to this subpart E to monitor air for clearance after each removal, encapsulation, and enclosure project involving ACBM, except for projects that are of small-scale, short-duration.

(ii) Local education agencies shall have air samples collected under this section analyzed for asbestos using laboratories accredited by the National Bureau of Standards to conduct such analysis using transmission electron microscopy (TEM) or, under circumstances permitted in this section, laboratories enrolled in the American Industrial Hygiene Association Proficiency Analytical Testing Program for phase contrast microscopy (PCM).

(iii) Until the National Bureau of Standards TEM laboratory accreditation program is operational, local educational agencies shall use laboratories that use the protocol described in appendix A to subpart E of this part.

(3) Except as provided in paragraphs (i)(4), and (i)(5), of this section, an action to remove, encapsulate, or enclose ACBM shall be considered complete when the average concentration of asbestos of five air samples collected within the affected functional space and analyzed by the TEM method in appendix A of this subpart E, is not statistically significantly different, as determined by the Z-test calculation found in appendix A of this subpart E, from the average asbestos concentration of five air samples collected at the same time outside the affected functional space and analyzed in the same manner, and the average asbestos concentration of the three field blanks described in appendix A of this subpart E is below the filter background level, as defined in appendix A of this subpart E, of 70 structures per square millimeter (70 s/mm \2\).

(4) An action may also be considered complete if the volume of air drawn for each of the five samples collected within the affected functional space is equal to or greater than 1,199 L of air for a 25 mm filter or equal to or greater than 2,799 L of air for a 37 mm filter, and the average concentration of asbestos as analyzed by the TEM method in appendix A of this subpart E, for the five air samples does not exceed the filter background level, as defined in appendix A, of 70 structures per square millimeter (70 s/mm \2\). If the average concentration of asbestos of the five air samples within the affected functional space exceeds 70 s/mm \2\, or if the volume of air in each of the samples is less than 1,199 L of air for a 25 mm filter or less than 2,799 L of air for a 37 mm filter, the action shall be considered complete only when the requirements of paragraph (i)(3) or (i)(5), of this section are met.

(5) At any time, a local education agency may analyze air monitoring samples collected for clearance purposes by phase contrast microscopy (PCM) to confirm completion of removal, encapsulation, or enclosure of ACBM that is greater than small-scale, short-duration and less than or equal to 160 square feet or 260 linear feet. The action shall be considered complete when the results of samples collected in the affected functional space and analyzed by phase contrast microscopy using the National Institute for Occupational Safety and Health (NIOSH) Method 7400 entitled "Fibers" published in the NIOSH Manual of Analytical Methods, 3rd Edition, Second Supplement, August 1987, show that the concentration of fibers for each of the five samples is less than or equal to a limit of quantization for PCM (0.01 fibers per cubic centimeter (0.01 f/cm \3\) of air). The method is available for public inspection at the Office of the Federal Register, 800 North Capitol Street, NW, Suite 700, Washington, DC, 20408, and the Non-Confidential Information Center (NCIC) (7407), Office of Pollution Prevention and Toxics, U.S. Environmental Protection Agency, Room B-607 NEM, 401 M St., SW., Washington, DC 20460, between the hours of 12 p.m. and 4 p.m. weekdays excluding legal holidays. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. The method is incorporated as it exists on the effective date of this rule, and a notice of any change to the method will be published in the Federal Register.

(6) To determine the amount of ACBM affected under paragraph (i)(5) of this section, the local education agency shall add the total square or linear footage of ACBM within the containment barriers used to isolate the functional space for the action to remove, encapsulate, or enclose the ACBM. Contiguous portions of material subject to such action conducted concurrently or at approximately the same time within the same school building shall not be separated to qualify under paragraph (i)(5), of this section. [52 FR 41846, Oct. 30, 1987, as amended at 53 FR 12525, Apr. 15, 1988; 60 FR 31922, June 19, 1995; 60 FR 34465, July 3, 1995]

Sec. 763.91 Operations and maintenance

(a) Applicability. The local education agency shall implement an operations, maintenance, and repair (O&M) program under this section whenever any friable ACBM is present or assumed to be present in a building that it leases, owns, or otherwise uses as a school building. Any material identified as non-friable ACBM or non-friable assumed ACBM must be treated as friable ACBM for purposes of this section when the material is about to become friable as a result of activities performed in the school building.

(b) Worker protection. Local education agencies must comply with either the OSHA Asbestos Construction Standard at 29 CFR 1926.1101, or the Asbestos Worker Protection Rule at 40 CFR 763.120, whichever is applicable.

(c) Cleaning

(1) Initial cleaning. Unless the building has been cleaned using equivalent methods within the previous 6 months, all areas of a school building where friable ACBM, damaged or significantly damaged thermal system insulation ACM, or friable suspected ACBM assumed to be ACM are present shall be cleaned at least once after the completion of the inspection required by Sec. 763.85(a) and before the initiation of any response action, other than O&M activities or repair, according to the following procedures:

(i) HEPA-vacuum or steam-clean all carpets.

(ii) HEPA-vacuum or wet-clean all other floors and all other horizontal surfaces.

(iii) Dispose of all debris, filters, mop-heads, and cloths in sealed, leak-tight containers.

(2) Additional cleaning. The accredited management planner shall make a written recommendation to the local education agency whether additional cleaning is needed, and if so, the methods and frequency of such cleaning.

(d) Operations and maintenance activities. The local education agency shall ensure that the procedures described below to protect building occupants shall be followed for any operations and maintenance activities disturbing friable ACBM:

(1) Restrict entry into the area by persons other than those necessary to perform the maintenance project, either by physically isolating the area or by scheduling.

(2) Post signs to prevent entry by unauthorized persons.

(3) Shut off or temporarily modify the air-handling system and restrict other sources of air movement.

(4) Use work practices or other controls, such as, wet methods, protective clothing, HEPA-vacuums, mini-enclosures, glove bags, as necessary to inhibit the spread of any released fibers.

(5) Clean all fixtures or other components in the immediate work area.

(6) Place the asbestos debris and other cleaning materials in a sealed, leak-tight container.

(e) Maintenance activities other than small-scale, short-duration.

The response action for any maintenance activities disturbing friable ACBM, other than small-scale, short-duration maintenance activities, shall be designed by persons accredited to design response actions and conducted by persons accredited to conduct response actions.(f) Fiber release episodes

(1) Minor fiber release episode. The local education agency shall ensure that the procedures described below are followed in the event of a minor fiber release episode (i.e., the falling or dislodging of 3 square or linear feet or less of friable ACBM):

(i) Thoroughly saturate the debris using wet methods.

(ii) Clean the area, as described in paragraph (e) of this section.

(iii) Place the asbestos debris in a sealed, leak-tight container.

(iv) Repair the area of damaged ACM with materials such as asbestos-free spackling, plaster, cement, or insulation, or seal with latex paint or an encapsulant, or immediately have the appropriate response action implemented as required by Sec. 763.90.

(2) Major fiber release episode. The local education agency shall ensure that the procedures described below are followed in the event of a major fiber release episode (i.e., the falling or dislodging of more than 3 square or linear feet of friable ACBM):

(i) Restrict entry into the area and post signs to prevent entry into the area by persons other than those necessary to perform the response action.

(ii) Shut off or temporarily modify the air-handling system to prevent the distribution of fibers to other areas in the building.

(iii) The response action for any major fiber release episode must be designed by persons accredited to design response actions and conducted by persons accredited to conduct response actions.[52 FR 41846, Oct. 30, 1987, as amended at 65 FR 69216, Nov. 15, 2000]

Sec. 763.92 Training and periodic surveillance

(a) Training.

(1) The local education agency shall ensure, prior to the implementation of the O&M provisions of the management plan, that all members of its maintenance and custodial staff (custodians, electricians, heating/air conditioning engineers, plumbers, etc.) who may work in a building that contains ACBM receive awareness training of at least 2 hours, whether or not they are required to work with ACBM. New custodial and maintenance employees shall be trained within 60 days after commencement of employment. Training shall include, but not be limited to:

(i) Information regarding asbestos and its various uses and forms.

(ii) Information on the health effects associated with asbestos exposure.

(iii) Locations of ACBM identified throughout each school building in which they work.

(iv) Recognition of damage, deterioration, and de-lamination of ACBM.

(v) Name and telephone number of the person designated to carry out general local education agency responsibilities under Sec. 763.84 and the availability and location of the management plan.

(2) The local education agency shall ensure that all members of its maintenance and custodial staff who conduct any activities that will result in the disturbance of ACBM shall receive training described in paragraph (a)(1) of this section and 14 hours of additional training.

Additional training shall include, but not be limited to:

(i) Descriptions of the proper methods of handling ACBM.

(ii) Information on the use of respiratory protection as contained in the EPA/NIOSH Guide to Respiratory Protection for the Asbestos Abatement Industry, September 1986 (EPA 560/OPPTS-86-001), available from the Director, Environmental Assistance Division (7408), Office of Pollution Prevention and Toxics, U.S. Environmental Protection Agency, Room E-543B, 1200 Pennsylvania Ave., NW., Washington, DC 20460, Telephone: (202) 554-1404, TDD: (202) 544-0551 and other personal protection measures.

(iii) The provisions of this section and Sec. 763.91, Appendices A, C, and D of this subpart E of this part, EPA regulations contained in 40 CFR part 763, subpart G, and in 40 CFR part 61, subpart M, and OSHA regulations contained in 29 CFR 1926.58.

(iv) Hands-on training in the use of respiratory protection, other personal protection measures, and good work practices.

(3) Local education agency maintenance and custodial staff who have attended EPA-approved asbestos training or received equivalent training for O&M and periodic surveillance activities involving asbestos shall be considered trained for the purposes of this section.

(b) Periodic surveillance.

(1) At least once every 6 months after a management plan is in effect, each local education agency shall conduct periodic surveillance in each building that it leases, owns, or otherwise uses as a school building that contains ACBM or is assumed to contain ACBM.

(2) Each person performing periodic surveillance shall:

(i) Visually inspect all areas that are identified in the management plan as ACBM or assumed ACBM.
(ii) Record the date of the surveillance, his or her name, and any changes in the condition of the materials.
(iii) Submit to the person designated to carry out general local education agency responsibilities under Sec. 763.84 a copy of such record for inclusion in the management plan. [52 FR 41846, Oct. 30, 1987, as amended at 60 FR 34465, July 3, 1995; 65 FR 69216, Nov. 15, 2000]

Sec. 763.93 Management plans

(a)(1)On or before October 12, 1988, each local education agency shall develop an asbestos management plan for each school, including all buildings that they lease, own, or otherwise use as school buildings, and submit the plan to an Agency designated by the Governor of the State in which the local education agency is located. The plan may be submitted in stages that cover a portion of the school buildings under the authority of the local education agency.

(2) If a building to be used as part of a school is leased or otherwise acquired after October 12, 1988, the local education agency shall include the new building in the management plan for the school prior to its use as a school building. The revised portions of the management plan shall be submitted to the Agency designated by the Governor.

(3) If a local education agency begins to use a building as a school after October 12, 1988, the local education agency shall submit a management plan for the school to the Agency designated by the Governor prior to its use as a school.

(b) On or before October 17, 1987, the Governor of each State shall notify local education agencies in the State regarding where to submit their management plans. States may establish administrative procedures for reviewing management plans. If the Governor does not disapprove a management plan within 90 days after receipt of the plan, the local education agency shall implement the plan.

(c) Each local education agency must begin implementation of its management plan on or before July 9, 1989, and complete implementation in a timely fashion.

(d) Each local education agency shall maintain and update its management plan to keep it current with ongoing operations and maintenance, periodic surveillance, inspection, re-inspection, and response action activities. All provisions required to be included in the management plan under this section shall be retained as part of the management plan, as well as any information that has been revised to bring the plan up-to-date.

(e) The management plan shall be developed by an accredited management planner and shall include:

(1) A list of the name and address of each school building and whether the school building contains friable ACBM, non-friable ACBM, and friable and non-friable suspected ACBM assumed to be ACM.

(2) For each inspection conducted before the December 14, 1987:

(i) The date of the inspection.

(ii) A blueprint, diagram, or written description of each school building that identifies clearly each location and approximate square or linear footage of any homogeneous or sampling area where material was sampled for ACM, and, if possible, the exact locations where bulk samples were collected, and the dates of collection.

(iii) A copy of the analyses of any bulk samples, dates of analyses, and a copy of any other laboratory reports pertaining to the analyses.

(iv) A description of any response actions or preventive measures taken to reduce asbestos exposure, including if possible, the names and addresses of all contractors involved, start and completion dates of the work, and results of any air samples analyzed during and upon completion of the work.

(v) A description of assessments, required to be made under Sec. 763.88, of material that was identified before December 14, 1987, as friable ACBM or friable suspected ACBM assumed to be ACM, and the name and signature, State of accreditation, and if applicable, accreditation number of each accredited person making the assessments.

(3) For each inspection and re-inspection conducted under Sec. 763.85:

(i) The date of the inspection or re-inspection and the name and signature, State of accreditation and, if applicable, the accreditation number of each accredited inspector performing the inspection or re-inspection.

(ii) A blueprint, diagram, or written description of each school building that identifies clearly each location and approximate square or linear footage of homogeneous areas where material was sampled for ACM, the exact location where each bulk sample was collected, date of collection, homogeneous areas where friable suspected ACBM is assumed to be ACM, and where non-friable suspected ACBM is assumed to be ACM.

(iii) A description of the manner used to determine sampling locations, and the name and signature of each accredited inspector collecting samples, the State of accreditation, and if applicable, his or her accreditation number.

(iv) A copy of the analyses of any bulk samples collected and analyzed, the name and address of any laboratory that analyzed bulk samples, a statement that the laboratory meets the applicable requirements of Sec. 763.87(a) the date of analysis, and the name and signature of the person performing the analysis.

(v) A description of assessments, required to be made under Sec. 763.88, of all ACBM and suspected ACBM assumed to be ACM, and the name, signature, State of accreditation, and if applicable, accreditation number of each accredited person making the assessments.

(4) The name, address, and telephone number of the person designated under Sec. 763.84 to ensure that the duties of the local education agency are carried out, and the course name, and dates and hours of training taken by that person to carry out the duties.

(5) The recommendations made to the local education agency regarding response actions, under Sec. 763.88(d), the name, signature, State of accreditation of each person making the recommendations, and if applicable, his or her accreditation number.

(6) A detailed description of preventive measures and response actions to be taken, including methods to be used, for any friable ACBM, the locations where such measures and action will be taken, reasons for selecting the response action or preventive measure, and a schedule for beginning and completing each preventive measure and response action.

(7) With respect to the person or persons who inspected for ACBM and who will design or carry out response actions, except for operations and maintenance, with respect to the ACBM, one of the following statements:

(i) If the State has adopted a contractor accreditation program under section 206(b) of Title II of the Act, a statement that the person(s) is accredited under such plan.

(ii) A statement that the local education agency used (or will use) persons who have been accredited by another State which has adopted a contractor accreditation plan under section 206(b) of Title II of the Act or is accredited by an EPA-approved course under section 206 (c) of Title II of the Act.

(8) A detailed description in the form of a blueprint, diagram, or in writing of any ACBM or suspected ACBM assumed to be ACM which remains in the school once response actions are undertaken pursuant to Sec. 763.90. This description shall be updated as response actions are completed.

(9) A plan for re-inspection under Sec. 763.85, a plan for operations and maintenance activities under Sec. 763.91, and a plan for periodic surveillance under Sec. 763.92, a description of the recommendation made by the management planner regarding additional cleaning under Sec. 763.91(c)(2) as part of an operations and maintenance program, and the response of the local education agency to that recommendation.

(10) A description of steps taken to inform workers and building occupants, or their legal guardians, about inspections, re-inspections, response actions, and post-response action activities, including periodic re-inspection and surveillance activities that are planned or in progress.

(11) An evaluation of the resources needed to complete response actions successfully and carry out re-inspection, operations and maintenance activities, periodic surveillance and training.

(12) With respect to each consultant who contributed to the management plan, the name of the consultant and one of the following statements:

(i) If the State has adopted a contractor accreditations plan under section 206(b) of Title II of the Act, a statement that the consultant is accredited under such plan.

(ii) A statement that the contractor is accredited by another State which has adopted a contractor accreditation plan under section 206(b) of Title II of the Act, or is accredited by an EPA-approved course developed under section 206(c) of Title II of the Act.

(f) A local education agency may require each management plan to contain a statement signed by an accredited management plan developer that such person has prepared or assisted in the preparation of such plan or has reviewed such plan, and that such plan is in compliance with this subpart E. Such statement may not be signed by a person who, in addition to preparing or assisting in preparing the management plan, also implements (or will implement) the management plan.

(g)

(1) Upon submission of a management plan to the Governor for review, a local education agency shall keep a copy of the plan in its administrative office. The management plans shall be available, without cost or restriction, for inspection by representatives of EPA and the State, the public, including teachers, other school personnel and their representatives, and parents. The local education agency may charge a reasonable cost to make copies of management plans.

(2) Each local education agency shall maintain in its administrative office a complete, updated copy of a management plan for each school under its administrative control or direction. The management plans shall be available, during normal business hours, without cost or restriction, for inspection by representatives of EPA and the State, the public, including teachers, other school personnel and their representatives, and parents. The local education agency may charge a reasonable cost to make copies of management plans.

(3) Each school shall maintain in its administrative office a complete, updated copy of the management plan for that school. Management plans shall be available for inspection, without cost or restriction, to workers before work begins in any area of a school building. The school shall make management plans available for inspection to representatives of EPA and the State, the public, including parents, teachers, and other school personnel and their representatives within 5 working days after receiving a request for inspection. The school may charge a reasonable cost to make copies of the management plan.

(4) Upon submission of its management plan to the Governor and at least once each school year, the local education agency shall notify in writing parent, teacher, and employee organizations of the availability of management plans and shall include in the management plan a description of the steps taken to notify such organizations, and a dated copy of the notification. In the absence of any such organizations for parents, teachers, or employees, the local education agency shall provide written notice to that relevant group of the availability of management plans and shall include in the management plan a description of the steps taken to notify such groups, and a dated copy of the notification.

(h) Records required under Sec. 763.94 shall be made by local education agencies and maintained as part of the management plan.

(i) Each management plan must contain a true and correct statement, signed by the individual designated by the local education agency under Sec. 763.84, which certifies that the general, local education agency responsibilities, as stipulated by Sec. 763.84, have been met or will be met.

Sec. 763.94 Recordkeeping

(a) Records required under this section shall be maintained in a centralized location in the administrative office of both the school and the local education agency as part of the management plan. For each homogeneous area where all ACBM has been removed, the local education agency shall ensure that such records are retained for 3 years after the next re-inspection required under Sec. 763.85(b)(1), or for an equivalent period.

(b) For each preventive measure and response action taken for friable and non-friable ACBM and friable and non-friable suspected ACBM assumed to be ACM, the local education agency shall provide:

(1) A detailed written description of the measure or action, including methods used, the location where the measure or action was taken, reasons for selecting the measure or action, start and completion dates of the work, names and addresses of all contractors involved, and if applicable, their State of accreditation, and accreditation numbers, and if ACBM is removed, the name and location of storage or disposal site of the ACM.

(2) The name and signature of any person collecting any air sample required to be collected at the completion of certain response actions specified by Sec. 763.90(i), the locations where samples were collected, date of collection, the name and address of the laboratory analyzing the samples, the date of analysis, the results of

the analysis, the method of analysis, the name and signature of the person performing the analysis, and a statement that the laboratory meets the applicable requirements of Sec. 763.90(i)(2)(ii).

(c) For each person required to be trained under Sec. 763.92(a) (1) and (2), the local education agency shall provide the person's name and job title, the date that training was completed by that person, the location of the training, and the number of hours completed in such training.

(d) For each time that periodic surveillance under Sec. 763.92(b) is performed, the local education agency shall record the name of each person performing the surveillance, the date of the surveillance, and any changes in the conditions of the materials.

(e) For each time that cleaning under Sec. 763.91(c) is performed, the local education agency shall record the name of each person performing the cleaning, the date of such cleaning, the locations cleaned, and the methods used to perform such cleaning.

(f) For each time that operations and maintenance activities under Sec. 763.91(d) are performed, the local education agency shall record the name of each person performing the activity, the start and completion dates of the activity, the locations where such activity occurred, a description of the activity including preventive measures used, and if ACBM is removed, the name and location of storage or disposal site of the ACM.

(g) For each time that major asbestos activity under Sec. 763.91(e) is performed, the local education agency shall provide the name and signature, State of accreditation, and if applicable, the accreditation number of each person performing the activity, the start and completion dates of the activity, the locations where such activity occurred, a description of the activity including preventive measures used, and if ACBM is removed, the name and location of storage or disposal site of the ACM.

(h) For each fiber release episode under Sec. 763.91(f), the local education agency shall provide the date and location of the episode, the method of repair, preventive measures or response action taken, the name of each person performing the work, and if ACBM is removed, the name and location of storage or disposal site of the ACM.

(Approved by the Office of Management and Budget under control number 2070-0091)

Sec. 763.95 Warning labels

(a) The local education agency shall attach a warning label immediately adjacent to any friable and non-friable ACBM and suspected ACBM assumed to be ACM located in routine maintenance areas (such as boiler rooms) at each school building.

This shall include:

(1) Friable ACBM that was responded to by a means other than removal.

(2) ACBM for which no response action was carried out.

(b) All labels shall be prominently displayed in readily visible locations and shall remain posted until the ACBM that is labeled is removed.

(c) The warning label shall read, in print which is readily visible because of large size or bright color, as follows:

CAUTION:
ASBESTOS HAZARDOUS
DO NOT DISTURB WITHOUT PROPER
TRAINING AND EQUIPMENT.

Sec. 763.97 Compliance and enforcement

(a) Compliance with Title II of the Act.

(1) Section 207(a) of Title II of the Act (15 U.S.C. 2647) makes it unlawful for any local education agency to:

(i) Fail to conduct inspections pursuant to section 203(b) of Title II of the Act, including failure to follow procedures and failure to use accredited personnel and laboratories.

(ii) Knowingly submit false information to the Governor regarding any inspection pursuant to regulations under section 203(i) of Title II of the Act.

(iii) Fail to develop a management plan pursuant to regulations under section 203(i) of Title II of the Act.

(2) Section 207(a) of Title II of the Act (15 U.S.C. 2647) also provides that any local education agency which violates any provision of section 207 shall be liable for a civil penalty of not more than $5,000 for each day during which the violation continues. For the purposes of this subpart, a "violation" means a failure to comply with respect to a single school building.

(b) Compliance with Title I of the Act.

(1) Section 15(1)(D) of Title I of the Act (15 U.S.C. 2614) makes it unlawful for any person to fail or refuse to comply with any requirement of Title II or any rule promulgated or order issued under Title II. Therefore, any person who violates any requirement of this subpart is in violation of section 15 of Title I of the Act.

(2) Section 15(3) of Title I of the Act (15 U.S.C. 2614) makes it unlawful for any person to fail or refuse to establish or maintain records, submit reports, notices or other information, or permit access to or copying of records, as required by this Act or a rule thereunder.

(3) Section 15(4) (15 U.S.C. 2614) of Title I of the Act makes it unlawful for any person to fail or refuse to permit entry or inspection as required by section 11 of Title I of the Act.

(4) Section 16(a) of Title I of the Act (15 U.S.C. 2615) provides that any person who violates any provision of section 15 of Title I of the Act shall be liable to the United States for a civil penalty in an amount not to exceed $25,000 for each such violation. Each day such a violation continues shall, for purposes of this paragraph, constitute a separate violation of section 15. A local education agency is not liable for any civil penalty under Title I of the Act for failing or refusing to comply with any rule promulgated or order issued under Title II of the Act.

(c) Criminal penalties. If any violation committed by any person (including a local education agency) is knowing or willful, criminal penalties may be assessed under section 16(b) of Title I of the Act.

(d) Injunctive relief. The Agency may obtain injunctive relief under section 208(b) of Title II of the Act to respond to a hazard which poses an imminent and substantial endangerment to human health or the environment or section 17 (15 U.S.C. 2616) of Title I of the Act to restrain any violation of section 15 of Title I of the Act or to compel the taking of any action required by or under Title I of the Act.

(e) Citizen complaints. Any citizen who wishes to file a complaint pursuant to section 207(d) of Title II of the Act should direct the complaint to the Governor of the State or the EPA Asbestos Ombudsman, 1200 Pennsylvania Ave., NW., Washington, DC 20460. The citizen complaint should be in writing and identified as a citizen complaint pursuant to section 207(d) of Title II of TSCA. The EPA Asbestos Ombudsman or the Governor shall investigate and respond to the complaint within a reasonable period of time if the allegations provide a reasonable basis to believe that a violation of the Act has occurred.

(f) Inspections. EPA may conduct inspections and review management plans under section 11 of Title I of the Act (15 U.S.C. 2610) to ensure compliance.

Sec. 763.98 Waiver; delegation to State

(a) General.

(1) Upon request from a State Governor and after notice and comment and an opportunity for a public hearing in accordance with paragraphs (b) and (c) of this section, EPA may waive some or all of the requirements of this subpart E if the State has established and is implementing or intends to implement a program of asbestos inspection and management that contains requirements that are at least as stringent as the requirements of this subpart E.

(2) A waiver from any requirement of this subpart E shall apply only to the specific provision for which a waiver has been granted under this section. All requirements of this subpart E shall apply until a waiver is granted under this section.

(b) Request. Each request by a Governor to waive any requirement of this subpart E shall be sent with three complete copies of the request to the Regional Administrator for the EPA Region in which the State is located and shall include:

(1) A copy of the State provisions or proposed provisions relating to its program of asbestos inspection and management in schools for which the request is made.

(2)

(i) The name of the State agency that is or will be responsible for administering and enforcing the requirements for which a waiver is requested, the names and job titles of responsible officials in that agency, and phone numbers where the officials can be contacted.

(ii) In the event that more than one agency is or will be responsible for administering and enforcing the requirements for which a waiver is requested, a description of the functions to be performed by each agency, how the program will be coordinated by the lead agency to ensure consistency and effective administration in the asbestos inspection and management program within the State, the names and job titles of responsible officials in the agencies, and phone numbers where the officials can be contacted. The lead agency will serve as the central contact point for the EPA.

(3) Detailed reasons, supporting papers, and the rationale for concluding that the State's asbestos inspection and management program provisions for which the request is made are at least as stringent as the requirements of this subpart E.

(4) A discussion of any special situations, problems, and needs pertaining to the waiver request accompanied by an explanation of how the State intends to handle them.

(5) A statement of the resources that the State intends to devote to the administration and enforcement of the provisions relating to the waiver request.

(6) Copies of any specific or enabling State laws (enacted and pending enactment) and regulations (promulgated and pending promulgation) relating to the request, including provisions for assessing criminal and/or civil penalties.

(7) Assurance from the Governor, the Attorney General, or the legal counsel of the lead agency that the lead agency or other cooperating agencies have the legal authority necessary to carry out the requirements relating to the request.

(c) General Notice - hearing.

(1) Within 30 days after receipt of a request for a waiver, EPA will determine the completeness of the request. If EPA does not request further information within the 30-day period, the request will be deemed complete.

(2) Within 30 days after EPA determines that a request is complete, EPA will issue for publication in the Federal Register a notice that announces receipt of the request, describes the information submitted under paragraph (b) of this section, and solicits written comment from interested members of the public. Comments must be submitted within 60 days.

(3) If, during the comment period, EPA receives a written objection to a Governor's request and a request for a public hearing detailing specific objections to the granting of a waiver, EPA will schedule a public hearing to be held in the affected State after the close of the comment period and will announce the public hearing date in the Federal Register before the date of the hearing. Each comment shall include the name and address of the person submitting the comment.

(d) Criteria. EPA may waive some or all of the requirements of subpart E of this part if:

(1) The State's lead agency and other cooperating agencies have the legal authority necessary to carry out the provisions of asbestos inspection and management in schools relating to the waiver request.

(2) The State's program of asbestos inspection and management in schools relating to the waiver request and implementation of the program are or will be at least as stringent as the requirements of this subpart E.

(3) The State has an enforcement mechanism to allow it to implement the program described in the waiver request.

(4) The lead agency and any cooperating agencies have or will have qualified personnel to carry out the provisions relating to the waiver request.

(5) The State will devote adequate resources to the administration and enforcement of the asbestos inspection and management provisions relating to the waiver request.

(6) When specified by EPA, the State gives satisfactory assurances that necessary steps, including specific actions it proposes to take and a time schedule for their accomplishment, will be taken within a reasonable time to conform with applicable criteria under paragraphs (d) (2) through (4) of this section.

(e) Decision. EPA will issue for publication in the Federal Register a notice announcing its decision to grant or deny, in whole or in part, a Governor's request for a waiver from some or all of the requirements of this subpart E within 30 days after the close of the comment period or within 30 days following a public hearing, whichever is

applicable. The notice will include the Agency's reasons and rationale for granting or denying the Governor's request. The 30-day period may be extended if mutually agreed upon by EPA and the State.

(f) Modifications. When any substantial change is made in the administration or enforcement of a State program for which a waiver was granted under this section, a responsible official in the lead agency shall submit such changes to EPA.

(g) Reports. The lead agency in each State that has been granted a waiver by EPA from any requirement of subpart E of this part shall submit a report to the Regional Administrator for the Region in which the State is located at least once every 12 months to include the following information:
   (1) A summary of the State's implementation and enforcement activities during the last reporting period relating to provisions waived under this section, including enforcement actions taken.
   (2) Any changes in the administration or enforcement of the State program implemented during the last reporting period.
   (3) Other reports as may be required by EPA to carry out effective oversight of any requirement of this subpart E that was waived under this section.

(h) Oversight. EPA may periodically evaluate the adequacy of a State's implementation and enforcement of and resources devoted to carrying out requirements relating to the waiver. This evaluation may include, but is not limited to, site visits to local education agencies without prior notice to the State.
   (1) Informal conference. EPA may request that an informal conference be held between appropriate State and EPA officials when EPA has reason to believe that a State has failed to:
      (i) Substantially comply with the terms of any provision that was waived under this section.
      (ii) Meet the criteria under paragraph (d) of this section, including the failure to carry out enforcement activities or act on violations of the State program.
   (2) EPA will:
      (i) Specify to the State those aspects of the State's program believed to be inadequate.
      (ii) Specify to the State the facts that underlie the belief of inadequacy.
   (3) If EPA finds, on the basis of information submitted by the State at the conference, that deficiencies did not exist or were corrected by the State, no further action is required.
   (4) Where EPA finds that deficiencies in the State program exist, a plan to correct the deficiencies shall be negotiated between the State and EPA. The plan shall detail the deficiencies found in the State program, specify the steps the State has taken or will take to remedy the deficiencies, and establish a schedule for each remedial action to be initiated.

(j) Rescission.
   (1) If the State fails to meet with EPA or fails to correct deficiencies raised at the informal conference, EPA will deliver to the Governor of the State and a responsible official in the lead agency a written notice of its intent to rescind, in whole or part, the waiver.
   (2) EPA will issue for publication in the Federal Register a notice that announces the rescission of the waiver, describes those aspects of the State's program determined to be inadequate, and specifies the facts that underlie the findings of inadequacy.

Sec. 763.99 Exclusions

(a) A local education agency shall not be required to perform an inspection under Sec. 763.85(a) in any sampling area as defined in 40 CFR 763.103 or homogeneous area of a school building where:
   (1) An accredited inspector has determined that, based on sampling records, friable ACBM was identified in that homogeneous or sampling area during an inspection conducted before December 14, 1987. The inspector shall sign and date a statement to that effect with his or her State of accreditation and if applicable, accreditation number and, within 30 days after such determination, submit a copy of the statement to the person designated under Sec. 763.84 for inclusion in the management plan. However, an accredited inspector shall assess the friable ACBM under Sec. 763.88.

(2) An accredited inspector has determined that, based on sampling records, non-friable ACBM was identified in that homogeneous or sampling area during an inspection conducted before December 14, 1987. The inspector shall sign and date a statement to that effect with his or her State of accreditation and if applicable, accreditation number and, within 30 days after such determination, submit a copy of the statement to the person designated under Sec. 763.84 for inclusion in the management plan. However, an accredited inspector shall identify whether material that was non-friable has become friable since that previous inspection and shall assess the newly-friable ACBM under Sec. 763.88.

(3) Based on sampling records and inspection records, an accredited inspector has determined that no ACBM is present in the homogeneous or sampling area and the records show that the area was sampled, before December 14, 1987 in substantial compliance with Sec. 763.85(a), which for purposes of this section means in a random manner and with a sufficient number of samples to reasonably ensure that the area is not ACBM.

(i) The accredited inspector shall sign and date a statement, with his or her State of accreditation and if applicable, accreditation number that the homogeneous or sampling area determined not to be ACBM was sampled in substantial compliance with Sec. 763.85(a).

(ii) Within 30 days after the inspector's determination, the local education agency shall submit a copy of the inspector's statement to the EPA Regional Office and shall include the statement in the management plan for that school.

(4) The lead agency responsible for asbestos inspection in a State that has been granted a waiver from Sec. 763.85(a) has determined that, based on sampling records and inspection records, no ACBM is present in the homogeneous or sampling area and the records show that the area was sampled before December 14, 1987, in substantial compliance with Sec. 763.85(a). Such determination shall be included in the management plan for that school.

(5) An accredited inspector has determined that, based on records of an inspection conducted before December 14, 1987, suspected ACBM identified in that homogeneous or sampling area is assumed to be ACM. The inspector shall sign and date a statement to that effect, with his or her State of accreditation and if applicable, accreditation number and, within 30 days of such determination, submit a copy of the statement to the person designated under Sec. 763.84 for inclusion in the management plan. However, an accredited inspector shall identify whether material that was non-friable suspected ACBM assumed to be ACM has become friable since the previous inspection and shall assess the newly friable material and previously identified friable suspected ACBM assumed to be ACM under Sec. 763.88.

(6) Based on inspection records and contractor and clearance records, an accredited inspector has determined that no ACBM is present in the homogeneous or sampling area where asbestos removal operations have been conducted before December 14, 1987, and shall sign and date a statement to that effect and include his or her State of accreditation and, if applicable, accreditation number. The local education agency shall submit a copy of the statement to the EPA Regional Office and shall include the statement in the management plan for that school.

(7) An architect or project engineer responsible for the construction of a new school building built after October 12, 1988, or an accredited inspector signs a statement that no ACBM was specified as a building material in any construction document for the building, or, to the best of his or her knowledge, no ACBM was used as a building material in the building. The local education agency shall submit a copy of the signed statement of the architect, project engineer, or accredited inspector to the EPA Regional Office and shall include the statement in the management plan for that school.

(b) The exclusion, under paragraphs (a) (1) through (4) of this section, from conducting the inspection under Sec. 763.85(a) shall apply only to homogeneous or sampling areas of a school building that were inspected and sampled before October 17, 1987. The local education agency shall conduct an inspection under Sec. 763.85(a) of all areas inspected before October 17, 1987 that were not sampled or were not assumed to be ACM.

(c) If ACBM is subsequently found in a homogeneous or sampling area of a local education agency that had been identified as receiving an exclusion by an accredited inspector under paragraphs (a) (3), (4), (5) of this section, or an architect, project engineer or accredited inspector under paragraph (a)(7) of this section, the local education agency shall have 180 days following the date of identification of ACBM to comply with this subpart E.

3.1.5 SITE DEVELOPMENT REQUIREMENTS

A. Site Narrative
B. Existing Conditions Site Plan
C. Supporting Documents

3.1.5 SITE DEVELOPMENT REQUIREMENTS

A. Site Narrative

LPA discussed site development requirements with representatives of the District, Town Departments and Officials, and the School Building Committee. Needs are outlined in several meeting memos (Refer to 3.1.2 Education Program section) and include the following:

- Adequate space to support 790-student ±142,000 SF Elementary School (2-3 story solution).
- Provide separate bus and parent pick-up/drop-off vehicular circulation. Extended day parent pick-up/drop-off does not coincide with typical day vehicular traffic.

  Anticipated:
  - Queuing space for 12-15 buses at pick-up/drop-off includes Special Education [2-3 buses]. The buses queue up at the same time in the afternoon unlike in the morning where drop-off is staggered.
  - Queuing space for ±120 vehicles for parent pick-up/drop-off. The vehicles queue up at the same time in the afternoon unlike in the morning where drop-off is staggered.
- Emergency vehicle access full perimeter of the building
- Parking:
  - 110-115 Staff spaces
  - 10-15 Visitor parking near main entrance.
  - Provide additional parking for assembly to accommodate community events and occasional parent/student events (concerts, parent/teacher nights, extended year programs etc.) and summer extended learning programs. The range identified as being sufficient is 320-350 spaces total (includes staff and visitor).
- 2 separate age appropriate play areas
- Nature walks and elements to support curriculum driven outdoor programs
- Athletic fields: minimum one flat multipurpose play field to be used for physical education, field day, etc. ideally adjacent to gym, cafeteria, and recess play areas. Town has high demand for community recreational fields; Little League baseball field at the existing site is heavily used and would likely need to be replaced elsewhere in town if it was lost to the school project.
- Service/delivery/dumpster area
- Secondary site access (if possible).
- Exterior underground grease trap for Kitchen.

It is anticipated that opportunities for "green" site features and strategies will be discussed, and LEED v4 point goals set, as the project moves forward into the next phase. The existing conditions site plan, as well as a plan graphic comparison of existing/proposed site features, is also included in this section.

3.1.5 SITE DEVELOPMENT REQUIREMENTS

B. Existing Conditions Site Plan

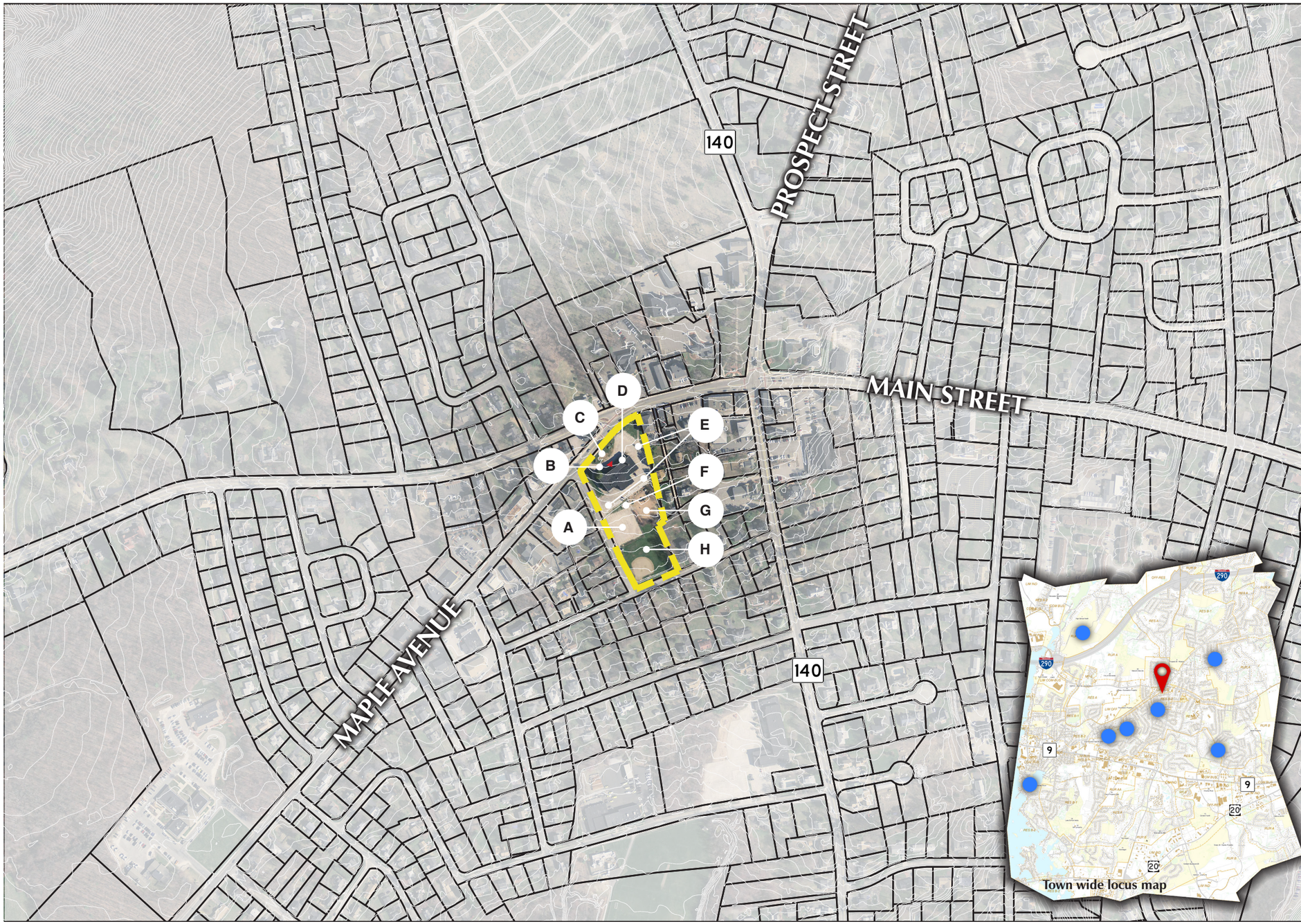
Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

FEASIBILITY STUDY

3.1.5 SITE DEVELOPMENT REQUIREMENTS

B. Existing Conditions Site Plan



ITEM	DESCRIPTION
A	Lower parking lot
B	Bus drop-off/pick-up
C	War Memorial
D	Accessible ramp access to main entry
E	Parking
F	Accessible ramp to lower lot at playground
G	Playground
H	Community softball field
▼	Main Entrance

LEGEND:

- Property line
- Easements
- Wetlands
- Ponds/lakes
- Streams
- 20′ No build around wetlands
- 100′ Buffer around wetlands
- Topography in excess 15%
- Developable area
- Existing K-12 schools
- Site location

NORTH

0′ 125′ 250′ 500′

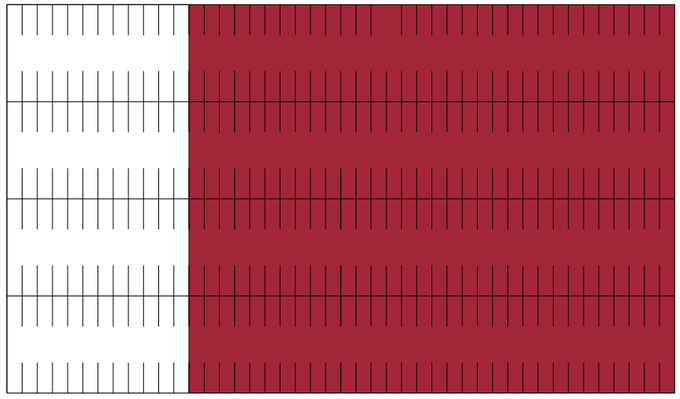
3.1.5 SITE DEVELOPMENT REQUIREMENTS

C. Supporting Documents

1. Existing vs. Proposed Site Program Template

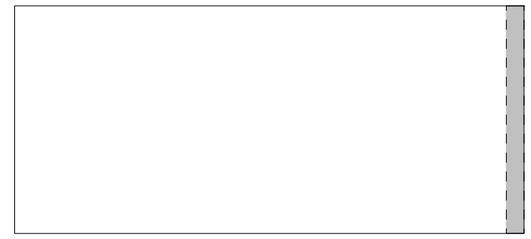
790 Student Option

PARKING



Existing parking : 90 spaces
Proposed parking: 350 spaces
- Staff: 110-115 spaces
- Visitor: 15 spaces
- Extended learning/events: 220 spaces

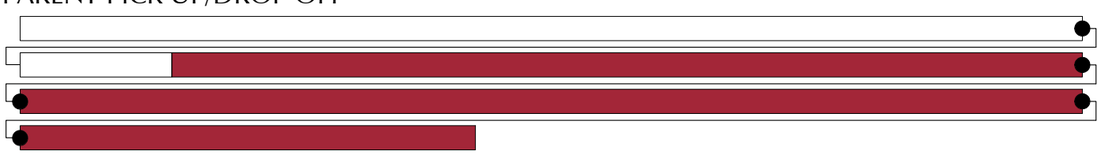
PLAY AREAS



Existing play area: 50,350 SF
Proposed: 48,600 SF
- 2 tot lots at 12,800 SF each
- Play field at 23,000 SF

Existing blacktop: 0 SF
Proposed: 30,000 SF each

PARENT PICK UP/DROP OFF



40 Existing spots ; 120 proposed

HALF SIZE BUSES

1 Existing bus; 3 proposed

FULL SIZE BUSES

11 Existing buses; 12 proposed

EXISTING AREA

EXISTING AREA THAT EXCEEDS PROPOSED SITE PROGRAM

PROPOSED AREA

3.1.6 PRELIMINARY EVALUATION OF ALTERNATIVES

A. Narrative
B. Base Repair Option
C. Existing Site Option
D. New Construction on Alternate Site Options
E. Comparative Cost Analysis
F. Recommended Alternatives for Further Development & Evaluation
G. Supporting Documents

3.1.6 PRELIMINARY EVALUATION OF ALTERNATIVES

A. Narrative

For all options investigated, it is assumed that the existing Beal Early Childhood Center must remain in operation during the construction period.

The owner has provided the following to address the lack of opportunity to move the students out of the school during the construction:

Analysis of school district's student assignment practices

The Shrewsbury Public School District consists of the following:

School/Office	Location	Grade Levels	Enrollment 10/1/2017	Attached Modular Classrooms
Central Office	100 Maple Ave. [Town Hall]	na		
Special Education Office	15 Parker Rd. [SELCO Bldg.]	na		
Parker Road Preschool	15 Parker Rd. [SELCO Bldg.]	preK	180	
Parker Road Preschool-Extension [*Leased space*]	2 Wesleyan Terrace	preK	56	
Beal Early Childhood Center	1 Maple Avenue	K-1	309	
Calvin Coolidge Elementary School	1 Florence Street	K-4	413	4
Floral Street Elementary School	57 Floral Street	1-4	750	
Walter J. Paton Elementary School	58 Grafton Street	K-4	342	3
Spring Street Elementary School	123 Spring Street	K-4	358	6
Sherwood Middle School	30 Sherwood Avenue	5-6	967	
Oak Middle School	45 Oak Street	7-8	1,009	
Shrewsbury High School	64 Holden Street	9-12	1,832	
			6,216	**13**

All of the schools are currently at or beyond capacity and there is no additional space to accommodate the Beal Early Childhood student population during construction. One should note that the district has 13 modular classrooms attached to elementary schools that have been installed over prior years to accommodate enrollment growth.

Tuition agreement with adjacent school districts:

We have no tuition agreements with other neighboring districts. Beginning with the 2016-2017 school year the School Committee voted to allow a small number of School Choice students to enroll at specific grade levels and in small enough numbers that it would have *de minimus* impact on class sizes but provide for an additional annual revenue stream. There are 27 School Choice students in the following grade levels: Grade 3=8 students, Grade 5=5 students, Grade 6= 4 students, Grade 7=10 students. It is not anticipated that any more seats would be open as space is not available.

Rental or acquisition of existing buildings that could be made available for school:

We have no rental agreements available or suitable commercial facilities in town to house students from the Beal Early Childhood Center. The District currently rents approximately 3,300 sf of space at Shrewsbury High to the Assabet Valley Collaborative who operates a special education program for 18-22 year old students transitioning out of public school services and towards independence. This space is highly specialized life skills oriented and not suitable for elementary age students.

3.1.6 PRELIMINARY EVALUATION OF ALTERNATIVES

B. Base Repair Option

1. Narrative
2. Base Repair Option - Site Diagram

Description: For purposes of this Feasibility Study, the Base Repair Option features the requisite scope of work to update the existing Beal facility to contemporary code without an expansion. The Base Repair Option addresses any existing code violations, the repair/replacement of existing building systems that have exceeded their life expectancy or are failing, and repairs to the building facade. The scope of work for this option is based on an assessment of building systems by LPA and each of its consulting engineers, which are published in the existing conditions report found in Section 3.1.4.

The following is a brief summary of the scope of work included:
33,400 sf building on three floors (12,400sf building footprint)

Base Repair Option Scope of Work:

ARCHITECTURAL

- Full EPDM roof replacement
- Full exterior window replacement with operable insulated glass units and screens
- Exterior entrance stair/handrail replacement; extend handrails at exterior ramp
- Add exterior wall studs and insulation system to interior of walls
- Replace all doors and hardware; modify as required for full accessibility
- Replacement ceilings as required to facilitate new MEP systems installation
- Replacement flooring in all areas except gym
- Refinish wood gym flooring
- Replace exterior fire escapes with enclosed stairwells
- Modify interior stairs to provide sloped nosing and code compliant railing extensions
- New millwork to provide accessibility
- Repair and re-paint existing steel lintels, all exterior metal items.
- Selective exterior brick repointing, repair concrete foundation cracks
- Provide new toilet partitions
- Perform hazardous material abatement throughout the interior and exterior of the building.
- All partition replacement, patching, reconfiguration required for installation of new code compliant systems

FIRE PROTECTION

- Installation of a full fire protection system per code requirements including protection of interior enclosed wood framing and exterior wood canopies

PLUMBING

- Replace existing supply piping and above slab waste piping and fixtures

HVAC

- Replacement of HVAC boilers, distribution, heating and control systems.

ELECTRICAL

- Replace all electrical systems and distribution.
- Upgrade existing electrical emergency systems as required to meet code.
- Replace telephone system, public address system and upgrade surveillance system to address current safety standards.

SITE

- Repave all parking and circulation driveways
- Restripe all parking

Degree of Educational Program/Space Summary Fulfillment: The Base Repair Option does not satisfy the Educational Program/Space Summary or site program requirements. Significant items of note include the following:

- Existing undersized classrooms and core facilities remain. All categories of the space summary template are significantly deficient.
- The 33,400sf existing facility is only about 20% of the overall proposed space summary template and could only accommodate a small portion of the 790 students projected for enrollment
- The existing configuration of classroom and other spaces does not support the District's project based learning curriculum
- The site plan does not meet the site plan program in any respect: number of parking spaces, off-street bus and parent vehicular circulation, play and athletic areas

Impact of Construction Phasing

Since the existing school would need to be fully occupied during construction, it is assumed the project would be phased over a three year period within the following general parameters:

- 8 modular classrooms and connector to existing school for swing space (assumed 2 years) with satellite parking elsewhere in the community

- Intensive summer construction periods for boiler and electrical system replacement, hazardous material abatement (as great an extent as possible while students are not in the building), toilet room and kitchen work, administration area, etc.
- Classroom renovation work by wing during the school year including moves to the modular classrooms as required.

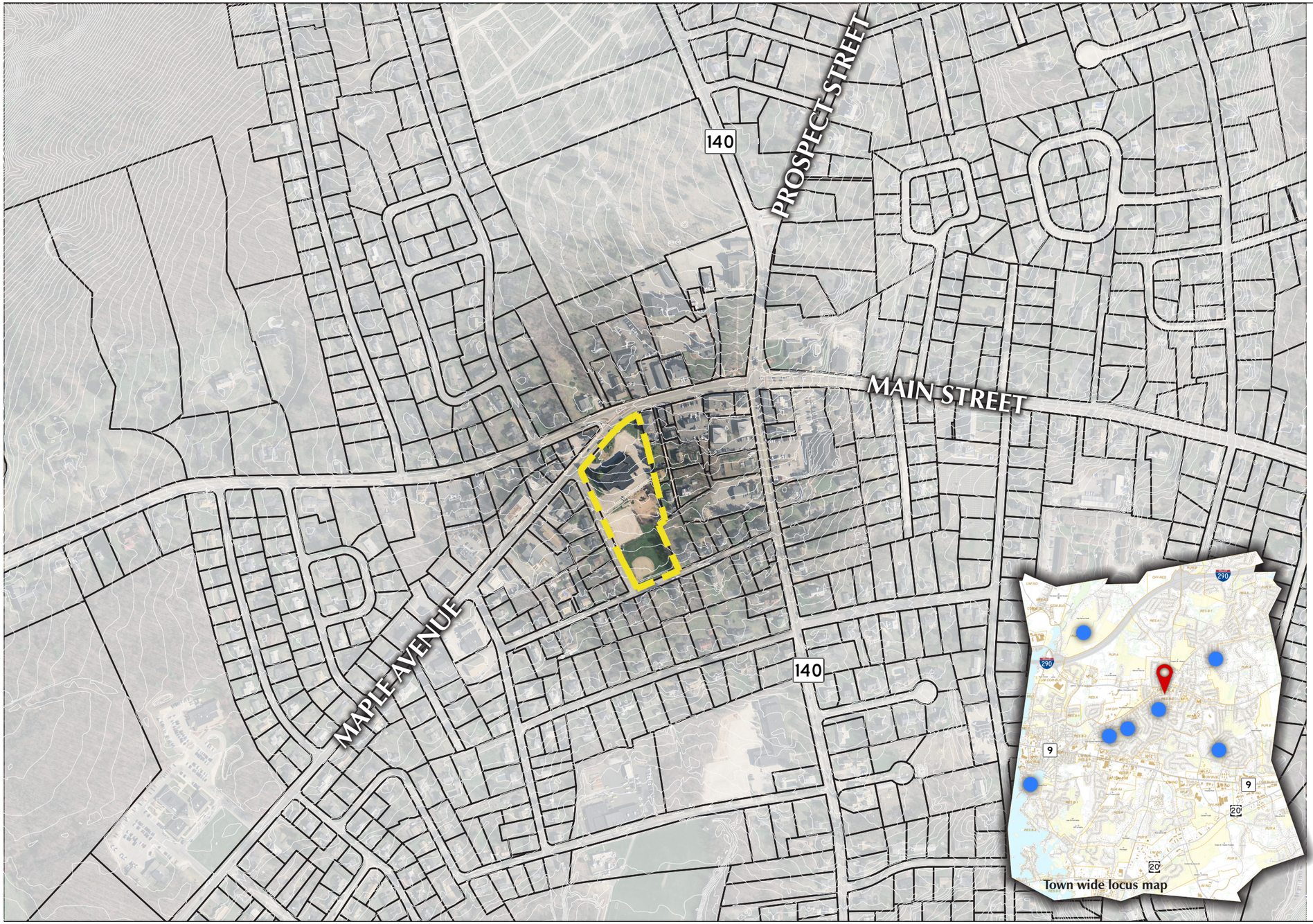
Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

FEASIBILITY STUDY

3.1.6 PRELIMINARY EVALUATION OF ALTERNATIVE SITES

B. Base Repair Option - Beal Early Childhood Center Site Diagram



GENERAL NOTES:

1. Repave, re-stripe and re-letter existing parking and driveway areas
2. Replace EPDM roof
3. Replace all exterior windows with operable insulated glass units and screens
4. Repair and re-paint existing steel lintels, all exterior metal items
5. Selectively re-point existing exterior masonry walls and repair concrete foundation cracks
6. Perform hazardous material abatement throughout interior and exterior of building
7. Interior paint and finishes work where required
8. Provide new toilet partitions at all bath rooms
9. Replace all MEP systems
10. Install full fire protection per code requirements

LEGEND:

- Property line
- Easements
- Wetlands
- Ponds/lakes
- Streams
- 20′ No build around wetlands
- 100′ Buffer around wetlands
- Topography in excess 15%
- Developable area
- Existing K-12 schools
- Site location

NORTH

0′ 125′ 250′ 500′

3.1.6 PRELIMINARY EVALUATION OF ALTERNATIVES

C. Existing Development Site Options

1. Narrative
2. Evaluation of Beal Early Childhood Center Property
3. Existing Site Development Options Site Diagram

Description: The existing site and building at the Beal Elementary School are both significantly undersized for development to meet the 790 student proposed school. The 3.8 acre site is particularly problematic to accommodate the recommended site program (approximately 12 – 14 acres). Additionally, the 3 story 33,400 sf existing school is not easily modified to address contemporary learning configurations for an addition renovation option. The Existing Site Option diagram is developed to show a 4 story academic wing as Phase 1 construction followed by a Phase 2 construction of core facilities. While Phase 2 could be developed as an addition renovation phase, the resultant building would not be practically suitable for the project. For that reason, we have focused on demolition of the existing building in Phase 2 followed by new construction.

Proposed square footage of this option is as follows:

- **150,000sf new construction in 2 phases (assumed to be larger than program due to inefficiencies of 4 story building**
- **33,400sf Demolition including hazardous material abatement**

EXISTING SITE OPTION SCOPE OF WORK:

- Phase 1: construct new 4 story academic wing behind the existing school. Maintain existing school in operation with satellite parking for faculty and staff
- Phase 2: Move students to new academic wing; provide remote meal preparation and delivery, off site physical education and assembly facilities. Demolish existing building, construct new core facility wing.
- Develop off site faculty parking and play fields.

Building Exterior/Interior:

- Provide new construction as follows
  - Exterior walls: Rain screen system including metal stud back-up walls, glass fiber reinforced gypsum board, self-adhered air/vapor barrier (AVB), AVB transitions to window/door openings and roof systems, rigid insulation, thermally broken standoff clips, metal furring, joint sealants and masonry or metal wall panel system
  - Roofing: Adhered PVC roofing system throughout, including all membrane/flashing, roof edging, sheet metal work, insulation, roof vapor barrier, wood blocking and other roof accessories (ladders, hatches, etc.) as required

- Windows, Storefront and Curtainwall: Thermally broken aluminum systems, including high performance insulating glass, perimeter joint sealants, insulated panels, screens, operable hardware, sheet metal work, air/vapor barrier (AVB) transitions, solar shading devices, window treatments and other accessories as required
- Interior partitions: Metal stud and Gypsum Wall Board (GWB) assemblies as required for structural and acoustical requirements.
- Doors, Frames and Hardware: Hollow metal and solid-core wood veneer doors; custom welded steel frames and borrowed lites; and lever type mortise hardware, electrified at exterior entries
- Millwork/Casework:
  - Classroom units with storage shelving, tall wardrobe and material storage units, and lockable low storage cabinets
  - Custom cabinetry at main Administrative offices, Media Center, Cafeteria and other locations as required
- Finishes:
  - Corridors, Stairs and Cafeteria: Linoleum flooring and resilient base, resilient stair treads, ceramic wall tile to 5' with painted GWB above, ACT
  - Classrooms: Linoleum flooring, resilient base, painted GWB, ACT
  - Kitchen: Quarry tile, FRP wall paneling, washable ceiling tile system
  - Administrative Offices and Media Center: Carpet flooring, resilient base, painted GWB, ACT
  - Gymnasium: Resilient tongue and groove maple flooring system, resilient base, wall padding, acoustical wall panels, painted acoustical cellular roof deck

- Provide Food Service equipment at Kitchen

Fixtures, Furnishings & Equipment (FF&E)/Technology (Project Budget Items):

- Provide new FF&E throughout including furnishings, equipment, maintenance items, etc. Provide new Technology throughout including student/teacher computers, laptop carts, interactive projectors, servers, etc.

Hazardous Materials:

- Abate entire existing building complex prior to demolition

Structural:

- Provide concrete foundations, steel framing, deck and accessories at new construction as required

Fire Protection:

- Provide automatic fire sprinkler system throughout
- Provide miscellaneous Fire Protection items as required

Plumbing:

- Provide plumbing fixtures
- Provide domestic hot water (HW) heating system
- Provide overflow roof drainage system
- Provide domestic water distribution system
- Provide above and below-grade sanitary waste and vent system
- Provide above and below-grade storm drainage system
- Provide sand/gas trap system as required
- Provide miscellaneous Plumbing items as required

HVAC:

- Provide Energy Management System (EMS) control system
- Provide gas-fired high-efficiency condensing boiler plant
- Provide 2-pipe Hot Water (HW) hydronic distribution piping and equipment (pumps, coils, fan coil units, finned tube radiation, unit heaters, etc.)
- Provide packaged rooftop air handling units for 100% air conditioned cooling and ventilation
- Provide ductless split systems at new Data Rooms
- Provide Kitchen ventilation systems
- Provide HVAC duct system including all diffusers, grilles, insulation, hangers, etc.
- Provide miscellaneous HVAC items as required

Electrical:

- Provide main electrical service, switchgear and distribution including new branch panels
- Provide exterior emergency/standby generator
- Provide emergency/egress lighting fixtures
- Provide lighting fixtures with LED lamps and daylighting control system

- Provide addressable Fire Alarm (FA) system
- Provide public safety radio Distributed Antenna System (DAS)
- Provide Data/Communications cabling infrastructure
- Provide wired and wireless data communications equipment
- Provide VOIP telephone system
- Provide public address and clock systems
- Provide local sound systems at Classrooms, Auditorium, Cafeteria, Media Center, and Gymnasium
- Provide video surveillance, access control and intrusion detection systems
- Provide lightning protection system
- Provide miscellaneous Electrical items as required

DEGREE OF EDUCATIONAL PROGRAM/SPACE SUMMARY FULFILLMENT

The potential for meeting the site and building program on the existing site is poor. A four story academic wing does not meet the building program for young users and the desired clustering of classrooms. The site program would not be well satisfied by satellite parking and play fields as transportation to those critical elements would be required. Additionally, it is anticipated that vehicular circulation would continue to be problematic as the site would not properly support the bus and parent vehicle queues called for to meet the program. The loss of the softball field on site would be another burden to the town as it is heavily used by the community.

Efficiency: Compared to a two or three story option, the four story solution would be markedly less efficient. Satellite site features also are inefficient in terms of time required to shuttle staff and students to those areas.

Adjacencies: It would be challenging to meet the desired adjacencies, particularly in the four story academic wing.

Code: The option could be developed to meet code in all respects.

Sustainability: The option would provide opportunities for sustainable design approaches particularly through energy efficient building systems, use of recycled content and locally sourced materials, low water

usage, and user education displays. The site would be limited in opportunities for large scale sustainable systems due to its size.

IMPACT OF CONSTRUCTION PHASING

Since the existing school must be fully occupied during construction, it is assumed the project would be phased over a three – four year period within the following general parameters:

- Phase 1: New construction of academic wing for 18 months. Satellite faculty parking and contractor staging area provided elsewhere in town.
- Phase 2: Move students and faculty to academic wing. Abate and demolish existing building. New construction of core facility wing (24 month duration). Develop off site parking and play fields.

BEAL EARLY CHILDHOOD CENTER PROPERTY		

CRITERIA		
GENERAL INFORMATION		
Property Information	1 Maple Avenue	
COMPARISON RATING	**SCORE 0 to 5 (0 being not responsive, 1 least advantageous, 5 most advantageous)**	
Geographical Location	Centrally located; Less than a quarter mile from the intersection of Main Street and Route 140	
Zoning & Adjacent Land Uses	The parcel is zoned "Limited Business". Immediate adjacent parcels to the East, West, and North are also "Limited Business". To the South the parcels are "Residence B-2"	1
Property Configuration, Size, Buildable Area	Site is only 3.86 acres. Site is too small to accommodate new school along with site features required [12-14 Buildable Acres].	0
Topography	Site is low sloping except between the upper parking lot and lower parking lot/playfields. The open space on the site has slopes ranging from ±1% to 4% with the exception of the previous mentioned area where the slope is ±30%	3
Environmental Resources and Hydrology	No streams or wetlands located on site.	3
Soils and Geologic Factors	Soils on site consist mostly of urban land and udorthents, smoothed.	3
Utility Availability	There is adequate water, sewer, and electricity available. There is an 8" intermediate pressure gas main at the street.	5
Access Potential-Traffic Pedestrian & Vehicular	Access is via Maple Avenue right after the intersection of Main Street and Maple Avenue which are a heavily traveled artery through the center of town. There is existing parking at the side and back of the building that can be accessed via Maple Avenue for the side parking lot and Hascall Street for the back-parking lot. Sidewalks run along Main Street, Maple Avenue, and Hascall Street.	0
Existing Development, Building and Site	Existing 33,779 GSF building with parking lots and playfields. Municipal, small commercial, and residential neighborhoods surround the site.	1
Easements and Other Property Limitations	No easements on site. Town to report back on any additional restrictions.	3
Acquisition Cost	N/A – Town owned land	5
General Comment		
	TOTAL	24

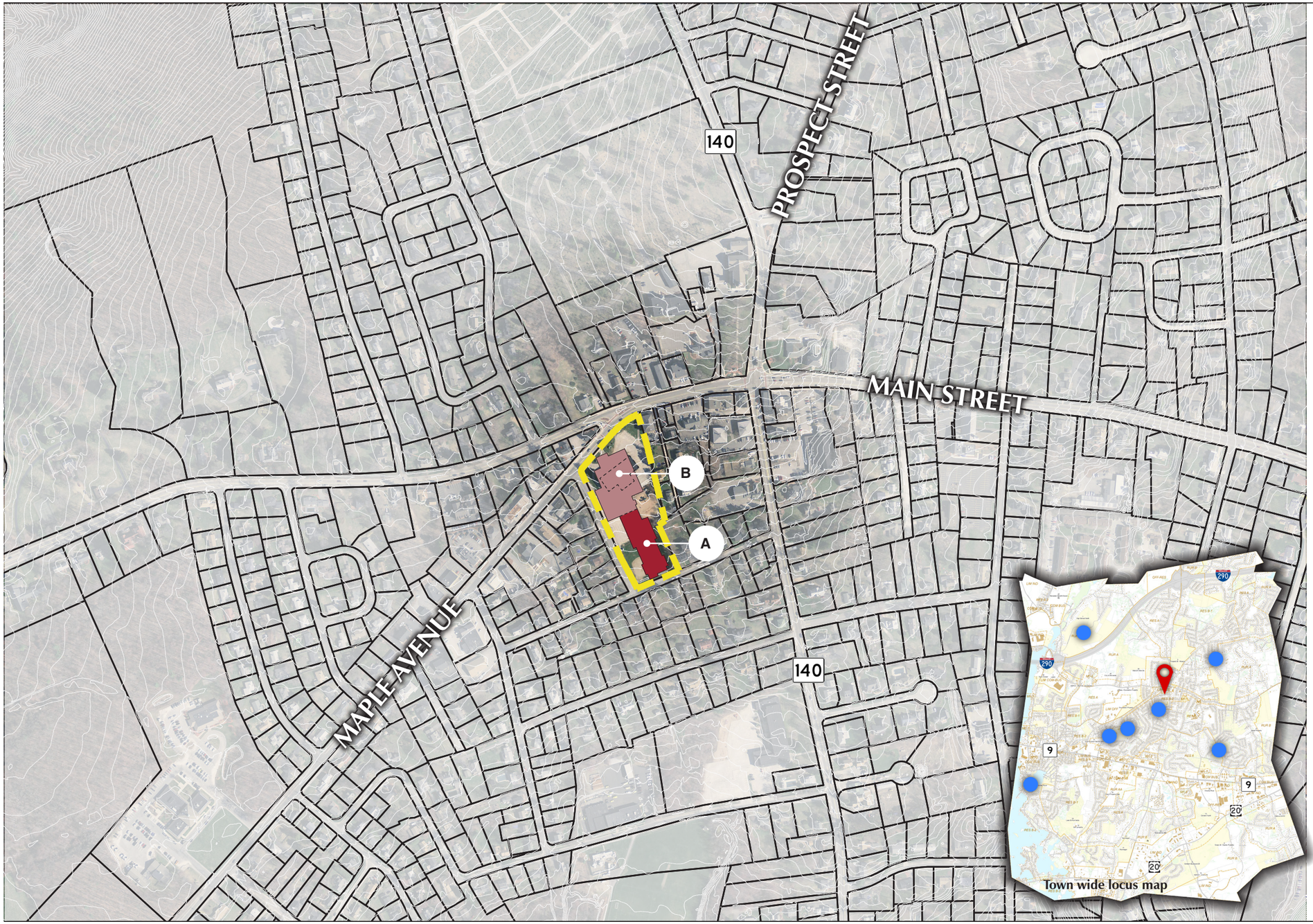
Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

FEASIBILITY STUDY

3.1.6 PRELIMINARY EVALUATION OF ALTERNATIVE SITES

C. Existing Site Development Options - Beal Early Childhood Center Site Diagram



ITEM	DESCRIPTION
A	Phase I Construction: Four story academic wing to be constructed.
B	Phase II Construction: Existing 350 student Beal Early Childhood Center to be renovated and/or demolished (33,400 GSF). New construction, additions, and/or renovations to accommodate core facility spaces as required

GENERAL NOTES:

1. All site features including parking and play fields to be located off site
2. New building to be 150,000 GSF total

LEGEND:

- Property line
- Easements
- Wetlands
- Ponds/lakes
- Streams
- 20′ No build around wetlands
- 100′ Buffer around wetlands
- Topography in excess 15%
- Developable area
- Existing K-12 schools
- Site location

NORTH

0′ 125′ 250′ 500′

3.1.6 PRELIMINARY EVALUATION OF ALTERNATIVES

D. New Construction on Alternate Site Options

1. New Construction on Alternate Site Options - Narrative
2. Prospect Park Property
   a. Evaluation of Prospect Park Property
   b. Existing Conditions Site Diagram
3. USPS Sorting Facility Property
   a. Evaluation of USPS Sorting Facility Property
   b. Existing Conditions Site Diagram
4. UMASS & Maple Avenue Property
   a. Evaluation of UMASS & Maple Avenue Property
   b. Existing Conditions Site Diagram
5. Camp Winnegan Property
   a. Evaluation of Camp Winnegan Property
   b. Existing Conditions Site Diagram
6. Glavin Center Property
   a. Narrative
   b. Evaluation of Glavin Center Property
   c. Existing Conditions Site Diagram
   d. Site Diagram – Option 01
   e. Site Diagram – Option 02
7. Allen Farm Property
   a. Narrative
   b. Evaluation of Allen Farm Property
   c. Existing Conditions Site Diagram
   d. Existing Conditions Site Diagram
   e. Site Diagram

Description: The New Construction on Alternate Sites Option is based on a new building located on the selected sites. The result at some of the sites would be a solution that fully meets the Educational Program requirements, except as noted for particular sites as outlined. Each candidate site has a detailed existing features description, comparing to the program criteria, and recommendations follow.

New Construction on Alternative Site Option, Scope of Work/Objectives:

- Provide all required utility services.
- New Building Construction (new building) = ±142,000 SF – 790 Students
- Provide all Site improvements, including parking, bus/parent drop off areas and driveways, as noted in the program documents.

Estimated Preliminary Construction and Project Costs: Refer to attached AM Fogarty order of magnitude cost estimates.

Site Selection Process: At the beginning of the project, meetings were held with the Town of Shrewsbury, to review potential available town land or private land that would be suitable for rehabilitation or open land for development. The Town of Shrewsbury reviewed assessor's parcels for land that either individually or in combination with other parcels were in excess of ten acres in total. The following is a list of reviewed parcels, and brief discussion:

REVIEWED SITES	REVIEW NOTES –NOT VIABLE/MARGINAL PARCELS
01 – Holden Street – 194.17 Acres	Limited development are due to existing site features, steep topography and the presence of a stream & wetlands.
02 – Boylston Street – 129.77 Acres	Site access is very limited and it has extreme topography and several wetland/water features. Located on the edge of Town
04 – Centech Boulevard – 70.87 Acres	Transmission wires, substation, and fire station located on site. Significant wetlands limiting access & developable area
05 – Green Street – 13.76 Acres	Limited access/frontage, sewer is not available and falls outside "Needs Area". Site just meets size requirements
06 – Green Street – 71.76 Acres	Severe topography and wetland/water features are present. The property is a farm and Wheelabrator has right of first refusal to purchase the land.
12-13 – 384-386 South Street – 60.89 Acres	Low sloping site with wetland features dividing it into two separate areas that appear to be large enough for development. Ample frontage and direct access to two major routes.
14 – Walnut Street – 24.7 Acres	Site is relatively flat in the front and steep at the rear. Located on a residential scale road. No sewer available and site is outside of "Needs Area". Appears to be an active farm.

15 – Cherry Street – 22.0 Acres	Narrow site that is steep sloping with electrical transmission wires running through it
17 – Main Street – 17.11 Acres	Site has extreme topography and a large wetland/water feature. There are also electrical transmission wires that run through the middle of the site.
18 – Lake Street – 9.3 Acres	Not large enough by itself to satisfy the program. Located off a residential scale road. No sewer available and site is outside of "Needs Area"
19 – Lake Street – 27.8 Acres	Narrow long site with limited frontage on a residential scale road. No sewer available and site is outside of "Needs Area"
20 – Rockwell Drive – 7.97 Acres	Not large enough to meet the program and has very limited frontage on public way that is part of a residential development. There is also a small wetland feature.
21 – Farmington Drive – 5.89 Acres	Site has extreme topography is and not large enough to meet the program. Frontage is on the end of a cul-de-sac.
22 – Florence Street – 14.27 Acres	Site is located adjacent to one of the other Town's elementary schools. It has significant water frontage and electrical transmission wires running through it.
23 – Holden Street – 113.1 Acres	Very flat parcel home to an active sand and gravel company. The City of Worcester has a public well with a Zone-1located on the property along with additional back-up locations. There is no sewer at the site currently and the local pump station would need to be improved/replaced in order to develop site.
24 – Holden Street – 88.65 Acres	Very flat parcel on the edge of town. Some wetlands/water features present. Shrewsbury has a public well with a Zone-1 located on the property. There is no sewer at the site currently and the local pump station would need to be improved/replaced in order to develop site.
25 – Main Street – 74.92 Acres	Limited developable areas due to wetland/water features. Frontage on Main Street at very steep portion of the road and adjacent to a private high school.
26 – Main Street – 20.55 Acres	Narrow site with significant but not extreme changes in topography from front to back of site.
27 – Walnut Street – 45.15 Acres	Relatively flat on the western side and becomes very steep on the eastern side. Wetlands/water Features divide the site in half. Located off a residential scale road. Appears to be an active farm.
28 – N. Quinsigamond Avenue – 4.84 Acres	Small town owned parcel adjacent to a larger parcel that is also being considered for development. Site has significant changes in topography. Not larger enough to meet the program on its own.
29 – 334 South Street – 42.44 Acres	Site is comprised of two separate parcel divided by South St. Relatively flat with the exception of a small portion. Site is home to a large laboratory complex and is a significant source of revenue for the town through commercial taxes.
30 – Hartford Turnpike – 56.57 Acres	Good portion of the site is flat. Wetland/water features are present. Town recently approved the site for a mixed use

	development. Commercial tax base for future development could be significant. Sewer would need to be extended along with the addition of a new municipal pump station.
31 – Oak Street – 9.7 Acres	Not large enough to meet the program.

REVIEWED SITES	REVIEW NOTES – VIABLE PARCELS SELECTED FOR REVIEW
03 – Prospect Street – 70.71 Acres	Good access to major routes, Route 70 & Prospect Street. Large low sloping area available for development. Wetland impact minimal.
07 – Main Street – 51.71 Acres	Low sloping site with limited wetland features. Access to two major routes. There is enough open space on the land and would not need to acquire building. Adjacent town land at 248 N. Quinsigamond to be considered along with this parcel as one site.
08 – Maple Avenue – 19.7 Acres	Very flat site with significant frontage on a major route. Currently used as play fields for the town. The frontage and access points on Maple Ave make it a strong candidate for consideration along with the adjacent land at 200 Maple Ave.
09-10 – Lake Street – 98.97 Acres	West parcel is low sloping. East parcel has significant changes in topography. Ample space for development and good access to major routes.
11 – Grafton Street – 29.7 Acres	Direct access to major route. Limited wetland/water features. Ample room for development. Access is limited due to changes in topography.
12-13 – 384-386 South Street – 60.89 Acres	Low sloping site with wetland features dividing it into two separate areas that appear to be large enough for development. Ample frontage and direct access to two major routes.
16 – Maple Avenue – 42.15 Acres	Fairly flat with ample open space for development of a school. Direct access to both Main Street & Maple Ave. Located adjacent to town owned land that currently houses their playing fields. Development should be in conjunction with adjacent town owned land
28 – N. Quinsigamond Avenue – 4.84 Acres	Small town owned parcel adjacent to a larger parcel that is also being considered for development. Site has significant changes in topography. Not larger enough to meet the program on its own should be considered for development in conjunction with the adjacent open space located on the 192 Main Street parcel.

Site Evaluation Process: As part of the Feasibility Study scope of work, LPA was tasked with evaluating, in addition to the existing Beal Early Childhood Center site, other sites to determine their suitability for a New Construction option. The six proposed sites were assessed and ranked based on different criteria, which were established, and given ratings. Refer to the following pages for site evaluations of those alternate sites.

Information was gathered from a variety of sources including site visits, previous studies and surveys, online mapping (topography, wetlands, soils, etc.), and the observations and experience of the design team. The criteria established for preliminary site analysis can be described as follows:

COMPARISON CRITERIA

- **Geographical Location:** The town is considering a K-4 grade configuration for the new school. Redistricting of the elementary schools will be required no matter where the school is sited. Sites that are located further away from other existing elementary school will be considered more advantageous than those located closer. The town has a desire to ensure the distribution of the schools is equitable.

- **Zoning & Adjacent Land Uses:** Proposed sites are rated according to the current uses of the subject parcel as well as adjacent properties. Compatible uses for a School include residential, business and publicly owned open space (i.e. parks, recreation fields, etc.). Town Zoning maps were utilized to identify each sites classified use along with adjacent parcels. The town in recent years has made efforts to maintain and bolster their commercial tax base and would careful weigh the impact of losing any land designated as such. Adjacent land uses are taken into consideration since they could have a negative or positive impact on the development of a particular site for a school.

- **Property Configuration, Size, & Buildable Area:** Based on the calculated area requirements for the building footprint, driveways, parking areas, play areas and other outdoor amenities; we estimate that the project requires a site with at least (12-14) developable acres. The shape of a parcel of land may also make one site more desirable than another; for instance, a parcel with an irregular configuration will be less efficient and more costly to develop than one that is square or rectangular. A larger and simpler lot configuration is better.

- **Topography:** Slope is measured as a percentage of vertical rise in elevation divided by horizontal distance. Slopes greater than 15% are considered excessive and will directly impact building design and site development costs, as retaining walls and stepped foundations become a necessity and earthwork quantities increase. Exposure of slopes to solar gain, weather, and prevailing winds are also taken into account for each site studied.

- **Environmental Resources and Hydrology**: The presence of wetland resource areas, intermittent streams, endangered species, hazardous materials [underground], and other permitting/regulatory issues have the potential to impact schedules, costs [testing, design and construction] and amount of useable site.

- **Soils and Geologic Factors:** On-site soils are rated according to reports and mapping published by the U.S. Department of Agriculture and State of Massachusetts. Soil limitations include poor drainage, ponding, presence of stones/cobbles, shallow depth to bedrock, and urban soil types that have been altered and/or filled. Impact due to soil type ranges from slight to severe and can significantly affect construction costs. While available information can provide a general sense of soil type, additional geotechnical exploration and testing is highly recommended prior to completion of the design phase.

- **Utility Availability**: Availability of utilities, including public sewer, water, electrical power and natural gas, determine this criterion. Proposed sites may require utility infrastructure upgrades or longer utility runs (due to lot configuration); these sites received lower marks. A site closer to primary available utility service is better.

- **Access Potential/Traffic, Pedestrian/Vehicular:** Access to each site is given a value based on a combination of factors including vehicular and pedestrian access. First, vehicular access considers a site's proximity to major traffic arteries (as opposed to narrower secondary streets). Safe vehicular entry and exit to and from the site, as well as associated sightlines and peak traffic flows, are also rated. Second, pedestrian access considers availability of sidewalks, crosswalks, signals and any other factors that might affect pedestrian use of each site.

- **Existing Development, Buildings and Site:** Proposed sites are rated according to the level of existing site improvements [fields, buildings, parking lots, etc.] and whether or not these improvements are betterment [play fields, entrance drives, etc.] to the redevelopment of the site for a school or are a hindrance [demolition of existing features, hazardous material remediation, etc.]

- **Easements and Other Property Limitations:** Examples of limitations that can impact a site's development include overhead power lines, underground utility easements, access right-or-ways, and agricultural land use.

- **Acquisition Cost/Site development Cost**: Cost of land acquisition or purchase of adjacent land is to be factored in this category, if a Town owned parcel can be developed at a high cost due to relocation costs, high development costs verses a site that can be purchased with higher purchase cost verses lower development cost. Consideration also to be factored in if the adjacent land can be either purchased to fulfill the program needs, or the ability to obtain easements for grading onto adjacent property, eliminating expensive retaining walls.

- **General Comment:** Any items particular to the noted sites that is not covered in the above criteria, or factors worthy of note and additional points, or negative points.

Each of the above criteria was assigned, for all proposed sites, a numerical ranking between 0 and 5 and based on the Site Evaluations that follow in this section. A ranking of 0 is non-responsive, 1 is least advantageous; a ranking of 5 is most advantageous. The sum of the criteria represents the score for that particular site; again, a higher score represents that a site can be more easily, and cost-effectively, developed. Refer to notes and table for the alternate sites, summary table of the rankings is indicated below.

Site	Criteria Point Total	Ranking
Prospect Park Property – 65 Prospect Street	36	3
USPS Sorting Facility – 192 Main St & 248 N. Quinsigamond Ave.	31	6
Maple Ave Fields & UMass Property – 150 & 200 Maple Ave.	43	1
Glavin Center Property – 214 Lake Street	38	2
Camp Winnegan Property – 645 Grafton Street	35	4
Allen Farm Property – 384-386 South Street	34	5

After presentations to the School Building Committee and public hearings were held on the above findings, the School Building Committee requested that LPA and their consulting engineers proceed forward with the following three sites: Glavin Center, Camp Winnegan, and Allen Farm. At the same time, the town will review the procedures required to develop each property as a school. During the town's review of the procedures for acquisition and development they realized, that the based on recent case law and the procedures/controls of Article 97, Camp Winnegan should not be considered a viable alternative site. This was largely due to the meeting the overall project schedule and the required land needed for a land swap. This left the team with two alternative sites for review and development of preliminary site development options. The results of those efforts are included in this section.

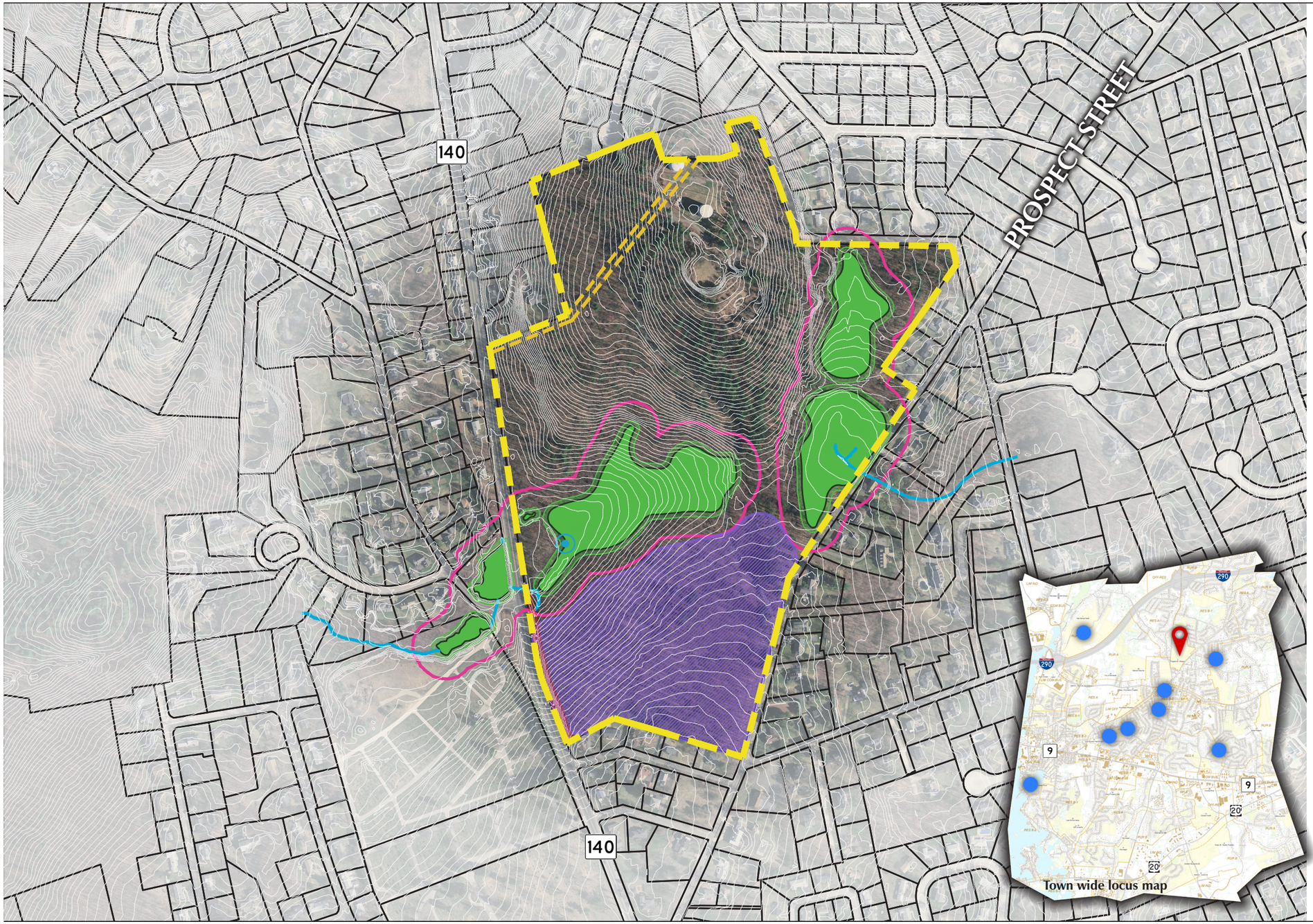
PROSPECT PARK PROPERTY		

CRITERIA		
GENERAL INFORMATION		
Property Information	65 Prospect Street	
COMPARISON RATING	**SCORE 0 to 5 (0 being not responsive, 1 least advantageous, 5 most advantageous)**	
Geographical Location	Centrally located; Less than a half mile from the intersection of Main Street and Route 140. Nearest adjacent elementary schools are Walter J. Paton [±0.6 miles] and Spring Street [±1mile], and Floral Street [±2.1 miles]	2
Zoning & Adjacent Land Uses	The parcel is zoned "Residence A". Immediate adjacent parcels to the East, South, and Southwest are also "Residence B-1". To the West and Northwest the parcels are "Residence A"	4
Property Configuration, Size, Buildable Area	Site is 70.71 acres in total. The property consists of two separate parcels; the parcel being considered for development is located between Prospect & Route 140, and the other parcel is quite small and covered by wetlands. There are ±16.5 buildable acres at the southwest corner of the larger parcel.	4
Topography	Site is a large sloping hill. The area being considered as developable has slopes in the range of ±2% to 10%.	3
Environmental Resources and Hydrology	There are wetland areas on the property that produce small streams. There is also a Potential vernal pool located on the site. The impact of these features on the development of the site will be limited.	3
Soils and Geologic Factors	The developable area consists of Woodbridge fine sandy loam, Paxton fine sandy loam [moderately to well drained loamy soils formed in lodgment till that are very deep to bedrock and moderately deep to a densic contact], and some Ridgebury fine sandy loam [hydric].	3
Utility Availability	There is adequate water, sewer, fiber, and electricity available. There is a 4" intermediate pressure gas main at the street.	5
Access, Potential-Traffic Pedestrian & Vehicular	The site could be accessed on both Prospect Street and Route 140. The amount of traffic coming to the site through intersection of Main Street & Route 140 could have a significant impact on an already congested area. There are sidewalks along both sides of Route 140 but none along Prospect Street.	2

PROSPECT PARK PROPERTY

CRITERIA		
Existing Development, Building and Site	There are municipal water towers located on the northern portion of the site at the top of the hill. The parcel is also home to several nature trails and remnants of the existing Juniper Hall Mansion. There is a master plan for a cemetery on the parcel.	2
Easements and Other Property Limitations	Before the town acquired the site there was a 30-foot wide water easement held by the Town of Shrewsbury that ran from the water towers to Route 140. There are no restrictions for development of the property as a school.	3
Acquisition Cost	N/A – Town owned land	5
General Comment	The impact of traffic in and around the intersection of Main Street and Route 70 is of particular concern and if this site were to be considered an expansive traffic study would be needed to full understand the impact of developing this site.	
	TOTAL	36

D.2 New Construction on Alternative Site - Prospect Park Property Existing Conditions Site Diagram



Address: 65 Prospect Street

Zoning: Residence A

Size: 70.71 Acres

Utilities: Water, Sewer, Fiber, Electricity & Gas

Acquisition Cost: Town Owned

Developable Area: +/- 16.5 Acres

GENERAL NOTES:

1. Site is no longer in consideration. See E.1 New Construction on Alternative Site Narrative for further information

LEGEND:

- Property line
- Easements
- Wetlands
- Ponds/lakes
- Streams
- 20′ No build around wetlands
- 100′ Buffer around wetlands
- Topography in excess 15%
- Developable area
- Existing K-12 schools
- Site location

NORTH

0′ 125′ 250′ 500′

USPS SORTING FACILITY PROPERTY		

CRITERIA		
GENERAL INFORMATION		
Property Information	192 Main Street & 248 N. Quinsigamond Avenue	
COMPARISON RATING	**SCORE 0 to 5 (0 being not responsive, 1 least advantageous, 5 most advantageous)**	
Geographical Location	Located in the Northwest quadrant of town; Less than a quarter mile from the intersection of Main Street and I-290. Nearest adjacent elementary schools are Walter J Paton and Calvin Coolidge both at ±2 miles away.	3
Zoning & Adjacent Land Uses	The parcels are zoned "Limited Commercial-Business". Immediate adjacent parcels to the Northeast, East, South, and West are "Rural B". To the North the parcels are "Limited Commercial-Business"	2
Property Configuration, Size, Buildable Area	Site is 56.19 acres in total. The site consists of two separate properties, 192 Main St. and 248 N. Quinsigamond. The areas being considered for development are the western portion of the Main St. parcel and all of the N. Quinsigamond Ave. parcel. There are ±19.5 buildable acres between the two properties.	4
Topography	The site is relatively flat where it has been developed. The N. Quinsigamond parcel has some extreme topography [+34% slope]. The area being considered as developable has slopes in the range of ±1% to 8% with a few small instances greater than 15%.	4
Environmental Resources and Hydrology	There are a few small wetland features located on site that appear to be detention/retention ponds. Their impact on the development of the site will be limited. Western portion falls under Zone I&II ground water protection act triggering strict storm water management regs.	3
Soils and Geologic Factors	The developable area consists mostly of gravel pits and a small portion of Hinckley loamy sand [excessively drained].	5
Utility Availability	There is adequate water, fiber, and electricity available. Sewer would require improvements or replacement of the local pump station. There is a 6" intermediate pressure gas main at the street.	2
Access Potential-Traffic Pedestrian & Vehicular	The site has good vehicular access on both N Quinsigamond Avenue and Main Street. The potential impact on local traffic, particularly in the morning, could be significant given the sites close proximity to Interstate 290 on/off ramps. There are no sidewalks on either Main St. or N. Quinsigamond Ave.	3

USPS SORTING FACILITY PROPERTY

CRITERIA		
Existing Development, Building and Site	The Main Street parcel has a ±242,000 sq.ft. mail sorting facility and associated parking located on it. This development takes up ±60% of the site.	3
Easements and Other Property Limitations	Subject to a right of way held by the Connecticut River Transmission Company and New England Power Company. The right of way runs north/south through the western portion of the site.	1
Acquisition Cost	248 N. Quinsigamond Ave. – Town owned land 192 Main St. – Land Assessed at $7,105,300 The process to acquire land from the USPS is unknown at this time.	1
General Comment	The easement that runs through the site will need to be acquired in order for any development to occur on this site. The process for acquisition is also a concern as it could impact the overall schedule.	
	TOTAL	31

D.3 New Construction on Alternative Site - USPS Sorting Facility Property Existing Conditions Site Diagram

Address: 192 Main Street &
248 N. Quinsigamond Ave.

Zoning: Limited Commercial-Business

Size: 56.19 Acres

Utilities: Water, Sewer, Fiber, Electricity & Gas. Local pump station would require improvements or replacement.

Acquisition Cost:
Main Street - TBD
N. Quinsigamond - Town Owned

Developable Area: +/- 19.5 Acres

GENERAL NOTES:

1. Site is no longer in consideration. See E.1 New Construction on Alternative Site Narrative for further information

LEGEND:

- Property line
- Easements
- Wetlands
- Ponds/lakes
- Streams
- 20′ No build around wetlands
- 100′ Buffer around wetlands
- Topography in excess 15%
- Developable area
- Existing K-12 schools
- Site location

NORTH

0′ 125′ 250′ 500′

MAPLE AVE FIELDS & UMASS PROPERTY		

CRITERIA		
GENERAL INFORMATION		
Property Information	150 Maple Avenue & 200 Maple Avenue	
COMPARISON RATING	**SCORE 0 to 5 (0 being not responsive, 1 least advantageous, 5 most advantageous)**	
Geographical Location	Centrally located; Less than a mile from the intersection of Main Street and Route 140. Nearest adjacent elementary schools is Walter J. Paton [±1 mile], Spring Street [±1.7 miles], and Calvin Coolidge [2.6 miles].	3
Zoning & Adjacent Land Uses	The parcels are zoned "Residence A" [150 Maple] and "Limited Office-research" [200 Maple]. Immediate adjacent parcels to the West, North, and Northeast are "Residence A". To the East, South, and Southwest the parcels are "Residence B-2"	4
Property Configuration, Size, Buildable Area	Site is 61.85 acres in total. The site consists of two separate properties, 150 Maple Ave. and 200 Maple Ave. The area being considered for development is the central portion of the 200 Maple Ave. parcel. There is ±22 buildable acres	5
Topography	The site is relatively flat along Maple Avenue and fall off towards the west and south. The area being considered as developable has slopes in the range of ±1% to 11%.	4
Environmental Resources and Hydrology	There is a stream and several wetland features at the Northeast portion of the 200 Maple Ave parcel as it approaches Main Street. These features will have limited impact on development of the site.	4
Soils and Geologic Factors	The developable area consists of Woodbridge fine sandy loam [moderately well drain soil]	4
Utility Availability	There is adequate water, sewer, fiber, and electricity available. There is an 8" intermediate pressure gas main at the street.	5
Access Potential-Traffic Pedestrian & Vehicular	The site has good access on both Maple Avenue and Main Street. The potential impact on local traffic does not appear as though it would be significant given that there is ample room for queuing both on and off the site and the staggered start times of the surrounding schools. Additionally traffic can be dispersed to both Main St and Maple St which are both major routes for the town. There are sidewalks along both sides of Maple Avenue.	4

MAPLE AVE FIELDS & UMASS PROPERTY

CRITERIA		
Existing Development, Building and Site	The 150 Maple Ave parcel is home to several municipal play fields and small parking lots. The 200 Maple Ave parcel has two active office buildings, a large paved parking lot, and several small abandoned out buildings.	4
Easements and Other Property Limitations	UMass holds an easement for use of all existing roadways located on the site until the West Main Street-Maple Avenue Connector Road becomes a "Proposed Right of Way", an easement for the repair, maintenance and replacement of all existing utilities serving the Campus is held by UMass, and a restriction that no structures be built on the Southwest corner of the site in front of the existing buildings. The utilities may be relocated by the Town of Shrewsbury, at its expense. An easement of fifty feet in width adjacent to the easterly sideline of the Proposed Right of Way is Held by the Town until the public way is actually constructed.	4
Acquisition Cost	150 Maple Ave. – Town owned land 200 Maple Ave. – Land Assessed at $747,200 Since the property was purchased "for playground purposes" vote would be required by the town to allocate it for development as a school. The property may also be subject to Article 97 which would require the Town to acquire a parcel of land of similar size "for playground purposes" elsewhere. Town to report back on the process required to acquire land from the owners of 200 Maple Ave.	2
General Comment	The acquisition of the 200 Maple Ave. land is the only criteria that could greatly impact the development of this site as a school. The ancillary benefits of the long planned right of way between Main St and Maple Ave. could also greatly inform this decision.	
	TOTAL	43

D.4 New Construction on Alternative Site - UMASS & Maple Avenue Fields Existing Conditions Site Diagram

Address: 150 Maple Avenue &
200 Maple Avenue

Zoning: 150 Maple Ave. - Residence A
200 Maple Ave. - Office-Research

Size: 61.85 Acres

Utilities: Water, Sewer, Fiber, Electricity & Gas

Acquisition Cost:
150 Maple Avenue - Town Owned
200 Maple Avenue - TBD

Developable Area: +/- 22 Acres

GENERAL NOTES:

1. Site is no longer in consideration. See E.1 New Construction on Alternative Site Narrative for further information

LEGEND:

- Property line
- Easements
- Wetlands
- Ponds/lakes
- Streams
- 20′ No build around wetlands
- 100′ Buffer around wetlands
- Topography in excess 15%
- Developable area
- Existing K-12 schools
- Site location

NORTH

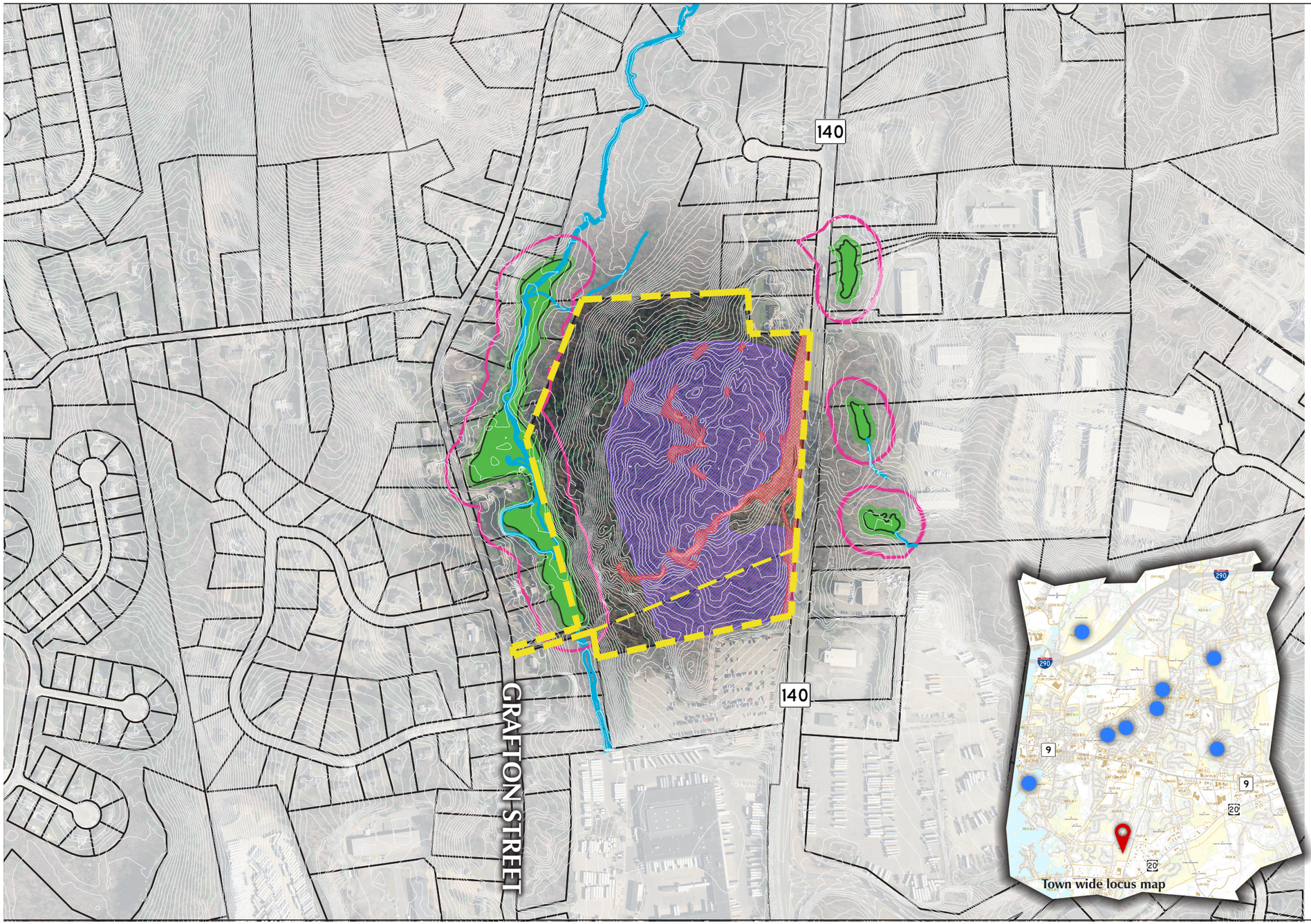
0′ 125′ 250′ 500′

CAMP WINNEGAN PROPERTY		
CRITERIA		
GENERAL INFORMATION		
Property Information	645 Grafton Street [Route 140]	
COMPARISON RATING	SCORE 0 to 5 (0 being not responsive, 1 least advantageous, 5 most advantageous)	
Geographical Location	Located in the Southern portion of town; Less than a half mile from the intersection of Route 140 Street and Route 20. Nearest adjacent elementary schools are Walter J Paton [±2.5 miles], Calvin Coolidge [±2.6 miles], and Floral Street [±3 miles]	5
Zoning & Adjacent Land Uses	The parcel is zoned "Rural B". Immediate adjacent parcels to the East, South, and Southwest are "Limited-Industrial". To the West and North the parcels are "Rural B". To the Northwest the parcels are "Residence A"	4
Property Configuration, Size, Buildable Area	Site is 33.7 acres in total. The site consists of two separate parcels. The area being considered for development is the top of the hill and the Southwest corner. There are ±17.5 buildable acres.	4
Topography	The site is sloping hill that fall off in all direction with some extreme slopes [+28%] along Route 140. The area being considered as developable on the parcel has slopes in the range of ±2% to 15% with several areas in excess to 30%.	2
Environmental Resources and Hydrology	There is a brook and wetlands that run along the western boarder of the site. These features will have limited impact on development of the site with the exception of bringing in utilities from Grafton Street	3
Soils and Geologic Factors	The developable area consists of Chatfield-Hollis-Rock outcrop complex with a small portion of Canton fine sandy loam. The soils are shallow to bedrock.	2
Utility Availability	There is adequate water and electricity available. Sewer would require improvements or replacement of the local pump station. There is a 4" intermediate pressure gas main at the street. Fiber will need to be brought a significant distance to service this site.	2
Access Potential-Traffic Pedestrian & Vehicular	Site has ample frontage along Route 140 however access is limited due to changes in topography. There is also a small amount of frontage along Grafton St. but access would require a wetlands crossing. The potential impact on local traffic would be marginal given there is ample room for queuing on and off the site.	3

CAMP WINNEGAN PROPERTY

CRITERIA		
	Additionally the site has quick access to Routes 9 & 20 via Route 140 which will help in dispersion of traffic. There are no sidewalks along Route 140 however there are some sidewalks along the neighboring streets off Grafton Street.	
Existing Development, Building and Site	There is a small abandoned structure on the site that was once used when the site was a functioning as Camp Winnegan. There are some trails that are still used by residents also present on the site.	3
Easements and Other Property Limitations	The property was granted to the Town of Shrewsbury through its Conservation Commission for administration, control and maintenance under the provisions of MGL. Chapter 40, Sec, 8c. Town to report back on any restrictions. Since the property is under the care and control of the Conservation Commission a vote would be required by the Town to allocate it for development as a school. The property would also be subject to Article 97 which would require the Town to acquire a parcel of land similar size elsewhere that would be under the care & control of the Conservation Commission	2
Acquisition Cost	N/A – Town owned land	5
General Comment	The development of this site would require a land swap to maintain the same level of "open space/conservation" land. The town could utilize some of the existing parcels currently under their ownership by voting to designate them for this purpose.	
	TOTAL	35

D.5 New Construction on Alternative Site - Camp Winnegan Property Existing Conditions Site Diagram



Address: 645 Grafton Street

Zoning: Rural B

Size: 33.7 Acres

Utilities: Water, Electricity, & Gas. Local pump station would require improvements or replacement.

Acquisition Cost: Town Owned

Developable Area: +/- 17.5 Acres

GENERAL NOTES:

1. Site is no longer in consideration. See E.1 New Construction on Alternative Site Narrative for further information

LEGEND:

- Property line
- Easements
- Wetlands
- Ponds/lakes
- Streams
- 20′ No build around wetlands
- 100′ Buffer around wetlands
- Topography in excess 15%
- Developable area
- Existing K-12 schools
- Site location

NORTH

0′ 125′ 250′ 500′

DESCRIPTION: The Glavin Center site would require demolition of the existing campus of institutional buildings on the site followed by new construction of the elementary school and associated site features. Since the buildings would be abandoned prior to construction, there would be no significant phasing or contractor isolation requirements for the project. To best facilitate the access to the site, some modifications of Lake Street are recommended. Two options for site placement are shown on the associated option diagrams, but both have about the same impact on the construction budget.

- **New Construction = ± 142,000 GSF**
- **Demolition (existing building) = +/- 100,000 GSF**

NEW CONSTRUCTION SCOPE OF WORK:

General:

- Demolition and hazardous material abatement of the existing campus of buildings would be followed by construction of the new 2 story facility.

Site

Provide full site accessibility to comply with 521 CMR including:

  - Provide an accessible route, via new sidewalks and curb cuts, from Lake Street to the Main Entry
  - Provide accessible route to all tot lots and play areas
  - Provide new signed accessible parking spaces, including at least one van-accessible space, distributed throughout the site
- Provide new parking areas, sidewalks, driveways, bus and parent drop-off/pick-up areas, service/receiving areas, fenced playground areas, and other required areas throughout including all associated earthwork and infrastructure
- Provide new MA-DEP-compliant storm water management infrastructure throughout
- Provide new exterior lighting throughout
- Provide exterior wayfinding and directional signage
- Update site utilities for Fire Protection, Plumbing, Natural Gas and Electrical/Data systems throughout
- Provide new landscaping throughout
- Demolish existing site amenities as required for new construction

Building Exterior/Interior:

- Provide new construction as follows
  - Exterior walls: Rain screen system including metal stud back-up walls, glass fiber reinforced gypsum board, self-adhered air/vapor barrier (AVB), AVB transitions to window/door openings and roof systems, rigid insulation, thermally broken standoff clips, metal furring, joint sealants and masonry or metal wall panel system
  - Roofing: Adhered PVC roofing system throughout, including all membrane/flashing, roof edging, sheet metal work, insulation, roof vapor barrier, wood blocking and other roof accessories (ladders, hatches, etc.) as required
  - Windows, Storefront and Curtainwall: Thermally broken aluminum systems, including high performance insulating glass, perimeter joint sealants, insulated panels, screens, operable hardware, sheet metal work, air/vapor barrier (AVB) transitions, solar shading devices, window treatments and other accessories as required
  - Interior partitions: Metal stud and Gypsum Wall Board (GWB) assemblies as required for structural and acoustical requirements.
  - Doors, Frames and Hardware: Hollow metal and solid-core wood veneer doors; custom welded steel frames and borrowed lites; and lever type mortise hardware, electrified at exterior entries
  - Millwork/Casework:
    - Classroom units with storage shelving, tall wardrobe and material storage units, and lockable low storage cabinets
    - Custom cabinetry at main Administrative offices, Media Center, Cafeteria and other locations as required
  - Finishes:
    - Corridors, Stairs and Cafeteria: Linoleum flooring and resilient base, resilient stair treads, ceramic wall tile to 5' with painted GWB above, ACT
    - Classrooms: Linoleum flooring, resilient base, painted GWB, ACT
    - Kitchen: Quarry tile, FRP wall paneling, washable ceiling tile system
    - Administrative Offices and Media Center: Carpet flooring, resilient base, painted GWB, ACT
    - Gymnasium: Resilient tongue and groove maple flooring system (competition court), synthetic resilient composite athletic flooring system (track), resilient base, painted

CMU to 12' with abuse-resistant GWB above, wall padding, acoustical wall panels, painted acoustical cellular roof deck

- Provide Food Service equipment at Kitchen

Fixtures, Furnishings & Equipment (FF&E)/Technology (Project Budget Items):

- Provide new FF&E throughout including furnishings, equipment, maintenance items, etc. Provide new Technology throughout including student/teacher computers, laptop carts, interactive projectors, servers, etc.

Hazardous Materials:

- Abate entire existing building complex prior to demolition

Structural:

- Provide concrete foundations, steel framing, deck and accessories at new construction as required

Fire Protection:

- Provide automatic fire sprinkler system throughout
- Provide miscellaneous Fire Protection items as required

Plumbing:

- Provide plumbing fixtures
- Provide domestic hot water (HW) heating system
- Provide overflow roof drainage system
- Provide domestic water distribution system
- Provide above and below-grade sanitary waste and vent system
- Provide above and below-grade storm drainage system
- Provide sand/gas trap system as required
- Provide miscellaneous Plumbing items as required

HVAC:

- Provide Energy Management System (EMS) control system
- Provide gas-fired high-efficiency condensing boiler plant

- Provide 2-pipe Hot Water (HW) hydronic distribution piping and equipment (pumps, coils, fan coil units, finned tube radiation, unit heaters, etc.)
- Provide packaged rooftop air handling units for 100% air-conditioned cooling and ventilation
- Provide ductless split systems at new Data Rooms
- Provide Kitchen ventilation systems
- Provide HVAC duct system including all diffusers, grilles, insulation, hangers, etc.
- Provide miscellaneous HVAC items as required

Electrical:

- Provide main electrical service, switchgear and distribution including new branch panels
- Provide exterior emergency/standby generator
- Provide emergency/egress lighting fixtures
- Provide lighting fixtures with LED lamps and daylighting control system
- Provide addressable Fire Alarm (FA) system
- Provide public safety radio Distributed Antenna System (DAS)
- Provide Data/Communications cabling infrastructure
- Provide wired and wireless data communications equipment
- Provide VOIP telephone system
- Provide public address and clock systems
- Provide local sound systems at Classrooms, Auditorium, Cafeteria, Media Center, and Gymnasium
- Provide video surveillance, access control and intrusion detection systems
- Provide lightning protection system
- Provide miscellaneous Electrical items as required

DEGREE OF EDUCATIONAL PROGRAM/SPACE SUMMARY FULFILLMENT: The New Construction Option has the potential to meet most, if not all, Educational Program/Space Summary and site program objectives.

Efficiency: The expansive space available on site gives great opportunities to develop a highly efficient plan without significant encumbrances

Adjacencies: It is expected that the majority of desired adjacencies could be incorporated.

Code: The option could be developed to meet code in all respects.

Sustainability: The site and building for the Glavin Center option present many opportunities to incorporate sustainable design elements including energy efficient construction and building systems, alternative energy sources, recycled and locally sourced materials, low water usage, and educational displays.

IMPACT OF CONSTRUCTION PHASING: Since the site would be unoccupied during construction, construction phasing would not be a consideration. Additionally, since there is no existing school on the site, the District could continue to run uninterrupted status quo until the new school was ready for occupancy. Due to the demolition of the existing buildings on site prior to construction, a 2 year construction period would be recommended.

The existing athletic fields and associated parking areas are sufficiently segregated from the proposed construction site to be easily fenced off from construction to remain open and operational for the community.

GLAVIN CENTER PROPERTY		

CRITERIA		
GENERAL INFORMATION		
Property Information	214 Lake Street	
COMPARISON RATING	**SCORE 0 to 5 (0 being not responsive, 1 least advantageous, 5 most advantageous)**	
Geographical Location	Centrally located; Less than a quarter mile from the intersection of Lake Street and Route 9. Nearest adjacent elementary schools are Walter J Paton [±1.5 miles], Floral Street [±2.4 miles], and Calvin Coolidge [±2.9 miles]	4
Zoning & Adjacent Land Uses	The parcels is zoned "Limited Commercial-Business" [Northern portion] and "Rural AA" [Southern portion]. Immediate adjacent parcels to the West and Southwest are "Residence B-1". To the South, Southeast and the East the parcels are "Residence A". To the north the parcels are mostly "Commercial Business" with a small portion of "Residence B-1" along Lake Street.	4
Property Configuration, Size, Buildable Area	Site is 98.87 acres in total. The property consists of two separate parcels that are separated by Lake Street, the Western parcel contains ±32 acres and the Eastern parcel contains ±53 acres. The areas being considered for development are the Northern portion of the Western parcel. There are ±16.5 buildable acres.	4
Topography	East Parcel is low sloping with the exception of a few areas along the northern property line and grade coming off of Lake Street. The area being considered as developable on the East parcel has slopes in the range of ±1% to 10%. West parcel has significant topography but enough low sloping area for development of a new school. The area being considered as developable on the West parcel has slopes in the range of ±1% to 10% with a few areas small areas close to 15%.	3
Environmental Resources and Hydrology	A stream runs through the eastern extents of east parcel and there is a large wetland associated with this same area. These features have no bearing on development of the site due to their location.	5
Soils and Geologic Factors	The developable area consists of Paxton fine sandy loam. These soils are very well drained loamy soil and deep to bedrock	4
Utility Availability	There is adequate water, sewer, fiber, and electricity available. There is a 2" intermediate pressure gas main at the street.	5

GLAVIN CENTER PROPERTY

CRITERIA		
Access Potential-Traffic Pedestrian & Vehicular	Site has ample frontage along Lake Street. The potential impact on local traffic would be marginal given there is ample room for queuing both on and off the site. Additionally the dispersion of traffic at the intersection of Route 9 and Lake St. would be significant. There are no sidewalks along Lake Street. Lake St. begins to narrow the further South from Route 9 its gets and may requiring widening.	3
Existing Development, Building and Site	Existing 90,000 GSF of buildings, large parking lot and playfields along with commercial and residential neighborhoods surrounding site.	1
Easements and Other Property Limitations	No easements on site. The parcel to the east of Lake Street is designated for use as "recreation" under the lease agreement with the state; it is also actively farmed. The southern portion of the western parcel is also designated for use as "recreation" under the same lease agreement. There appears to be no restrictions on the portion being considered for development.	4
Acquisition Cost	Property is appraised at $18,192,200 for both land and buildings. Special legislation will be needed for the State to convey the property to the Town.	3
General Comment	The only portion of the site that is readily available for development is the area occupied by the existing buildings, parking lots, and the two baseball/softball fields. All other portions would require at a minimum votes both at the municipal and state level to modify designated use and could trigger additional requirements for land swaps and environmental review.	
	TOTAL	40

D.6 New Construction on Alternative Site - Glavin Center Property Existing Conditions Site Diagram

Address: 214 Lake Street

Zoning: Limited Commercial Business (Northern Portion)
Rural AA (Southern Portion)

Size: 98.87 Acres

Utilities: Water, Sewer, Fiber, Electricity & Gas

Acquisition Cost: TBD

Developable Area: +/- 16.5 Acres

LEGEND:

- Property line
- Easements
- Wetlands
- Ponds/lakes
- Streams
- 20′ No build around wetlands
- 100′ Buffer around wetlands
- Topography in excess 15%
- Developable area
- Existing K-12 schools
- Site location

NORTH

0′ 125′ 250′ 500′

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

FEASIBILITY STUDY

3.1.6 PRELIMINARY EVALUATION OF ALTERNATIVE SITES

D.6 New Construction on Alternative Site - Glavin Center Property Site Diagram Option - I

ITEM	DESCRIPTION
A	Potential parent drop-off/pick-up (120 cars)
B	Potential location of blacktop play area/overflow parking (50 spots)
C	Potential location of tot lots/play field (2 tot lots at 12,800 SF & play field at 23,000 SF)
D	Potential location of building (2 story 146,200 GSF)
E	Potential location of parallel parking (75 spots)
F	Emergency access around building
G	Main site entrance
H	Potential location of parking (225 spots)
I	Potential bus drop-off/pick-up (15 buses; 12 full & 3 half size)

GENERAL NOTES:

1. Existing buildings shown dashed to be demolished (+/- 100,000 SF)
2. Existing town maintained athletic fields and associated parking on southern portion of site to remain

LEGEND:

- Property line
- Easements
- Wetlands
- Ponds/lakes
- Streams
- 20′ No build around wetlands
- 100′ Buffer around wetlands
- Topography in excess 15%
- Developable area
- Existing K-12 schools
- Site location

NORTH

0′ 125′ 250′ 500′

ITEM	DESCRIPTION
A	Potential parent drop-off/pick-up (120 cars)
B	Potential location of tot lots/play field (2 tot lots at 12,800 SF & play field at 23,000 SF)
C	Potential location of parallel parking (50 spots)
D	Potential location of building (2 story 146,200 GSF)
E	Potential location of blacktop play area/overflow parking (100 spots)
F	Emergency access around building
G	Main site entrance
H	Potential location of parking (200 spots)
I	Potential bus drop-off/pick-up (15 buses; 12 full & 3 half size)

GENERAL NOTES:

1. Existing buildings shown dashed to be demolished (+/- 100,000 SF)
2. Existing town maintained athletic fields and associated parking on southern portion of site to remain

LEGEND:

- Property line
- Easements
- Wetlands
- Ponds/lakes
- Streams
- 20′ No build around wetlands
- 100′ Buffer around wetlands
- Topography in excess 15%
- Developable area
- Existing K-12 schools
- Site location

NORTH

0′ 125′ 250′ 500′

DESCRIPTION: The Allen Farm north option would include new construction of the elementary school and associated site features with the main access from South Street and emergency access from Route 20. Currently owned by the town, the site is unoccupied. The development of the north portion of the site would allow for future development on the southern portion of the site. Characterized by significant wetland features, the proposed option is carefully positioned to minimize impact on the associated buffer zones.

- **New Construction = ± 142,000 GSF**

NEW CONSTRUCTION SCOPE OF WORK:

General:

- With the exception of an agricultural barn on the site and wetlands protection, there are few, if any, preconstruction activities required for construction.

Site

Provide full site accessibility to comply with 521 CMR including:

  - Provide an accessible route, via new sidewalks and curb cuts, from South Street to the Main Entry
  - Provide accessible route to all tot lots and play areas
  - Provide new signed accessible parking spaces, including at least one van-accessible space, distributed throughout the site
- Provide new parking areas, sidewalks, driveways, bus and parent drop-off/pick-up areas, service/receiving areas, fenced playground areas, and other required areas throughout including all associated earthwork and infrastructure
- Provide new MA-DEP-compliant storm water management infrastructure throughout
- Provide wetlands protection as dictated by regulatory authorities
- Provide wetlands vehicular crossing
- Provide new exterior lighting throughout
- Provide exterior wayfinding and directional signage
- Provide site utilities for Fire Protection, Plumbing, Natural Gas and Electrical/Data systems throughout
- Provide new landscaping throughout
- Demolish existing site amenities as required for new construction

Building Exterior/Interior:

- Provide new construction as follows
  - Exterior walls: Rainscreen system including metal stud back-up walls, glass fiber reinforced gypsum board, self-adhered air/vapor barrier (AVB), AVB transitions to window/door openings and roof systems, rigid insulation, thermally broken standoff clips, metal furring, joint sealants and masonry or metal wall panel system
  - Roofing: Adhered PVC roofing system throughout, including all membrane/flashing, roof edging, sheet metal work, insulation, roof vapor barrier, wood blocking and other roof accessories (ladders, hatches, etc.) as required
  - Windows, Storefront and Curtainwall: Thermally broken aluminum systems, including high performance insulating glass, perimeter joint sealants, insulated panels, screens, operable hardware, sheet metal work, air/vapor barrier (AVB) transitions, solar shading devices, window treatments and other accessories as required
  - Interior partitions: Metal stud and Gypsum Wall Board (GWB) assemblies as required for structural and acoustical requirements.
  - Doors, Frames and Hardware: Hollow metal and solid-core wood veneer doors; custom welded steel frames and borrowed lites; and lever type mortise hardware, electrified at exterior entries
  - Millwork/Casework:
    - Classroom units with storage shelving, tall wardrobe and material storage units, and lockable low storage cabinets
    - Custom cabinetry at main Administrative offices, Media Center, Cafeteria and other locations as required
  - Finishes:
    - Corridors, Stairs and Cafeteria: Linoleum flooring and resilient base, resilient stair treads, ceramic wall tile to 5′ with painted GWB above, ACT
    - Classrooms: Linoleum flooring, resilient base, painted GWB, ACT
    - Kitchen: Quarry tile, FRP wall paneling, washable ceiling tile system
    - Administrative Offices and Media Center: Carpet flooring, resilient base, painted GWB, ACT
    - Gymnasium: Resilient tongue and groove maple flooring system. resilient base, wall padding, acoustical wall panels, painted acoustical cellular roof deck

- Provide Food Service equipment at Kitchen

Fixtures, Furnishings & Equipment (FF&E)/Technology (Project Budget Items):

- Provide new FF&E throughout including furnishings, equipment, maintenance items, etc. Provide new Technology throughout including student/teacher computers, laptop carts, interactive projectors, servers, etc.

Hazardous Materials:

- It is assumed that no hazardous materials are present

Structural:

- Provide concrete foundations, steel framing, deck and accessories at new construction as required

Fire Protection:

- Provide automatic fire sprinkler system throughout
- Provide miscellaneous Fire Protection items as required

Plumbing:

- Provide plumbing fixtures
- Provide domestic hot water (HW) heating system
- Provide overflow roof drainage system
- Provide domestic water distribution system
- Provide above and below-grade sanitary waste and vent system
- Provide above and below-grade storm drainage system
- Provide sand/gas trap system as required
- Provide miscellaneous Plumbing items as required

HVAC:

- Provide Energy Management System (EMS) control system
- Provide gas-fired high-efficiency condensing boiler plant
- Provide 2-pipe Hot Water (HW) hydronic distribution piping and equipment (pumps, coils, fan coil units, finned tube radiation, unit heaters, etc.)
- Provide packaged rooftop air handling units for 100% air-conditioned cooling and ventilation

- Provide ductless split systems at new Data Rooms
- Provide Kitchen ventilation systems
- Provide HVAC duct system including all diffusers, grilles, insulation, hangers, etc.
- Provide miscellaneous HVAC items as required

Electrical:

- Provide main electrical service, switchgear and distribution including new branch panels
- Provide exterior emergency/standby generator
- Provide emergency/egress lighting fixtures
- Provide lighting fixtures with LED lamps and daylighting control system
- Provide addressable Fire Alarm (FA) system
- Provide public safety radio Distributed Antenna System (DAS)
- Provide Data/Communications cabling infrastructure
- Provide wired and wireless data communications equipment
- Provide VOIP telephone system
- Provide public address and clock systems
- Provide local sound systems at Classrooms, Auditorium, Cafeteria, Media Center, and Gymnasium
- Provide video surveillance, access control and intrusion detection systems
- Provide lightning protection system
- Provide miscellaneous Electrical items as required

DEGREE OF EDUCATIONAL PROGRAM/SPACE SUMMARY FULFILLMENT: The New Construction Option has the potential to meet most, if not all, Educational Program/Space Summary. For the site program, the parent pick up queue would be about 2/3 achieved and the parking would be only be fully achieved by use of the paved play area during peak parking demand.

Efficiency: The space available on site gives ample opportunities to develop an efficient plan without significant encumbrances

Adjacencies: It is expected that the majority of desired adjacencies could be incorporated.

Code: The option could be developed to meet code in all respects.

Sustainability: The site and building for the Allen Farm north option present many opportunities to incorporate sustainable design elements including energy efficient construction and building systems, alternative energy sources, recycled and locally sourced materials, low water usage, and educational displays.

IMPACT OF CONSTRUCTION PHASING: Since the site would be unoccupied during construction, construction phasing would not be a consideration. Additionally, since there is no existing school on the site, the District could continue to run uninterrupted status quo until the new school was ready for occupancy. An 18 – 24month construction period would be recommended.

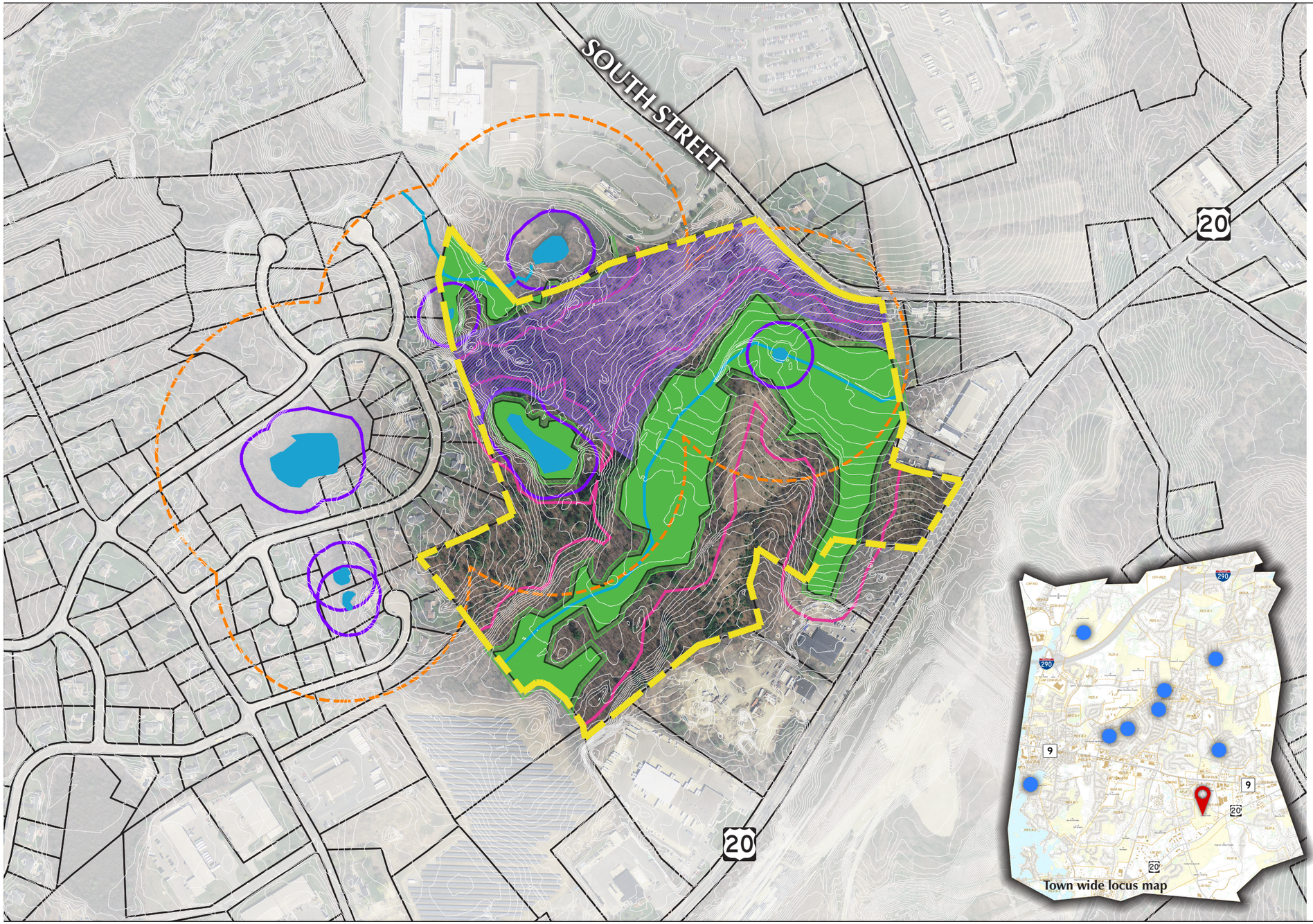
ALLEN FARM PROPERTY

CRITERIA		
GENERAL INFORMATION		
Property Information	384-386 South Street	
COMPARISON RATING	**SCORE 0 to 5 (0 being not responsive, 1 least advantageous, 5 most advantageous)**	
Geographical Location	Located in the Southeast quadrant of town at the intersection of South Street and Route 20. Nearest adjacent elementary schools are Floral Street [±1.2 miles], Walter J Paton [±2.2 miles], and Spring Street [±2.8 Miles]	4
Zoning & Adjacent Land Uses	The parcels are zoned "Office-Research". Immediate adjacent parcels to the North and Northeast are also "Office-Research". To the East, South, and Southwest the parcels are "Limited-Industrial". To the East the parcels are "Rural B".	2
Property Configuration, Size, Buildable Area	Site is 60.89 Acres. The property originally consisted of two separate parcels that are now both under the ownership of the town. The areas being considered for development are the Northern and Southern portions of the parcel as defined by the wetlands/water features. The northern portion consists of ±12 buildable acres and the southern portion consists of ±9 buildable acres for a total of ±20.5 buildable acres.	2
Topography	The site is overall is low sloping in all directions towards the center of the site. There are two areas being considered as developable on the parcel. Both developable areas under consideration have slopes in the range of ±1% to 10% with a few areas small areas in excess of 15%.	3
Environmental Resources and Hydrology	There is a stream that runs through the site and several significant wetland features. There are two potential vernal pools located along the western portion of the site. The wetlands/water features will have an impact on development of this site.	1
Soils and Geologic Factors	The developable areas consist of Paxton fine sandy loam [moderately to well drained loamy soils formed in lodgment till that are very deep to bedrock and moderately deep to a densic contact], and some Ridgebury fine sandy loam [hydric].	3
Utility Availability	There is adequate water, sewer, fiber, and electricity available. There is an 8" intermediate pressure gas main at the street.	5

ALLEN FARM PROPERTY

CRITERIA		
Access Potential-Traffic Pedestrian & Vehicular	Site has ample frontage along both South St and Route 20. To access the northern portion of the site from Route 20 would require a wetlands crossing. The potential impact on local traffic would be marginal given there is ample room for queuing on and off the site. Additionally the site has quick access to Routes 9 & 20 via South St. which will help in dispersion of traffic. There are no sidewalks along Route 20 however there is a sidewalk along the Western side of South St.	2
Existing Development, Building and Site	The property was once used as an active farm and still has several buildings along South Street.	2
Easements and Other Property Limitations	No easements on site. There are no restrictions for development of the property as a school.	5
Acquisition Cost	N/A – Town owned land	5
General Comment	The developable portion along Route 20 could be subdivided and maintained as a possible commercial tax base allowing the remainder of the site to be designated for development of the new school	
	TOTAL	34

D.7 New Construction on Alternative Site - Allen Farm Property Existing Conditions Site Diagram



Address: 384-386 South Street

Zoning: Office-Research

Size: 60.89 Acres

Utilities: Water, Sewer, Fiber, Electricity & Gas

Acquisition Cost: Town Owned

Developable Area: +/- 16 Acres

LEGEND:

- Property line
- Easements
- Wetlands
- Ponds/lakes
- Streams
- 20′ No build around wetlands
- 100′ Buffer around wetlands
- 100′ Vernal pool envelope
- 500′ Vernal pool critical habitat
- Topography in excess 15%
- Developable area
- Existing K-12 schools
- Site location

NORTH

0′ 125′ 250′ 500′

Beal Early Childhood Center

1 Maple Avenue, Shrewsbury, MA 01545

FEASIBILITY STUDY

3.1.6 PRELIMINARY EVALUATION OF ALTERNATIVE SITES

D.7 New Construction on Alternative Site - Allen Farm Property Site Diagram

ITEM	DESCRIPTION
A	Emergency access around building
B	Potential location of play field (23,000 SF)
C	Potential location of building (2 story 146,200 GSF)
D	Potential location of tot lots (2 at 12,800 SF Each)
E	Potential location of blacktop play area/overflow parking (105 spots)
F	Potential parent drop-off/pick-up (32 cars short)
G	Main site entrance
H	Potential bus drop-off/pick-up (15 buses; 12 full & 3 half size)
I	Potential location of parking (140 spots)

LEGEND:

- Property line
- Easements
- Wetlands
- Ponds/lakes
- Streams
- 20′ No build around wetlands
- 100′ Buffer around wetlands
- 100′ Vernal pool envelope
- 500′ Vernal pool critical habitat
- Topography in excess 15%
- Developable area
- Existing K-12 schools
- Site location

NORTH

0′ 125′ 250′ 500′

3.1.6 PRELIMINARY EVALUATION OF ALTERNATIVES

E. Comparative Cost Analysis

1. Narrative
2. Comparative Cost Analysis

At this preliminary stage of design, order of magnitude comparative construction estimates were based on Gross Square Footage (GSF) of Demolition/Renovation/Addition/New Construction, and associated Sitework and Hazardous Waste Removal costs, as applicable to each Option. Factors for Construction Contingency, General Conditions/Requirements, Bonds/Insurance and Profit were calculated accordingly. A Design Contingency is also included for each option, due to the limited level of detail at this stage of development, and will be reduced incrementally in future cost estimates as the design is refined and more detail becomes available. The project duration for each option is the same with the exception of the Base repair option.

For purposes of this feasibility study, cost estimates have been provide showing two separate delivery methods: Design/Bid/Build – Chapter 149 (D/B/B) and Construction Manager at Risk – Chapter 149A (CM@Risk) for reference. **It should be emphasized that comparative costs are for construction only and exclude other project costs** (i.e. Designer and OPM fees, moving expenses, escalation of non-construction items, legal fees, Owner's project contingency, furnishings/fixtures/equipment, technology/computer equipment, surveys, construction testing, printing, etc.). The Beal project OPM, PMA, recommends including a 20% factor for project costs which is effectively calculated by multiplying the construction budget times 1.25.

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Beal Early Childhood Center
Shrewsbury, MA

January 18, 2018

GRAND SUMMARY

CM - Chptr 149a

BASE REPAIR OPTION	$15,796,149
NEW CONSTRUCTION OPTION - EXISTING SITE	$74,960,080
NEW CONSTRUCTION OPTION - GLAVIN CENTER SITE	$74,153,239
NEW CONSTRUCTION OPTION - ALLEN FARM NORTH SITE	$71,973,036

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STUDY
Beal Early Childhood Center
Shrewsbury, MA

18-Jan-18

Designer: Lamoureux Pagano Architects

BASE REPAIR OPTION

	GSF		COST PER S.F.	**TOTAL**
RENOVATION	33,400	**GSF**	$200.00	**$6,680,000**
HAZARDOUS WASTE REMOVAL				**$310,000**
SITE COST				**$500,000**

TOTAL DIRECT COST				$7,490,000
CM AT RISK CHPTR 149A				
DESIGN CONTINGENCY		15%		$1,123,500
CM CONTINGENCY		3.0%		$258,405
ESCALATION (mid point 2/20)		11.0%		$947,485
GENERAL CONDITIONS (PHASED)	36	MOS	$125,000	$4,500,000
GENERAL REQUIREMENTS/PHASING		5%		$715,970
BUILDING PERMIT		0%		$0
P&P BOND & INSURANCE		2%		$300,707
PROFIT		3%		$460,082

TOTAL CONSTRUCTION COST				$15,796,149
COST PER SF				**$472.94**

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STUDY
Beal Early Childhood Center
Shrewsbury, MA

18-Jan-18

Designer: Lamoureux Pagano Architects

NEW CONSTRUCTION OPTION - EXISTING SITE

	GSF		COST PER S.F.	TOTAL
NEW CONSTRUCTION	150,000	**GSF**	$295.00	**$44,250,000**
DEMOLITION	33,400	**GSF**	$7.00	**$233,800**
HAZARDOUS WASTE REMOVAL				**$310,000**
SITE COST		12%		**$5,375,256**

	TOTAL DIRECT COST			$50,169,056
CM AT RISK CHPTR 149A				
DESIGN CONTINGENCY		15%		$7,525,358
CM CONTINGENCY		3.0%		$1,730,832
ESCALATION (mid point 2/20)		11.0%		$6,346,386
GENERAL CONDITIONS	28	MOS	$125,000	$3,500,000
GENERAL REQUIREMENTS		3%		$2,078,149
BUILDING PERMIT		0%		$0
P&P BOND & INSURANCE		2%		$1,426,996
PROFIT		3%		$2,183,303

	TOTAL CONSTRUCTION COST			$74,960,080
	COST PER SF			**$499.73**

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STUDY
Beal Early Childhood Center
Shrewsbury, MA

18-Jan-18

Designer: Lamoureux Pagano Architects

NEW CONSTRUCTION OPTION - GLAVIN CENTER SITE

	GSF		COST PER S.F.	**TOTAL**
NEW CONSTRUCTION	142,800	**GSF**	$295.00	**$42,126,000**
DEMOLITION	100,000	**GSF**	$7.00	**$700,000**
HAZARDOUS WASTE REMOVAL				**$1,460,000**
SITE COST		12%		**$5,314,320**

	TOTAL DIRECT COST			$49,600,320
CM AT RISK CHPTR 149A				
DESIGN CONTINGENCY		15%		$7,440,048
CM CONTINGENCY		3.0%		$1,711,211
ESCALATION (mid point 2/20)		11.0%		$6,274,440
GENERAL CONDITIONS	28	MOS	$125,000	$3,500,000
GENERAL REQUIREMENTS		3%		$2,055,781
BUILDING PERMIT		0%		$0
P&P BOND & INSURANCE		2%		$1,411,636
PROFIT		3%		$2,159,803

	TOTAL CONSTRUCTION COST			$74,153,239
	COST PER SF			**$519.28**

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"Construction Cost Consultants"

STUDY
Beal Early Childhood Center
Shrewsbury, MA

18-Jan-18

Designer: Lamoureux Pagano Architects

NEW CONSTRUCTION OPTION - ALLEN FARM NORTH SITE

	GSF		COST PER S.F.	TOTAL
NEW CONSTRUCTION	142,800	**GSF**	$295.00	**$42,126,000**
DEMOLITION				**n/a**
HAZARDOUS WASTE REMOVAL				**n/a**
SITE COST		15%		**$6,318,900**

	TOTAL DIRECT COST			$48,444,900
CM AT RISK CHPTR 149A				
DESIGN CONTINGENCY		15%		$7,266,735
CM CONTINGENCY		3.0%		$1,671,349
ESCALATION (mid point 2/20)		11.0%		$6,128,280
GENERAL CONDITIONS	24	MOS	$125,000	$3,000,000
GENERAL REQUIREMENTS		3%		$1,995,338
BUILDING PERMIT		0%		$0
P&P BOND & INSURANCE		2%		$1,370,132
PROFIT		3%		$2,096,302

	TOTAL CONSTRUCTION COST			$71,973,036
	COST PER SF			**$504.01**

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"Construction Cost Consultants"

Beal Early Childhood Center
Shrewsbury, MA

January 18, 2018

GRAND SUMMARY

Design/Bid - Chptr 149

BASE REPAIR OPTION	$14,042,340
NEW CONSTRUCTION OPTION - EXISTING SITE	$69,455,403
NEW CONSTRUCTION OPTION - GLAVIN CENTER SITE	$68,736,695
NEW CONSTRUCTION OPTION - ALLEN FARM NORTH SITE	$66,724,059

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STUDY
Beal Early Childhood Center
Shrewsbury, MA

18-Jan-18

Designer: Lamoureux Pagano Architects

BASE REPAIR OPTION

	GSF		COST PER S.F.	TOTAL
RENOVATION	33,400	**GSF**	$190.00	**$6,346,000**
HAZARDOUS WASTE REMOVAL				**$310,000**
SITE COST				**$500,000**

TOTAL DIRECT COST				$7,156,000
DB CHPTR 149				
DESIGN CONTINGENCY		15%		$1,073,400
ESCALATION (mid point 2/20)		11.0%		$905,234
GENERAL CONDITIONS (PHASED)	36	MOS	$105,000	$3,780,000
GENERAL REQUIREMENTS/PHASING		4%		$516,585
BUILDING PERMIT		0%		$0
P&P BOND & INSURANCE		2%		$268,624
PROFIT		2.5%		$342,496

TOTAL CONSTRUCTION COST				$14,042,340
COST PER SF				**$420.43**

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NEW CONSTRUCTION OPTION - EXISTING SITE

	GSF		COST PER S.F.	TOTAL
NEW CONSTRUCTION	150,000	**GSF**	$285.00	**$42,750,000**
DEMOLITION	33,400	**GSF**	$6.50	**$217,100**
HAZARDOUS WASTE REMOVAL				**$310,000**
SITE COST		12%		**$5,193,252**

	TOTAL DIRECT COST			$48,470,352
DB CHPTR 149				
DESIGN CONTINGENCY		15%		$7,270,553
ESCALATION (mid point 2/20)		11.0%		$6,131,500
GENERAL CONDITIONS	28	MOS	$105,000	$2,940,000
GENERAL REQUIREMENTS		2.5%		$1,620,310
BUILDING PERMIT		0%		$0
P&P BOND & INSURANCE		2%		$1,328,654
PROFIT		2.5%		$1,694,034

	TOTAL CONSTRUCTION COST			$69,455,403
	COST PER SF			**$463.04**

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Designer: Lamoureux Pagano Architects

NEW CONSTRUCTION OPTION - GLAVIN CENTER SITE

	GSF		COST PER S.F.	**TOTAL**
NEW CONSTRUCTION	142,800	**GSF**	$285.00	**$40,698,000**
DEMOLITION	100,000	**GSF**	$6.50	**$650,000**
HAZARDOUS WASTE REMOVAL				**$1,460,000**
SITE COST		12%		**$5,136,960**

	TOTAL DIRECT COST			$47,944,960
DB CHPTR 149				
DESIGN CONTINGENCY		15%		$7,191,744
ESCALATION (mid point 2/20)		11.0%		$6,065,037
GENERAL CONDITIONS	28	MOS	$105,000	$2,940,000
GENERAL REQUIREMENTS		2.5%		$1,603,544
BUILDING PERMIT		0%		$0
P&P BOND & INSURANCE		2%		$1,314,906
PROFIT		2.5%		$1,676,505

	TOTAL CONSTRUCTION COST			$68,736,695
	COST PER SF			**$481.35**

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NEW CONSTRUCTION OPTION - ALLEN FARM NORTH SITE

	GSF		COST PER S.F.	TOTAL
NEW CONSTRUCTION	142,800	**GSF**	$285.00	**$40,698,000**
DEMOLITION				**n/a**
HAZARDOUS WASTE REMOVAL				**n/a**
SITE COST		15%		**$6,104,700**

	TOTAL DIRECT COST			$46,802,700
DB CHPTR 149				
DESIGN CONTINGENCY		15%		$7,020,405
ESCALATION (mid point 2/20)		11.0%		$5,920,542
GENERAL CONDITIONS	24	MOS	$105,000	$2,520,000
GENERAL REQUIREMENTS		2.5%		$1,556,591
BUILDING PERMIT		0%		$0
P&P BOND & INSURANCE		2%		$1,276,405
PROFIT		2.5%		$1,627,416

	TOTAL CONSTRUCTION COST			$66,724,059
	COST PER SF			**$467.26**

3.1.6 PRELIMINARY EVALUATION OF ALTERNATIVES

F. Recommended Alternatives for Further Development and Evaluation

As a result of the work of the Design Team to date, LPA recommends that the following three options be further developed and evaluated during the Preliminary Schematic Report (PSR) phase:

- No Build Base Repair to Beal Early Childhood Center
- New Construction 790 Student K-4 on the Glavin Center Property
- New Construction 790 Student K-4 on the Allen Farm Property

None of the Existing Site Development Options are being recommended for further development due to their inability to fully meet the program without incurring significant costs increases or severe compromises to the educational program.