



Long-Range Facilities Assessment Study for Clinton Public Schools

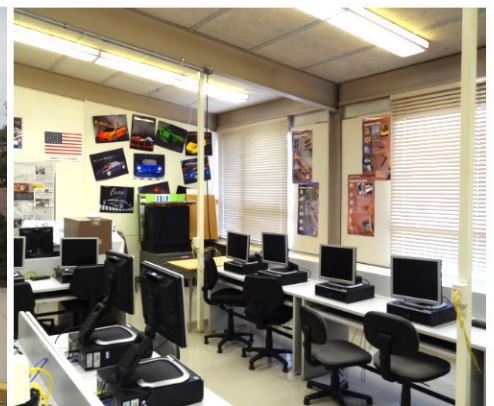
Clinton, Connecticut



LEWIN G. JOEL JR. SCHOOL



ABRAHAM PIERSON SCHOOL



JARED ELIOT SCHOOL



Drummey Rosane Anderson Inc. - Planning Architecture Interior Design

October 1, 2014

Clinton Public Schools – Long-Range Facilities Assessment Study

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Introduction

Background

Drummey Rosane Anderson, Inc was engaged by Clinton Public Schools to prepare a Long-Range Facilities Assessment Study focusing on the district’s elementary and middle schools (including the Board of Education district offices currently housed in the Lewin G. Joel, Jr. Elementary School). The buildings to be included in this study effort are:

- Lewin G. Joel, Jr. School
- Abraham Pierson School
- Jared Eliot Middle School

Purpose of this Study

The purpose of this Long-Range Facilities Assessment Study is to provide the Clinton community with an understanding of the challenges facing its elementary and middle schools now and in the near future, a comprehensive view of the range of possible options with cost implications, and a means to reach consensus on the best possible solution to those challenges.

The intent of the Long-Range Facilities Assessment Study process is:

- To offer a transparent process to move the community toward consensus.
- To present information clearly to decision-makers.
- To involve interested members of the community in an interactive discussion of the issues.
- To record discussions and decisions reached by the community.
- To present the final recommendations as a foundation for future actions by Clinton.

This Study provides for:

- Identification of all maintenance issues (including architectural, mechanical/electrical/plumbing, and fire protection conditions) on a school-by-school basis.
- Prioritization of these maintenance issues on the basis of urgency and level of risk.
- Linked assessment of long term educational space needs with recommended options for related demolition, renovation, and construction.
- Determination wherever possible of approximate costs related to all above items.

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Executive Summary

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Executive Summary

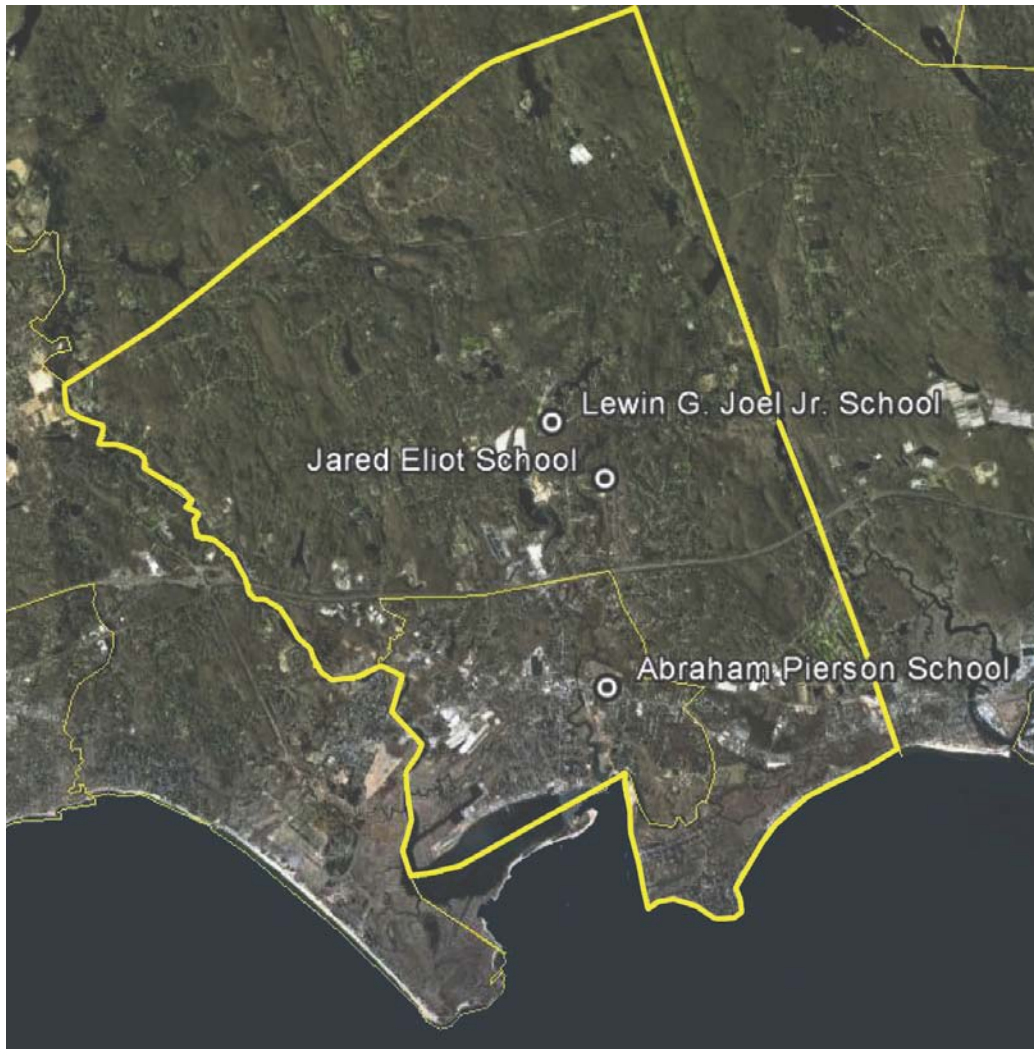
1.1 Introduction

Clinton's three public schools (grades PK-8) are facing changes and planning challenges today and in the foreseeable future. This Long-Range Facilities Assessment Study seeks to document these factors and to explore a range of possible responses to them. The study team, led by the architectural firm of Drummey Rosane Anderson (DRA) and working on behalf of the Board of Education, Buildings & Grounds subcommittee, hosted three community workshops for public discussions of the issues and a range of solutions. The results of this transparent and interactive process are being presented in this report, with descriptions of the range of options considered, recommended options, advantages/disadvantages, and projected costs.

Also included in this study is a discussion of sites for a possible Board of Education maintenance facility (included in this report as Appendix D). The study concludes that the best location for this facility is one of three possible sites at the Lewin G. Joel, Jr. Elementary School; however, please note that this study does not further explore or project costs for the construction of this facility.

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Buildings Included in the Study



1.2 Existing Conditions Analysis

The Lewin G. Joel, Jr. Elementary School was originally built in 1963, the Abraham Pierson Elementary School in 1932, and the Jared Eliot Middle School in 1960 – each has had two or more additions over time. Each of the buildings has been well maintained in most respects, although to varying degrees, finishes and systems are showing the cumulative effects of years of wear and tear.

Some of the major building systems are at or near the end of their useful life expectancy. If not addressed as part of any future plans for these buildings, breakdowns of these systems can be anticipated on an ongoing basis.

In addition to the physical infrastructure work needed, there are functional improvements to be addressed (e.g., some plumbing fixtures in Pierson fail to meet

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today's ADA requirements for handicapped accessibility). There is also an interest in providing space for three prospective programs: the Early Childhood Center (ECC, a combined Kindergarten/Pre-Kindergarten area), the School-Based Health Program (SBH), and the Family Resource Center (FRC).

There are modular classrooms attached to Eliot and an annex attached to Joel; these units have a limited life expectancy, and both are now over 40 years old. As explained in the next section (Enrollment Projections), overall enrollments are on a downward trend, offering the needed opportunity to retire these structures, but also to reconfigure the schools and/or put them to new or additional uses in ways which may require renovation and/or new construction.

1.3 Enrollment Projections

Consultants Milone & MacBroom were commissioned to do an eight-year enrollment projection for the Clinton Public Schools.

The total Pre-Kindergarten – 12th grade enrollment in Clinton Public Schools has ranged from a high of 2,208 to a low of 1,976 for the period of 2001 to 2013; the historic median for this period is 2,106 students. Since 2007-08, total enrollments have declined by about 130 students, or 8.2%. The lowest recent total enrollment recorded is the current 2013-14 enrollment of 1,976 students.

The low current enrollment in 2013-14 is in part due to the smallest recent birth cohort feeding the incoming Kindergarten class in 2013-14. The gradual enrollment decline experienced over the past decade continues to play out.

Use of the cohort-survival method, along with adjustments for the economic recession and stagnant housing market, yields a projection which sees total enrollments declining slowly over the projection horizon, from 1,976 students this year to a low of 1,680 students in 2021-22, a decline of approximately 15% over eight years, and all of this despite a small level of in-migration. Kindergarten - 3rd grade enrollments are expected to decline over the next five years before recovering from 2019-20 to 2021-22. The 4th-5th and 6th-8th grade groupings are projected to experience sharp declines in the latter half of the projection horizon due to the lag in the smaller birth and elementary cohorts matriculating through the system. Enrollments in the high school are projected to dip to around 550 students in 2014-15 and then remain fairly flat for the remainder of the time horizon; declining elementary enrollments and births over the last two years will not have a significant impact within that horizon. The following table shows the eight-year enrollment projections for Clinton Public Schools by grade.

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Table 12

Clinton Enrollment Projections by Grade (2014-15 to 2021-22)																	PK-12th		PK-3rd		4rd-5th		6th-8th		9th-12th	
School Year	Birth Year	Births	K	1	2	3	4	5	6	7	8	9	10	11	12	PK	Total	Percent Change	Total	Percent Change	Total	Percent Change	Total	Percent Change	Total	Percent Change
2014-15	2008	132	142	151	133	144	175	146	152	162	159	140	131	139	145	40	1,958	-0.90%	610	-4.9%	321	8.4%	473	1.0%	555	-2.8%
2015-16	2009	101	109	145	148	132	144	176	147	151	164	150	128	133	134	40	1,901	-2.92%	573	-6.0%	321	-0.1%	462	-2.3%	545	-1.7%
2016-17	2010	98	106	111	142	146	133	146	177	146	153	155	138	130	129	40	1,850	-2.70%	545	-5.0%	278	-13.2%	476	3.0%	551	1.1%
2017-18	2011	99	107	107	109	141	147	134	146	176	148	144	142	139	126	40	1,806	-2.38%	503	-7.6%	281	0.9%	470	-1.2%	552	0.1%
2018-19	2012	116	125	109	105	108	141	148	134	145	178	140	132	144	135	40	1,785	-1.16%	486	-3.3%	289	3.1%	458	-2.6%	551	-0.1%
2019-20	2013	114	123	127	106	104	108	142	149	134	147	168	128	134	139	40	1,751	-1.89%	501	3.0%	251	-13.5%	430	-6.2%	570	3.3%
2020-21	2014	111	120	125	125	105	105	109	143	148	135	139	155	130	130	40	1,708	-2.44%	515	2.8%	214	-14.6%	426	-0.8%	553	-3.1%
2021-22	2015	113	122	122	123	124	106	106	109	142	150	128	128	156	125	40	1,680	-1.63%	530	2.9%	212	-1.0%	402	-5.8%	537	-2.9%

1.4 Educational Space Needs

The projected enrollment drop means that the square footage of all three buildings will continue to be adequate (though see below regarding widely undersized/underequipped classrooms), but if the choice were made today to close Pierson School and/or redistribute grade levels among the schools, then there would be a square footage shortage in one or more buildings. Furthermore, if the Joel annex or Eliot modulars were demolished today, and/or if one or more buildings were chosen to host any of the ECC, SBH or FRC programs now, the shortage of space would be even greater. For these reasons, please note that any demolition and/or building closure discussed in the options below are slated for implementation in 2016-17 at the earliest.

Typical classrooms

Average existing classrooms sizes are listed in the following table by grade level:

Grade (School)	Avg. Size (sq. ft.)	Comments
PK (Joel)	798	
K (Joel)	950	
1 (Joel)	824	
2 (Joel)	798	grade level uses some smaller Annex rooms
3 (Joel)	777	grade level uses some smaller Annex rooms
4 (Pierson)	816	
5 (Pierson)	769	
6 (Eliot)	845	grade level uses some smaller modular rooms
7 (Eliot)	919	
8 (Eliot)	848	

Existing classrooms sizes are adequate for current uses, though according to current best practices (see below), many classrooms in Joel and Eliot, and nearly all

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classrooms in Pierson, are undersized for their grade level; Pre-Kindergarten and Kindergarten spaces in Joel also mostly lack the recommended access to toilet facilities with child-size fixtures. **However, please note that aside from all new building in Option E, no planned options provide for the correction of these situations (though the reconfiguration or closing of Pierson in the C and D families of options [see below] make the deficiencies moot).**

Similar space analysis in other existing spaces demonstrated needs for more space in the testing areas, conference rooms, foreign language and music rooms, and storage.

A typical Pre-Kindergarten, Kindergarten, elementary, or middle school classroom needs more space now than when it was originally built. The currently recommended, best-practices sizes for these classrooms are:

<u>Grades:</u>	<u>Size:</u>
PK – K	1,200 sq.ft.
1-5	900-1,000 sq.ft.
6-8	850 sq.ft.

These sizes allow greater flexibility in frequent rearrangements of student desks, better accessibility for teacher and paraprofessionals to help students, more storage, and more space demanded by technology (30 sq. ft. per computer station is a good rule of thumb).

These are the approximate net square footages assumed to accommodate the ECC, SBH and FRC programs mentioned above:

ECC - Early Childhood Education (PK-K)	14,000 sq.ft.
SBH - School Based Health Program	1,000-1,200 sq.ft.
FRC - Family Resource Center	2,200 sq.ft.

Capacity

We have recommended the following optimum student occupancies for classrooms at the various grade levels:

Grade level:	PK	K	1	2	3	4	5	6	7	8
Students/CR:	20*	18	20	22	22	22	22	24	24	24

*Note that Pre-Kindergarten takes place on a half-day basis, and so only half of a 20-student count will occupy the classroom at one time.

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1.5 Planning Options

A full range of options has been considered. The options were sorted into 5 families, as described in the “Families of Options” chart below. Please note:

- (i) It is recommended that the **maintenance** component of Options B through D **should be performed as soon as possible**, regardless of a given option’s implementation year.
- (ii) No options include any potential costs for **hazardous waste mitigation** made necessary by demolition.
- (iii) **For Option families B and C**, we have used enrollment projections for the **2017-18 school year** (see Table 12 above). In Option B, demolition of the Joel annex and Eliot modulars must wait until 2017-18 in order not to create undercapacity (enrollment will not have fallen far enough by 2016-17). In Option C, a one-classroom undercapacity in Eliot can be avoided by delaying until 2017-18.

For Option families D and E, we have used enrollment projections for the **2016-17 school year** (again, see Table 12). This is primarily because 2016-17 is the first school year for which any of the proposed options could be undertaken. Also importantly, enrollments will have fallen sufficiently by this school year to provide adequate space for these proposals.

(Note that **Option family A** is implemented in the present, although the accommodation of some programs will be delayed until 2015-16 [see below].)

Given these target years, any *overcapacity* will be determined by the planning option chosen (see below).

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FAMILY LABEL		DESCRIPTION
A	Do Nothing	DO NOTHING means deciding to continue using the three school buildings in the same grade configuration, and accommodating the new ECC, SBH and FRC programs without major improvement projects. Upgrades and repairs are undertaken in reaction to deteriorating conditions as needed.
B	Maintain All Schools & Demo	Maintain all schools, with selective demo work at Joel (annex building 9,000 SF) and at Eliot (portables 4,000 SF).
C	Maintain All Schools, Grade Reconfiguration, & All New Programs in Pierson	Maintain all schools, and renovate Pierson to fit ECC, SBH, and FRC Programs; move 4th and 5th grades to Joel.
D	Close a School	Five options considering closure of Pierson and reconfiguring grades at Joel and Eliot. Selective additions and demo work required to fit grade reconfiguration, as well as the new ECC and/or SBH programs in some versions.
E	All New Buildings	Two options considering all new buildings, accommodating the new FRC, SBH, and ECC programs.

A. Do Nothing

This option involves making no major changes to any existing buildings or sites. The ECC program can be accommodated in Joel, as can the SBH and FRC programs. This option is not cost-free, however, and DRA, working from the surveys supplied by Consulting Engineering Services, Inc. (CES), has identified systems* likely to fail within the next ten years, noting the likely costs of repair/replacement on an emergency basis. Secondly, we anticipate small costs related to minimal renovation of limited areas in Joel to accommodate the ECC, SBH and FRC programs in existing spaces (see below); these costs have not been taken into account in this option. No costs related to this option are eligible for reimbursement by the State of Connecticut.

As of 2015-16, there will be enough excess classroom space to house the SBH and FRC programs. The SBH can be accommodated by combining the existing nurse's area with the adjacent Pre-Kindergarten classroom (this classroom can then be relocated to one of the excess Kindergarten spaces); two or three further excess classrooms can be combined to house the FRC. (The ECC program can be accommodated without this delay.)

**In Options A and B, these systems are identified (with reference to the CES surveys) as those scoring a "System Rating" of "1" or "2" (on a scale of 1 to 5, five being the highest, or best condition); AND/OR those systems with a projected replacement date within ten years (or already past).*

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B. Maintain All Schools & Demo

In this option, the same urgent maintenance identified in Option A is now performed on a proactive basis at significant cost savings. This option also involves demolishing the temporary/low-quality structures at Joel and Eliot; the parking hill at Joel is removed, and the affected parking rebuilt (see diagram with test fit drawings later in this chapter). Joel houses an ECC program; the SBH and FRC programs are not accommodated. No costs related to this option are eligible for reimbursement by the State of Connecticut. This option is implemented for the 2017-18 school year at the earliest.

C. Maintain All Schools, Grade Reconfiguration, Renovations, & All New Programs in Pierson

All systems surveyed by CES are replaced across all schools. The temporary/low-quality structures at Joel and Eliot are demolished; the parking hill at Joel is removed, and the affected parking rebuilt. 4th and 5th grades move to Joel. Pierson is renovated and used to host the ECC, SBH and FRC programs, as well as the district offices currently housed in Joel; note that Pierson will contain as much as 7,000 sq. ft. of unprogrammed space in this scenario. The vacated district office space in Joel is renovated to serve as classroom space. Under this option, all schools are designated “renovate as new,” which qualifies all work there for possible 41.43% reimbursement by the State of Connecticut; the district office space planned in Pierson is potentially reimbursable at 20.715%. This option is implemented for the 2017-18 school year at the earliest.

D. Close a School

All systems surveyed by CES are replaced in Joel and Eliot. The temporary/low-quality structures at Joel and Eliot are demolished; the parking hill at Joel is removed, and the affected parking rebuilt.. This family of options involves closing Pierson and variously reconfiguring grades at Joel and Eliot. The ECC and SBH programs may or may not be accommodated in different versions; the FRC program is not accommodated. Both buildings receive additions of varying sizes. Under these options, Joel and Eliot (after demolitions) are designated as “renovate as new,” which qualifies these projects for possible 41.43% reimbursement by the State of Connecticut; the newly built additions are potentially reimbursable at 31.43%. These options are implemented for the 2016-17 school year at the earliest.

E. All New Buildings

All three current schools are demolished, and either three new schools or one large K-8 school are built with appropriate square footages, on their current sites or others; one version considers a single PK-8 school. In these options, the ECC, SBH and FRC programs are all accommodated, and all new building qualifies for possible 31.43% reimbursement by the State of Connecticut. Joel parking hill is demolished (this project may be eliminated if the current Joel site is not re-used). No potential

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additional costs for the preparation of new building sites have been included in this option. These options are implemented for the 2016-17 school year at the earliest.

Pros and Cons

The following table comparing the options was generated as a result of in-depth discussions.

	OPTION	PROS	CONS
A	<ul style="list-style-type: none"> • Retain existing configuration. Repairs undertaken in reaction to deteriorating conditions. • Potential Cost (based on anticipated repairs): \$17- 19m 	<ul style="list-style-type: none"> • Grade configuration remains the same and all schools remain in operation. • Very low upfront cost. • Comfort with status quo. • Additional programs (ECC, SBH, FRC) are accommodated. • Fixes immediate concerns. • Provides flexibility for future needs. • Conservative approach. 	<ul style="list-style-type: none"> • Excess of space due to declining enrollment, tough other space needs still exist. • Doesn't improve, just "fixes". • No progress means no planning for the future. • No possibility of state reimbursement. • Reactive approach. • Long-term cost increase (future facility improvements will cost more). • Very high premium paid on emergency repairs. • False perception of low overall cost.
B	<ul style="list-style-type: none"> • Retain existing configuration. • Upgrades and repairs undertaken in reaction to deteriorating conditions, but on a proactive basis. • Demo excess square footage at Eliot and Joel to fit declining enrollment. • Cost: \$14-16m 	<ul style="list-style-type: none"> • Eliot & Joel are a better fit for their population. • Eliminates low-quality/nonpermanent structures. • Decreased SF lowers operational cost. • ECC program accommodated. • Grade configuration remains the same and all schools remain in operation. • Proactive approach. • Bundled repairs cost less. • Comfort with status quo. • Fixes immediate concerns • Flexibility for future needs. • Low upfront cost. 	<ul style="list-style-type: none"> • No planning for future educational improvements. • No possibility of state reimbursement. • SBH and FRC not accommodated. • Long-term cost increase (future facility improvements will cost more).
C	<ul style="list-style-type: none"> • Pierson School no longer functions as an Elementary school; it houses the SBH, FRC, & ECC programs in addition to the B.O.E. district offices. • Joel serves Gr. 1-5, Eliot serves Gr. 6-8. • Cost: \$85-94m 	<ul style="list-style-type: none"> • Keeps all schools operational; provides flexibility for future needs. • Uses all existing buildings. • Creates ideal 3-grade Middle School. • Accommodates additional programs in a central location. • Buildings are right sized for the populations. • Shared staff. • Moderate upfront cost. • Opportunity for educational 	<ul style="list-style-type: none"> • Lost educational benefit unique to Pierson's location. • Pierson would require significant renovations for the change in use. • Building operational cost are not improved.

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		<ul style="list-style-type: none"> improvements (ECC, etc.). Possible state reimbursement. Proactive approach. New school-neutral location for B.O.E. district offices. 	
OPTION		PROS	CONS
D1	<ul style="list-style-type: none"> Pierson School is returned to town use. Additions/Reno needed at Joel and Eliot to fit additional grades (Additions: 17 classrooms total plus support spaces, approx. 30,500 sq. ft. total). Annex construction at both Joel and Eliot to be replaced with permanent construction. Joel houses ECC & serves Gr. PK-4, Eliot serves Gr. 5-8. Cost: \$80-89m 	<ul style="list-style-type: none"> Less one building's operational cost. Efficiency of operation (less administration/staff). Eliminates low-quality/nonpermanent structures. Fewer transitions for students. Decreased transportation costs. Improves traffic. Accommodates ECC and SBH programs, benefiting the community. ECC classrooms are appropriately sized/equipped. Shared resources (materials) combined for efficiency. Moderate upfront cost. Opportunity for educational improvements. Possible state reimbursement. Proactive approach. 	<ul style="list-style-type: none"> Lost Educational benefit unique to Pierson's location. FRC program is not accommodated.
D3	<ul style="list-style-type: none"> Pierson School is returned to town use. Additions/Reno needed at Joel and Eliot to fit additional grades (Additions: 14 classrooms, approx. 18,000 sq ft. total). Annex construction at both Joel and Eliot to be replaced with permanent construction. Joel serves Gr. K-5, Eliot serves Gr. Pk, 6-8. Cost: \$80-88m 	<ul style="list-style-type: none"> Less one building's operational cost. Efficiency of operation (less administration/staff). Eliminates low-quality/nonpermanent structures. Decreased transportation costs. Improves traffic. Creates ideal 3-grade middle school. Shared resources (materials) combined for efficiency. Opportunity for educational improvements. Moderate upfront cost. Possible state reimbursement. Proactive approach. 	<ul style="list-style-type: none"> Lost Educational benefit unique to Pierson's location. ECC, SBH and FRC programs not accommodated. Pk-K transition for students.
D6	<ul style="list-style-type: none"> Pierson School is returned to town use. Additions/Reno needed at Joel and Eliot to fit additional grades (Additions: 14 classrooms, approx. 18,000 sq ft. total). Annex construction at both Joel and Eliot to be replaced with permanent construction. 	<ul style="list-style-type: none"> Less one building's operational cost. Efficiency of operation (less administration/staff). Eliminates low-quality/nonpermanent structures. Decreased transportation costs. Improves traffic. 	<ul style="list-style-type: none"> Grade levels K-8 each divided between two schools. SBH and FRC programs not accommodated.

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	<ul style="list-style-type: none"> • Joel houses ECC & serves Gr. PK-8, Eliot serves Gr. K-8. • Cost: \$83-91m 	<ul style="list-style-type: none"> • Shared resources (materials) combined for efficiency. • Opportunity for educational improvements. • Moderate upfront cost. • Possible state reimbursement. • Proactive approach. 	
E1	<ul style="list-style-type: none"> • All new school buildings - 3 schools total, grade configuration remains as it is currently. • Cost: \$95-105m 	<ul style="list-style-type: none"> • New state-of-the-art schools. • Grade configuration remains the same. • All new facilities provide parity among the schools. • ECC, SBH and FRC programs are accommodated. • Efficiency of operation (less administration/staff). • Opportunity to improve education and community programs. • Opportunity for educationally advantageous mixing of grades e.g. reading buddy, peer buddy. • Possible state reimbursement. • Proactive approach. 	<ul style="list-style-type: none"> • Highest upfront cost. • Significant planning and design strategies necessary to keep younger students separate from older (unless there is specific program or event specifically intended for mixing of grades.)
E2	<ul style="list-style-type: none"> • Build single new Pk-8 school. • All existing schools return to town use. • Pierson for SBH, FRC, and B.O.E. district offices. • Cost: \$92-102m 	<ul style="list-style-type: none"> • New state-of-the-art school. • ECC, SBH and FRC programs are accommodated. • Opportunity to improve education and community programs. • Fewer transitions for students. • Decreased transportation costs. • Improves traffic. • Less two buildings' operational cost. • Maximal efficiency of operation (less administration/staff). • Opportunity for educationally advantageous mixing of grades e.g. reading buddy, peer buddy. • Possible state reimbursement. • Proactive approach. 	<ul style="list-style-type: none"> • High upfront cost. • Significant planning and design strategies necessary to keep younger students separate from older (unless there is a program or event specifically intended for mixing of grades.) • At 1,300 students approx., may be an overly large school. • Logistical challenges of cafeteria schedules, etc.

1.6 Recommended Option

The recommended options are B, C and D1. These range from a simpler choice for upkeep of existing facilities and demolition of unneeded space, to additions and renovations aimed at accommodating grade redistributions and additional programs. None of these options are the most expensive or the least, but they offer the best chance of providing maximal value to the town in addressing its educational goals.

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The feasibility and flexibility of these options were demonstrated by studying them in more detail, although final details will be developed during the design process. The details as developed so far are recorded here both to describe the options and to become the first step in that process.

Option B: Summary of Details

Joel School Description

While generally in good condition, Joel has some urgent maintenance issues, and maintenance will be performed in these areas as recommended by this report. This project will also demolish Joel's annex and parking hill.

Pierson School Description

As an older building, Pierson has a number of systems in need of urgent maintenance, and maintenance will be performed in these areas as recommended by this report.

Eliot School Description

While generally in good condition, Eliot has some urgent maintenance issues, and maintenance will be performed in these areas as recommended by this report. Modular classrooms will be demolished.

Option C: Summary of Details

Joel School Description

Hosting PK through grade 5, Joel will require 7 additional classrooms. These will occupy the space vacated by the district offices and Kindergarten / Pre-Kindergarten classrooms (this reallocation will actually leave one excess classroom). The annex and parking hill will be demolished, and all systems identified by CES will be replaced.

Pierson School Description

Approx. 34,000 gross sq.ft. of Pierson is renovated and used to host the ECC, SBH and FRC programs, as well as the district offices moved from Joel. All systems identified by CES will be replaced.

Eliot School Description

Hosting grades 6 through 8, Eliot will have sufficient classrooms. The modulares will be demolished, and all systems identified by CES will be replaced

Clinton Public Schools – Long-Range Facilities Assessment Study

Option D1: Summary of Details

Joel School Description

Hosting Pre-Kindergarten through grade 4, Joel will require 10 additional classrooms of approx 1,200 sq.ft. each; the annex and parking hill will be demolished, and all systems identified by CES will be replaced as part of “renovation-as-new”. Kindergarten and Pre-Kindergarten will be consolidated as the ECC program in the new classrooms, and the SBH will be accommodated in vacated Pre-Kindergarten space. The 10 new classrooms, along with additional needed spaces, are contained in an addition of approx. 15,800 gross sq.ft.

Pierson School Description

Pierson will be closed; this building could used by the town for other purposes or demolished, though these courses are not explored or priced as a part of this option.

Eliot School Description

Hosting grades 5 through 8, Eliot will require 7 additional classrooms of approx. 950 sq.ft. each. The modulars will be demolished, and all systems identified by CES will be replaced as part of “renovation-as-new”. The 7 new classrooms, along with additional needed spaces, are contained in additions of approx. 14,700 gross sq.ft..

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1.7 Project Costs

Construction cost (“hard costs”) includes construction costs, contractor’s general overhead and profit, project general conditions, bonds, and an estimating design contingency. Project “soft costs” are those project related cost centers beyond “brick and mortar”. These “soft cost” centers include, but are not limited to legal fees, technology, design fees, furniture-fixtures-&-equipment, construction contingency, site surveys, borings, geotechnical studies, testing, inspections, independent structural reviews, telephone, and security systems. The “hard costs” and the “soft costs” taken together form the total project cost for a project scope of work.

Construction costs for feasibility study purposes are based on standard industry costs per square foot for demolition, renovation, and/ or new construction. Land acquisition costs (if any) are not made part of the Opinion of Probable Cost at this time. Costs reported are given in year 2014 (current-year) dollar values and do not include escalation or inflation.

An additional contingency is used (Option A only) to account for the additional costs of replacing systems only when they fail, i.e., on an emergency rather than a proactive basis – this contingency represents increased costs for labor and materials on an emergency basis, clean-up and collateral repairs from the system failure, and so on; this contingency is established at 20%.

The overall Opinion of Probable Cost is developed utilizing gross square footage cost centers and combining those square footage calculations as they are divided between renovation and new construction scopes of work. The following tables capture the cost centers described in this section, and a final likely cost range is provided (+/- 5% of the raw cost, rounded).

Final note: Demolitions may LOWER the costs of SOME maintenance (Joel loses plumbing facilities in its demolished annex, for example).

Option B Probable Costs

<u>Work</u>	<u>Square feet</u>	<u>Cost per SF</u>	<u>Total cost</u>
Demo: Joel annex	9,256 SF	@ \$10 / SF	= \$93,000
Demo: Joel parking hill			= \$320,000 (flat estimate)
Demo: Eliot modulars	4,191 SF	@ \$10 / SF	= \$42,000
Urgent Maintenance: Joel			= \$6,477,000
Urgent Maintenance: Pierson			= \$2,997,000
Urgent Maintenance: Eliot			= \$5,181,000
Total cost range:			= \$14m – \$16m

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Option C Probable Costs

<u>Work</u>	<u>Square feet</u>	<u>Cost per SF</u>	<u>Total cost</u>
Demo: Joel annex	9,256 SF	@ \$10 / SF	= \$93,000
Demo: Joel parking hill			= \$320,000 (flat estimate)
Demo: Eliot modulars	4,191 SF	@ \$10 / SF	= \$42,000
“Renovate as new”: Joel	78,386 SF	@ \$425 / SF	= \$33,314,000
“Renovate as new”: Pierson	48,531 SF	@ \$425 / SF	= \$20,626,000
“Renovate as new”: Eliot	81,884 SF	@ \$425 / SF	= \$34,801,000
Total cost range:			= \$85m – \$94m

Option D1 Probable Costs

<u>Work</u>	<u>Square feet</u>	<u>Cost per SF</u>	<u>Total cost</u>
Demo: Joel annex	9,256 SF	@ \$10 / SF	= \$93,000
Demo: Joel parking hill			= \$320,000 (flat estimate)
Demo: Eliot modulars	4,191 SF	@ \$10 / SF	= \$42,000
“Renovate as new”: Joel	78,386 SF	@ \$425 / SF	= \$33,314,000
“Renovate as new”: Eliot	81,884 SF	@ \$425 / SF	= \$34,801,000
Addition: Joel	15,800 SF	@ \$525 / SF	= \$8,295,000
Addition: Eliot	14,700 SF	@ \$525 / SF	= \$7,717,500
Total cost range:			= \$80m – \$89m

2

Existing Conditions Analysis

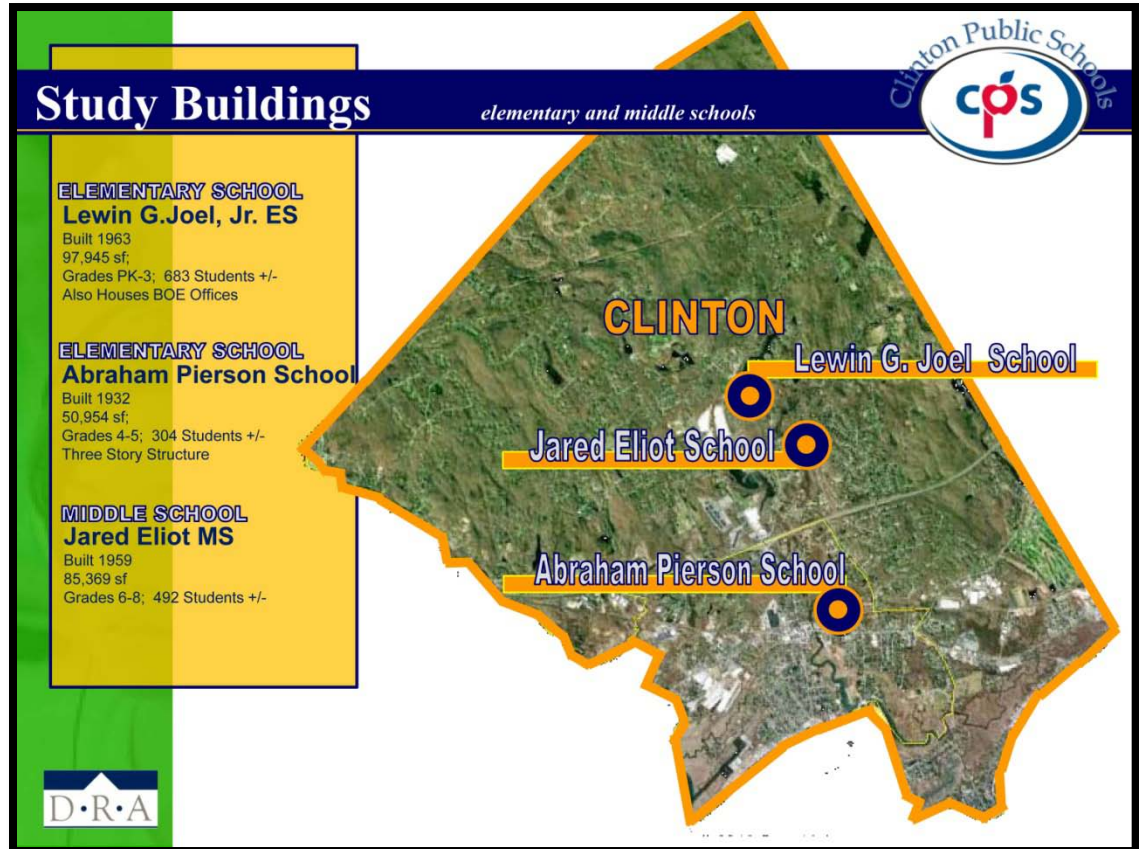
Clinton Public Schools – Long-Range Facilities Assessment Study

Existing Conditions Analysis

(See Appendix A for the Architectural Assessment Report)

(See Appendix B for the MEP Analysis Report)

2.1 Introduction



This Long-Range Facilities Assessment Study focuses on Clinton’s Pre-Kindergarten through 8th-grade schools (including other facilities housed in these buildings, such as the Board of Education district offices). This portion of the Clinton Public School system is comprised of three facilities: the Lewin G. Joel, Jr. School (grades PK-3), the Abraham Pierson School (grades 4-5), and the Jared Eliot Middle School (grades 6-8). The Joel School currently houses the Board of Education district offices.

Of the school buildings under consideration, original construction dates range between 1932 and 1963, with two to four subsequent additions at each school (through the most recent, in 2003, at Joel).

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The buildings are well maintained; however, fit and finish of many of the architectural systems are tired, and many of the major building systems are at or near the end of their useful life expectancy. If not addressed as part of a planned, systematic upgrading of the buildings, breakdown of these systems which are beyond their useful life expectancy, can be anticipated on an ongoing basis.

2.2 *Issues Affecting Clinton Schools*

The facility needs of the Clinton Elementary and Middle School Systems involve several central issues:

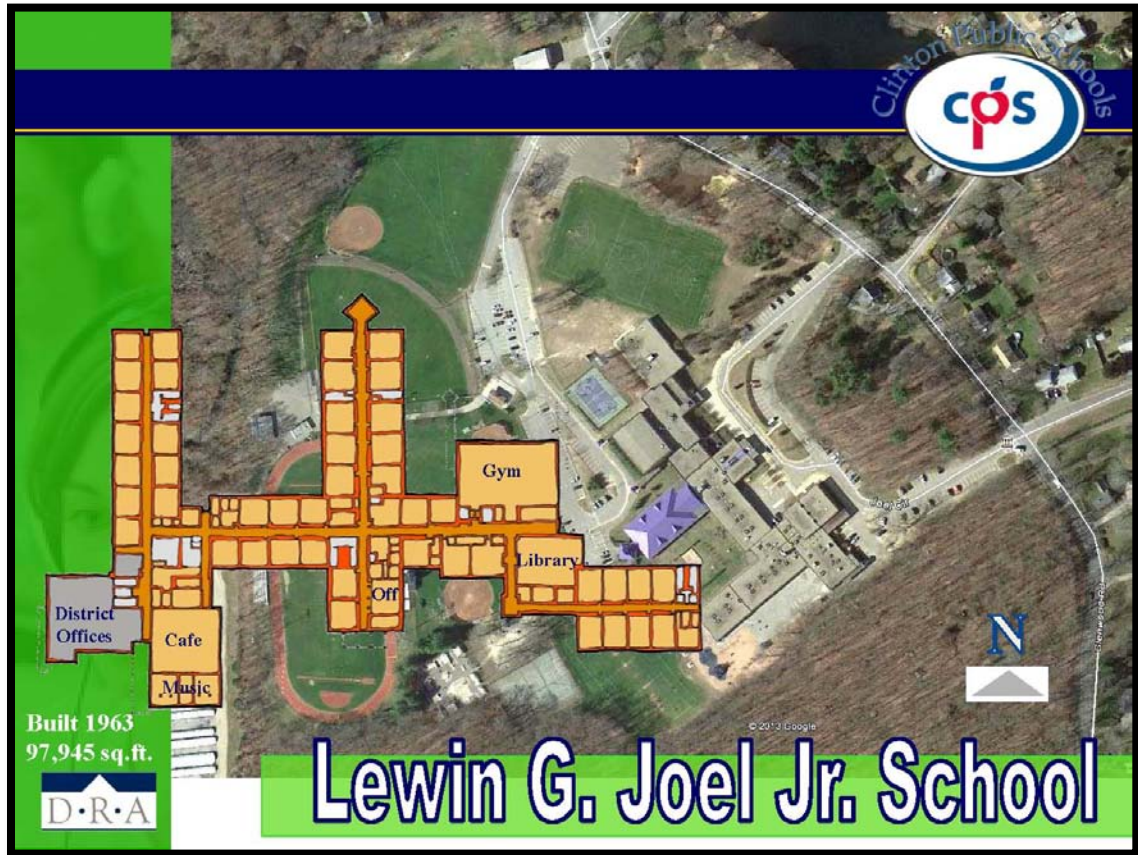
Firstly, all three schools face maintenance issue of varying urgency to some extent, and related issues such as ADA compliance are a problem in one or more areas at all three facilities. Pierson also currently has no ground-level entry, which creates a code problem for accessing Kindergarten and Pre-Kindergarten there.

Secondly, the annex building at Joel and the modular classrooms at Eliot are low-quality structures which are not intended to be permanent and are at the end of their service lives. The classrooms in these structures also tend to be smaller than those in the associated permanent buildings, and this disadvantages students and teacher there, as well as causing problems with space and enrollment planning. The permanent structures also tend to have undersized classrooms which have given rise to concerns about crowding. There is also a need for a greater variety of teaching spaces -- both large and small, open and enclosed -- throughout the system.

Lastly, educational methodologies have experienced significant change over the last 40 to 50 years. For example, computer and technology-rich teaching environments simply were not planned for when these schools were built. Implementing these systems does require square footage that was originally planned for student use. Similarly, the current practice of mainstreaming has brought students to the public school environment who may have gone to other facilities in the past. In today's educational environment, these students, and their support equipment (as needed), and additional attendant educators are accommodated in the classroom environment.

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2.3 Summary of Architectural Assessment Report



Joel School

Joel School is located on over five acres with a large man-made hill adjacent to the bus loop (this hill is slated for demolition in most options). The facility was constructed in 1963 with four additions, most recently in 2003; an annex with eight classrooms and other spaces was added in 1971; Board of Education district offices are also currently housed in the main building. The square footage of the building is 97,945 sq.ft. (88,689 sq.ft. without the annex).

Some areas of the roof are at or near the end of their warranty and require replacement, specifically

- the roofs for the Gymnasium, Library and Art area (EDPM), and
- the roof for the Main Office, Old Wing and B.O.E.

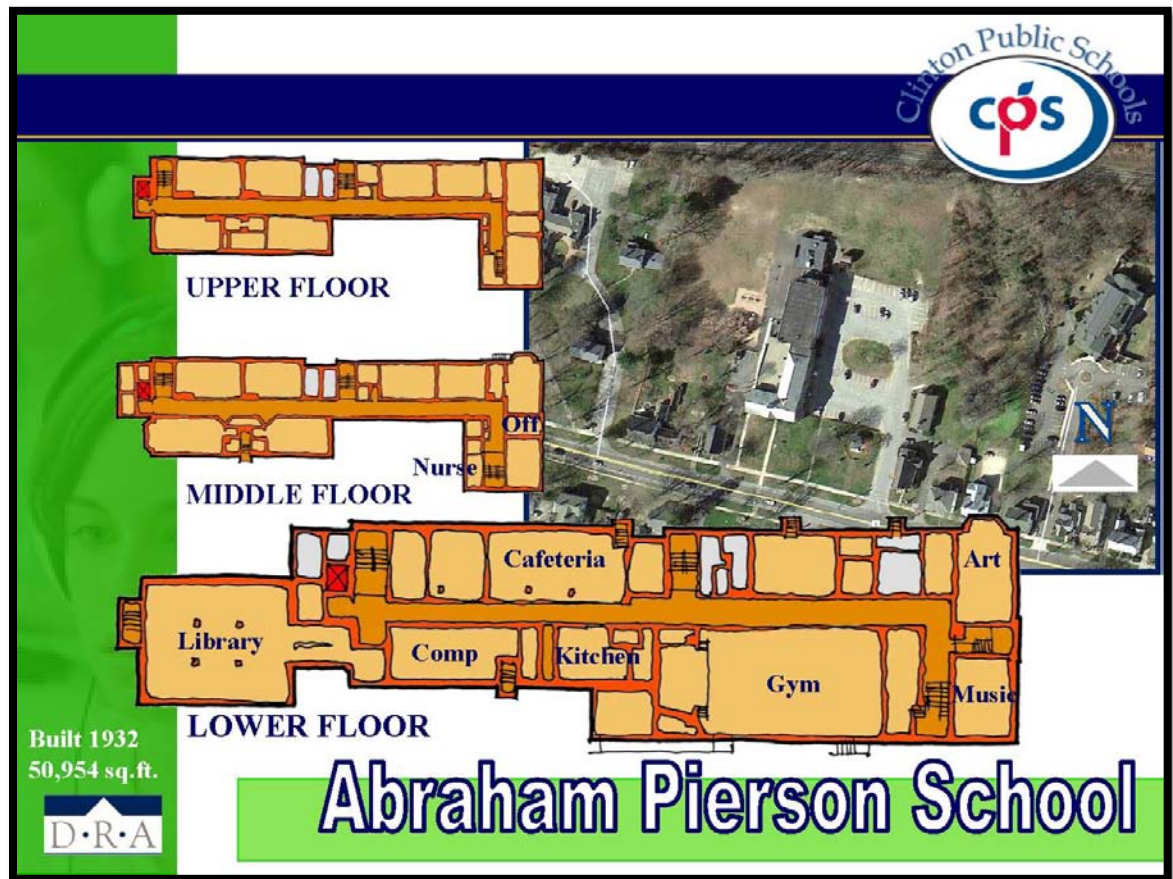
Ponding water on these structures is also a particular concern.

Some interior furnishings, such as classroom casework, are seriously deteriorated and require replacement.

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The building has multiple accessibility issues and concerns – multiple non-ADA-compliant doors and toilet facilities, as well as an absence of tactile signage, are included in the listing of challenges facing this structure when considering ADA compliance.

Finally, an **Asbestos Hazard Emergency Response Act (AHERA) report** has been made for this facility. The AHERA Program identifies known sources of hazardous materials in a building, identifies their condition, and allows schools to actively manage these materials; updates are made every six months, with major studies every three years. According to the AHERA report for Joel School, **hazardous materials ARE present** throughout the building, and **planning for renovation work should include hazardous material removal.**



Pierson School

Pierson School is located on a four-acre site; originally constructed in 1932 with additions in 1952 and 2000, the building now measures 50,945 sq.ft.. In contrast to the single-level structures of Joel and Eliot, Pierson has three floors.

The building's original slate roof has been maintained as needed over time, and this should continue; the roof on the 1952 addition, last replaced in 1993, is at the end of its warranty.

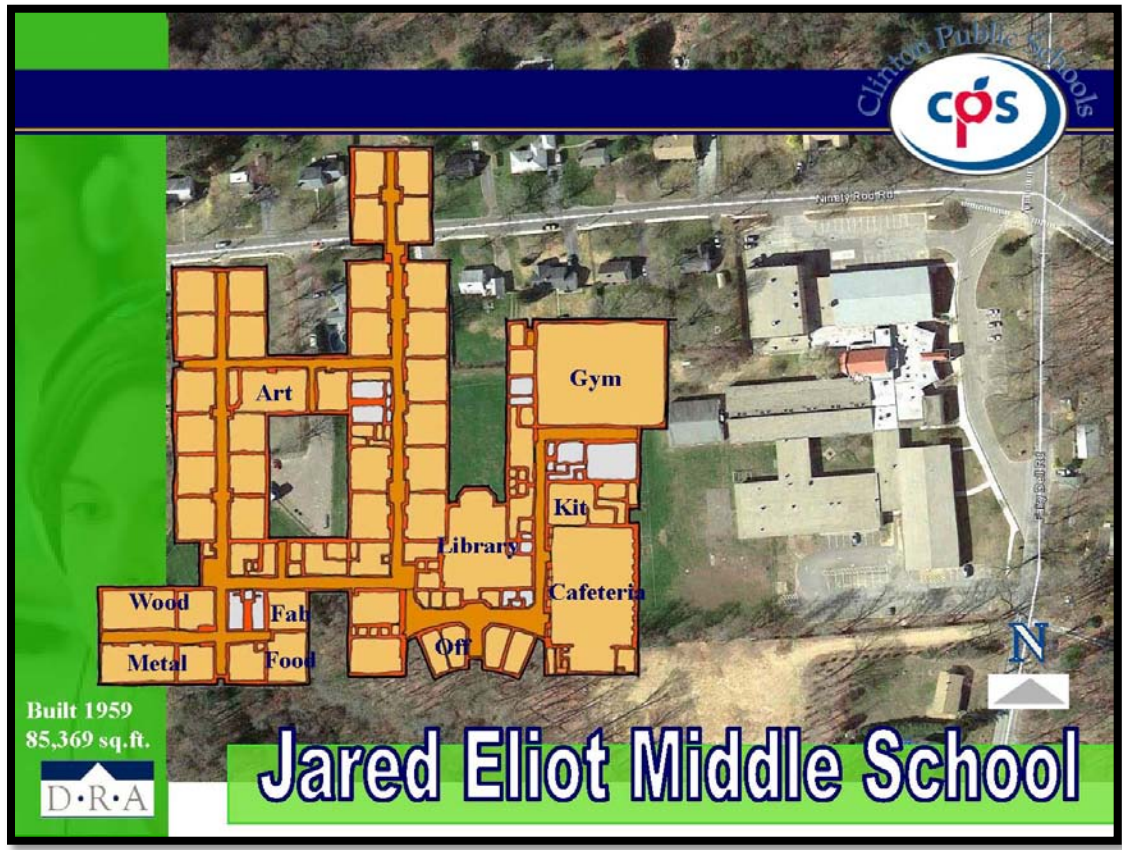
Many other aspects of the buildings are showing significant wear, including with restroom ceramic tiles; a fire-resistant curtain is also needed on the stage.

The building has multiple accessibility issues and concerns – multiple non-ADA-compliant doors, toilet facilities, and exterior entrances are included in the listing of challenges facing this structure.

Finally, an **Asbestos Hazard Emergency Response Act (AHERA) report** has been made for this facility. The AHERA Program identifies known sources of hazardous materials in a building, identifies their condition, and allows schools to actively

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manage these materials; updates are made every six months, with major studies every three years. According to the AHERA report for Pierson School, **hazardous materials ARE present** throughout the building, and **planning for renovation work should include hazardous material removal.**



Eliot School

Eliot School sits on a twelve-acre site, constructed in 1959 with additions in 1964, 1970, 1982, and 1991; in 1970, modular/portable structures were attached. The building is 91,376 sq.ft. in size (including 4,191 sq.ft. of modulars, and excluding a 5,301-sq.ft. enclosed courtyard)..

The roofs on the Library and Main Office areas (installed 1989) have exceeded their life expectancy, and the roof on the Annex and 6th grade wing is nearing the end of its warranty.

Other aspects of the buildings are showing significant wear, e.g., floor cracking in corridors and the cafeteria areas, as well as classroom casework.

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The building has multiple accessibility issues and concerns – multiple non-ADA-compliant doors, toilet facilities, and exterior entrances are included in the listing of challenges facing this structure.

Finally, an **Asbestos Hazard Emergency Response Act (AHERA) report** has been made for this facility. The AHERA Program identifies known sources of hazardous materials in a building, identifies their condition, and allows schools to actively manage these materials; updates are made every six months, with major studies every three years. According to the AHERA report for Eliot School, **hazardous materials ARE present** throughout the building, and **planning for renovation work should include hazardous material removal.**

2.4 *Summary of the MEP Analysis Report*

Joel School

The Joel School's mechanical, electrical, and plumbing systems have served the community well. Typically, the systems are roughly 10-25 years old, with a few more recent replacements (e.g., one of two hot water heaters and site lighting). However,



some have met their useful life expectancy: for example, the boilers, the air handling system and the kitchen hood exhaust system. Trap primers for floor drains are a currently unmet code requirement, and janitors' sinks require replacement. Efficiency improvements to some plumbing and electrical systems could result in a reduced carbon footprint and cost savings.

Pierson School

The Pierson School's MEP systems are a mix of younger and older installations, some dating from 1952, some from roughly 15-25 years ago. Many of these systems



have met their useful life expectancy, for example: the boilers, heating units, emergency lighting, kitchen hood exhaust, and the ventilation, control and air handling systems; some of the fire alarm equipment, while in good condition, is 20 years old. Vacuum breakers for janitors' sinks and trap primers for floor drains are currently

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unmet code requirements (the janitors' sinks themselves also require replacement). A new sprinkler system will be required upon renovation; and efficiency improvements to some plumbing and electrical systems could result in a reduced carbon footprint and cost savings.

Eliot School

As a building of similar age, the Eliot School's MEP systems are in a condition generally similar to Joel's, though Eliot has some of its own issues. Typically, the systems are roughly 10-25 years old, with a few more recent replacements (e.g., one



of the two hot water heaters, fuel oil tank and site lighting). However, some systems have met their useful life expectancy, for example: both boilers (installed in 1998 and 2001), the air handling system, emergency lighting, kitchen hood exhaust system, and exhaust fans; fire alarm systems may also require replacement. Vacuum breakers for janitors' sinks and trap primers for floor drains are

currently unmet code requirements (the janitors' sinks themselves also require replacement); there are also ADA issues with the fire alarm system and some sinks. A new sprinkler system will be required upon renovation; and efficiency improvements to some plumbing and electrical systems could result in a reduced carbon footprint and cost savings.

PLEASE SEE APPENDIX B FOR THE FULL MEP REPORTS.

2.5 Additional Space Planning Needs

As part of the study, the faculty at each building was given an opportunity to identify specific programmatic space needs or in some case space deficiencies. The complete list of suggestions and recommendations can be found at the end of Appendix F. The list below represents those items that have been vetted through the building administration and central office administration as critical to the programmatic needs of the district.

General space deficiencies

Joel Elementary School:

- ☐ Space is tight throughout the building
- ☐ Annex wing classrooms lack sinks

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- ☐ Music classroom ventilation
- ☐ Insufficient storage space
- ☐ Assembly space for whole school events
- ☐ Private space for nursing mothers
- ☐ Additional small conference space
- ☐ Parent parking

Pierson Elementary School:

- ☐ Life Skills room is undersized
- ☐ Storage is in short supply (classrooms, kitchen, office)
- ☐ Designated space for OT/PT
- ☐ Classrooms ventilation, spring and fall classrooms are often overheated.
- ☐ Windows in the classrooms are difficult to open/shut without assistance from the custodians
- ☐ Pick-up/drop-off occurs across the street at the church's parking lot; safety concerns with this arrangement.

Eliot Middle School:

- ☐ Space for Social Work/Guidance are inadequate (Consider a connected “suite” configuration for Guidance, Psychologist, Nurse, Asst. Principal – with a reception waiting area)
- ☐ Poorly regulated heating, humidity and ventilation in science labs and kitchen (science labs have no exhaust).
- ☐ Student storage options needed (students store books in their homeroom desk)
- ☐ An additional space for world language instruction
- ☐ Band and chorus rooms are too small

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- ☐ Additional small group conference area
- ☐ Large “team” meeting space (approx. 100 students)
- ☐ Private space for nursing mothers
- ☐ Additional storage space needed throughout the building
- ☐ Locker rooms need updating
- ☐ Modular classrooms are small and are not able to be well regulated seasonally for extreme temperatures
- ☐ Parking for events is not adequate

3

Enrollment Projections

Enrollment Projections

(See Appendix C for the detailed Enrollment Projections)

3.1 Introduction

Milone & MacBroom was commissioned to do an eight-year enrollment projection (2014-15 through 2021-22) for Clinton Public Schools. To accomplish this, they reviewed enrollment projection data and spoke to Town and school officials who have supplied information that enabled them to draw significant conclusions relative to future school enrollments and school space needs in the Town of Clinton. Formulating long-range enrollment projections requires the development of a set of assumptions on birth rates, housing development, population, and other factors, around which a statistical framework can be built.

3.2 Background

Indices for these factors in Clinton are generally consistent with county and state trends, with adjustments made for particular features of Clinton's economy, location, and other town specific data. The school-age population (ages 5-18) has recently declined in most Clinton neighborhoods (8.9% overall between 2000 to 2010); this seems due mainly to concurrent decreases in Clinton's population of child-bearing females, bringing with it an expectation of low birth rates in the future term projected here. The expected continuing decrease in the school-age population may be offset to small extent by town housing growth. This study assumes that Clinton's population will not vary significantly over the next decade, although the Connecticut Department of Transportation has projected population growth.

3.3 Methodology

The cohort-survival method, with some modifications, was used to calculate all projections in this report. This is a standard method for projecting populations and student enrollments. The cohort-survival methodology relies on observed data from the recent past to predict the near future. This methodology works well for stable populations, including those that are steadily growing or declining. However, the economic recession and stagnant housing market are factors that contribute to a much different enrollment climate than in the past. Therefore, adjustments were made in the projections to adequately capture these external factors. To track each cohort, a persistency ratio calculation was used to track the growth or decline of class sizes as they progressed through the school system in recent years.

3.4 Assumptions

The proceeding enrollment projections are expected to hold true under the following assumptions:

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- Births will remain between 95-125 per year
- Annual Housing Permits will average between 15-30 per year
- Sales of Single Family homes will stay between 120-150 per year
- Sales of Condominiums will stay between 20-35 per year
- Annual unemployment remains between 6-7%

3.5 *Summary*

Since 2007-08, total enrollments for Pre-K – 12th grades have declined by about 130 students, or 8.2%. The lowest recent total enrollment recorded is that of the current year, a 2013-14 enrollment of 1,976 students. (This number is in part due to the fact that the smallest recent birth cohort of recent years is now feeding the current-year kindergarten class in 2013-14.) This gradual enrollment decline is expected to continue, especially considering low birth rates in recent years, which is expected to influence kindergarten enrollments in the 2016-17 and 2017-18 school years.

In the last two years, Clinton saw positive migration for the first time since 2004-05 to 2005-06 school years, and this trend may also partly offset the coming enrollment drops. In general, however, total enrollments are projected to decline slowly from 1,976 students this year to a low of 1,680 students in 2021-22, or 15%:

- i) Pre-K – 3rd grade enrollments are expected to decline over the next five years before recovering from 2019-20 to 2021-22.
- ii) The 4th-5th and 6th-8th grade groupings are projected to experience sharp declines in 2018-22 as the smaller entering cohorts mentioned above (2016-17 and 2017-18) make their effects felt.

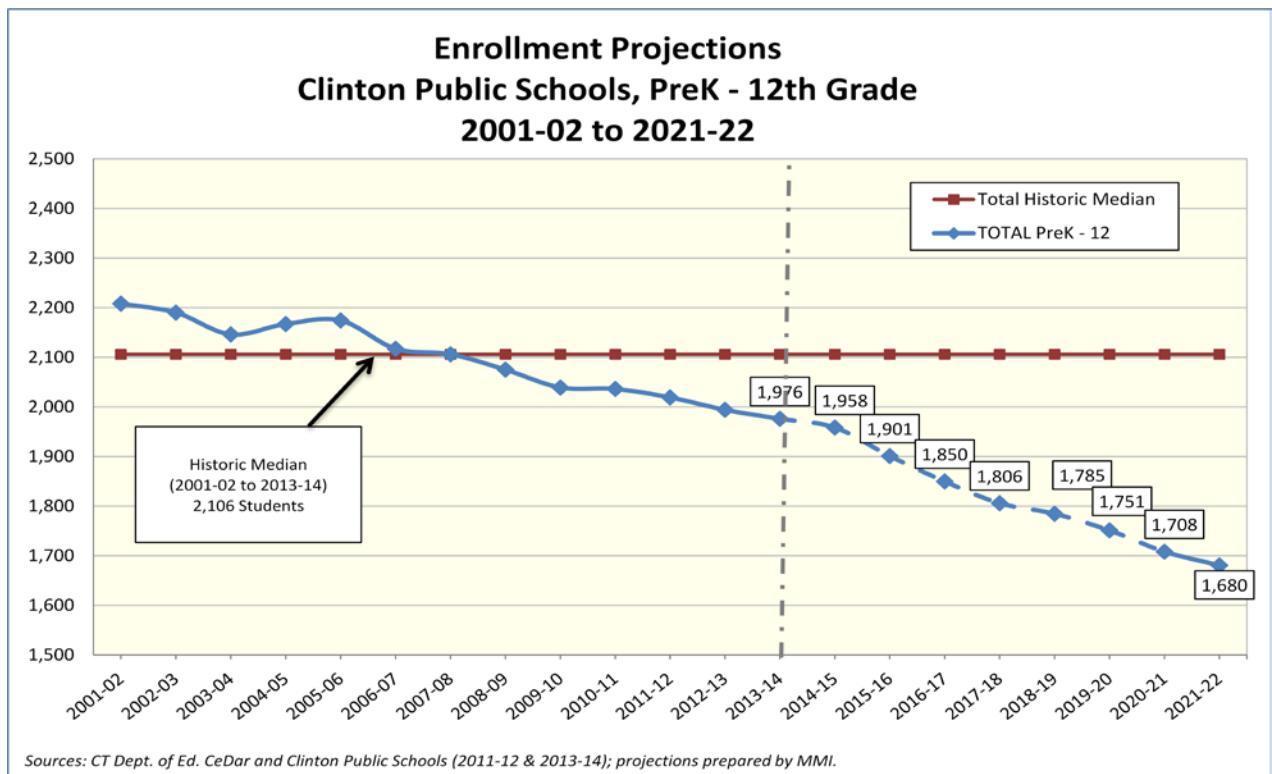
Milone & MacBroom's experience recognizes that communities with a strong and highly regarded school system, such as Clinton's, will continue to attract families with young children. However, this will not be sufficient to offset the fact that more students will be graduating from Clinton's schools than entering them. As a result, overall school enrollments will continue to shrink. The decline in enrollment will be apparent from the following chart.

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3.6 Clinton K-12 Enrollment Projection and History

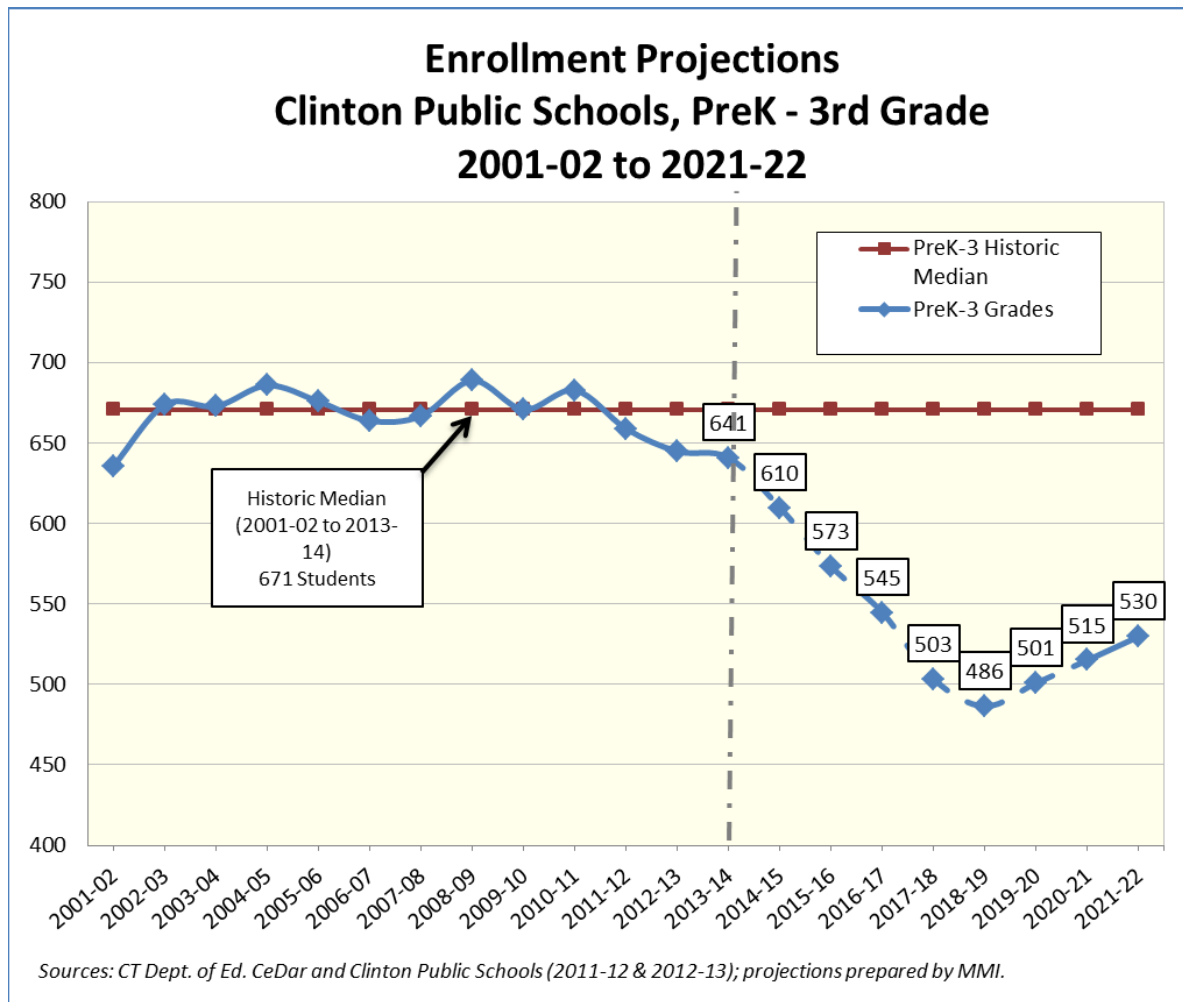
Projection by grade level

Clinton Enrollment Projections by Grade (2014-15 to 2021-22)																	PK-12th		PK-3rd		4rd-5th		6th-8th		9th-12th	
School Year	Birth Year	Births	K	1	2	3	4	5	6	7	8	9	10	11	12	PK	Total	Percent Change	Total	Percent Change	Total	Percent Change	Total	Percent Change	Total	Percent Change
2014-15	2008	132	142	151	133	144	175	146	152	162	159	140	131	139	145	40	1,958	-0.90%	610	-4.9%	321	8.4%	473	1.0%	555	-2.8%
2015-16	2009	101	109	145	148	132	144	176	147	151	164	150	128	133	134	40	1,901	-2.92%	573	-6.0%	321	-0.1%	462	-2.3%	545	-1.7%
2016-17	2010	98	106	111	142	146	133	146	177	146	153	155	138	130	129	40	1,850	-2.70%	545	-5.0%	278	-13.2%	476	3.0%	551	1.1%
2017-18	2011	99	107	107	109	141	147	134	146	176	148	144	142	139	126	40	1,806	-2.38%	503	-7.6%	281	0.9%	470	-1.2%	552	0.1%
2018-19	2012	116	125	109	105	108	141	148	134	145	178	140	132	144	135	40	1,785	-1.16%	486	-3.3%	289	3.1%	458	-2.6%	551	-0.1%
2019-20	2013	114	123	127	106	104	108	142	149	134	147	168	128	134	139	40	1,751	-1.89%	501	3.0%	251	-13.5%	430	-6.2%	570	3.3%
2020-21	2014	111	120	125	125	105	105	109	143	148	135	139	155	130	130	40	1,708	-2.44%	515	2.8%	214	-14.6%	426	-0.8%	553	-3.1%
2021-22	2015	113	122	122	123	124	106	106	109	142	150	128	128	156	125	40	1,680	-1.63%	530	2.9%	212	-1.0%	402	-5.8%	537	-2.9%



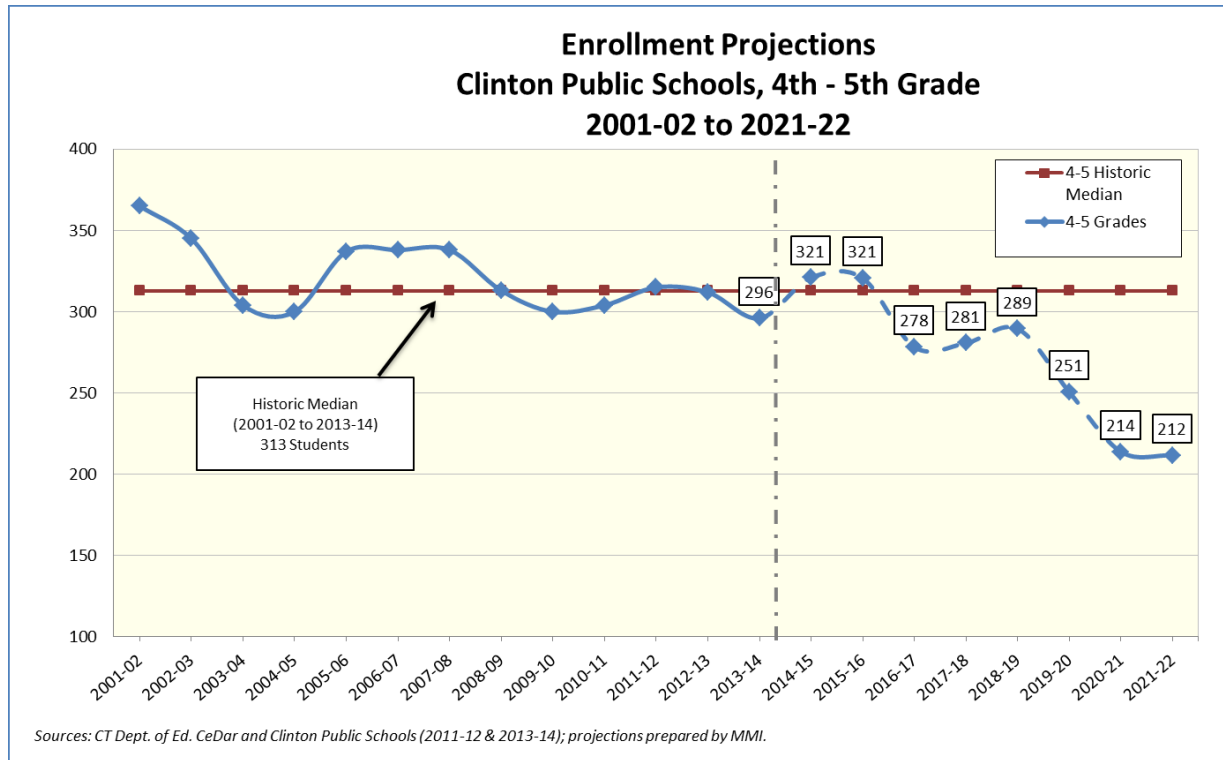
Clinton Public Schools – Long-Range Facilities Assessment Study

Projection & History: Joel School (current grade-level configuration)



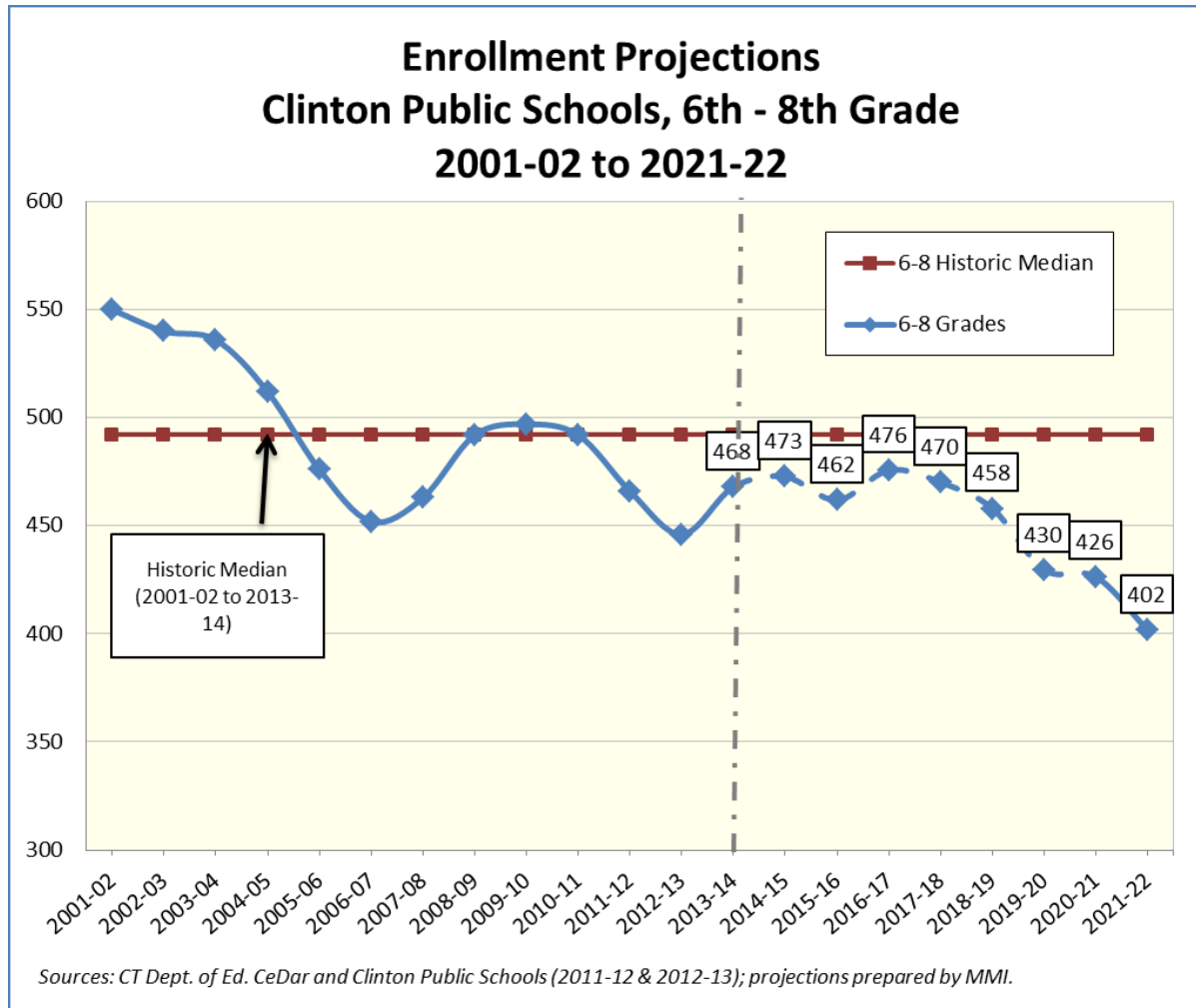
Clinton Public Schools – Long-Range Facilities Assessment Study

Projection & History: Pierson School (current grade-level configuration)



Clinton Public Schools – Long-Range Facilities Assessment Study

Projections & History: Eliot School (current grade-level configuration)



4

Educational Space Needs

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Educational Space Needs

The box at right shows current best practices for classroom sizes by grade level. These same best practices specify that Kindergarten and Pre-Kindergarten classrooms should be 1,200 square feet (sq.ft.) in size, including direct access to a toilet with child-size fixtures. A typical elementary school classroom needs more space now than when it was originally built: best practices size is 900-1,000 sq.ft. Middle school classrooms generally require less space (at 850 sq.ft.), but 5th-grade classrooms in an elementary school setting (a feature of some planned options in Chapter 5) should revert to the 900-sq.ft. elementary-school guidelines. All of these accommodations allow greater flexibility in frequent rearrangements of student desks, better accessibility for teacher and paraprofessionals to help students, more storage, and more space demanded by technology (30 sq.ft. per computer station is a good rule of thumb). Classrooms must be ready to accommodate children with disabilities, some of whom need special equipment and often an additional adult in the classroom. Space is needed for learning centers within the classroom, to allow each student the opportunity to learn in the ways that work best for him or her, with sufficient separation between the centers to reduce distractions between different small groups.

<u>Grades:</u>	<u>Classroom Size:</u>
PK – K	1,200 sq.ft.
1-4	900-1,000 sq.ft.
5-8	850 sq.ft.

The proportions of the classroom should be almost square for best flexibility in furniture layout, better visibility into the furthest corners and to the marker board, and reasonable distribution of natural light. A classroom that is relatively long and narrow, with the shorter wall along the corridor, is more efficient in overall building layout, but has less outside wall for windows, and the innermost side of the room is too far from the source of natural light.

The following are DRA's recommended student occupancies for these same grade-level classrooms:

Grade level:	PK	K	1	2	3	4	5	6	7	8
Students/CR:	20*	18	20	22	22	22	22	24	24	24

*Note that Pre-Kindergarten takes place on a half-day basis, and so only half of a 20-student count will occupy the classroom at one time.

Additional Program Descriptions

As part of the long-range facility study, the district recognizes the need to continue to build and expand partnerships with community resources to better help families navigate health and educational issues. The three programs described below would

Clinton Public Schools – Long-Range Facilities Assessment Study

provide opportunities to enhance efforts currently being undertaken by both the school district and the community.

Family Resource Center (FRC):

Family resource centers are designed to provide a comprehensive family support system within the school setting. The focus of this support is on early childhood and services that build family capacity through education and training; pre-school and school-age child care; youth development support; and coordination and connection to community resources. The long-term implementation of a school-based family resource center model will result in prevention of a range of childhood and adolescent difficulties by bolstering family management systems and practices, and building relationships with school and community resources.

Early Childhood Education Center (ECC):

Early childhood education programs are built on the premise that building a strong foundation for learning will have a lifelong impact for success. Pre-kindergarten and kindergarten programs in an early childhood education model provide opportunities for children to engage in developmentally appropriate academic and social skills experiences. In addition, early childhood education centers support families in learning how to develop and reinforce their children's social-emotional well-being, literacy and numeracy skills and executive functioning skills, by providing a variety of resource supports and materials.

School-Based Health Clinics (SBH):

School-based health clinics are typically operated as a partnership between school districts and community health organizations. Clinics are designed to provide a comprehensive range of primary care, mental health and dental care programs with a focus on prevention and early intervention. Clinics operate in a similar fashion to any other outside service provider with the key difference being that they work in collaboration with school district staff and provide convenient services for parents and students in the school environment. It is important to note that clinics provide additional resource supports and do not replace existing school resource supports, including building-based nursing services, counseling and other student support services typically provided in the schools.

The following are the approximate net square footages assumed to accommodate the FRC, ECC, and SBH programs, where relevant:

FRC - Family Resource Center:	2,200 sq.ft.
ECC - Early Childhood Center (PK-K):	14,000 sq.ft.
SBH - School Based Health Program:	1,000-1,200 sq.ft.

These square footages would need to be verified when such projects are planned to proceed.

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4.1 *Current Conditions and Assessments*

Generally speaking, classrooms in Joel, Pierson and Eliot are adequate to continue in their current uses where capacity is concerned (though many classrooms do not meet the above recommendations and may lack recommended facilities; see remarks below on undersized/underequipped classrooms). Because future enrollment is expected to decline, undercapacity in the schools' current grade-level configurations is not expected to be a problem, and Clinton Public Schools' primary concern has become how to handle the excess space in all three schools which will result in the future.

This concern is complicated by the presence of an annex structure (at Joel) and modular classrooms (at Eliot). Annex structures such as Joel's are generally of lower quality than the building to which they are attached; modular classrooms have a limited life expectancy. All planning options (except Option A) include the demolition of these structures, and these demolitions must be timed with enrollment drops so as not to create undercapacity for planned grade levels and other programs in a given building; reconfiguration of grades and programs, of course, must also guard against creating this problem itself.

Problems with recommendation shortfalls:

- (i) Only one Pre-Kindergarten classroom in Joel (and no Kindergarten classrooms) have toilets associated solely with that classroom (i.e., direct access); it is also unknown whether the plumbing fixtures in these toilets, or the shared Kindergarten-area toilets, are child-sized as required. With the exception of all new construction in Option E, no planned options provide for the provision of child-sized toilets for other existing Kindergarten and Pre-Kindergarten classrooms.
- (ii) A significant number of classrooms in Joel and Eliot fall below their grade-level recommendations (and Joel's elementary classrooms fall below the 850-square foot recommendation for middle school classrooms); Joel classrooms do not meet the 1,200-square foot recommendation for pre-kindergarten and kindergarten spaces currently hosted in that school. With the exception of all new construction in Option E, no planned options provide for the enlargement of these classrooms.
- (iii) Pierson School has nearly all undersized classrooms which are felt to be crowded at their current counts of 21 students. On the one hand, best practices indicate that these classrooms hold a maximum of 18 students each; however, it should be noted that for Options A and B as developed here, 18 students per classroom in Pierson is not attainable (we have continued allocating for 21).

Specific calculations on this question would be somewhat difficult and perhaps overly confining in a planning context. Our presumption is that as enrollments continue to drop past the chosen options' implementation dates, an easing of classroom

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occupancy counts should be possible over time, and that these problems with existing room sizes will therefore eventually improve. In Option families C through E, the existing Pierson building is also no longer used for grade-level classroom space (other than the ECC), and so this overcrowding problem is avoided. Lastly, please note that locating the ECC in Pierson (Option C) means that this building's undersized classrooms present difficulties for the square-footage best practices regarding Kindergarten and Pre-Kindergarten spaces – these issues will have to be addressed if Option C is pursued.

Typical classroom

Average existing classrooms sizes are listed in the table below by grade level, and can be compared to the best-practices sizes at right.

Grades:	Classroom Size:
PK – K	1,200 sq.ft.
1-4	900-1,000 sq.ft.
5-8	850 sq.ft.

Grade (School)	Avg. size (sq.ft.)	Comment
PK (Joel)	798	
K (Joel)	950	
1 (Joel)	824	
2 (Joel)	798	grade level uses some smaller Annex rooms
3 (Joel)	777	grade level uses some smaller Annex rooms
4 (Pierson)	816	
5 (Pierson)	769	
6 (Eliot)	845	grade level uses some smaller modular rooms
7 (Eliot)	919	
8 (Eliot)	848	

Kindergarten and Pre-Kindergarten classrooms are recommended to be **1200 square feet (sq.ft.)** in size, including direct access to a toilet with child-size fixtures. Notice that Joel's Kindergarten classrooms **do not** have such access, with only nearby toilets available. One of the two Pre-Kindergarten rooms has associated toilets; the other does not. If not already child-sized, all plumbing fixtures in all of these toilets (along with any new facilities) should be made so.

A **typical elementary school classroom** needs more space now than when it was originally built. The recommended size is **900-1000 sq.ft.** to allow greater flexibility in frequent rearrangements of student desks, better accessibility for teacher and paraprofessionals to help students, more storage, and more space demanded by technology (30 sq.ft. per computer station is a good rule of thumb). Classrooms must be ready to accommodate children with disabilities, some of whom need special equipment and often an additional adult in the classroom. Space is needed for learning centers within the classroom, to allow each student the opportunity to learn

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in the ways that work best for him or her, with sufficient separation between the centers to reduce distractions between different small groups.

The proportions of the classroom should be almost square for best flexibility in furniture layout, better visibility into the furthest corners and to the marker board, and reasonable distribution of natural light. A classroom that is relatively long and narrow, with the shorter wall along the corridor, is more efficient in overall building layout, but has less outside wall for windows, and the innermost side of the room is too far from the source of natural light.

Many of these same guidelines also apply to **a typical middle school classroom**, for which the recommended size is **850 sq.ft.** Note also that if 5th grade students are assigned to a middle school (grades 6-8), the classroom should meet this standard. If included as part of an elementary school (**which we recommend as the more desirable configuration**), the classroom should adhere to the **900-1000 sq.ft.** elementary-school space guideline.

Library

A modern school has a media center rather than a library, because it offers much more than books. Whole classes come to use the media center at a time, with small groups of students doing research around computers, or moving back and forth between tables and shelves. More space is needed to offer the complete range of resources to media-savvy students. Allow as much space as 3 classrooms in the media center: **2700-3000 sq.ft.** The existing libraries are adequately sized, with the possible exception of Pierson:

School	Size (sq.ft.)	Comment
Joel	3,069	
Pierson	2,479	
Eliot	3,531	Includes approx. 400-sq.ft. space used for computer lab

The media center acts as the technological hub of the school, usually with an adjacent computer lab, and the media center specialist oversees centralized AV equipment as well. In certain cases, though this is certainly not ideal, the media center space can also accommodate regular classes, as it does at Eliot in the case of Spanish class; in these situations, additional classroom space should be sought.

Computer Lab

A computer lab has enough stations to offer hands-on experience for every student in the class. It has a higher level of technology available than the typical classroom, including a digital projector, scanner, smart board, and multiple printers. Since an entire class uses the room at once, it should be at least **1000-1100 sq.ft.** in size. The existing computer labs are somewhat undersized (with the exception of Eliot's combined facilities, which are nonetheless undersized as individual rooms/spaces):

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School	Total size (sq.ft.)	Comment
Joel	818	Single room
Pierson	900	Single room
Eliot	2,132	Two rooms, plus additional space in Media Center

Music

Each school has one or two music rooms. In those with two rooms, the functions of general music education, band and chorus are divided between the spaces. Storage for instruments is a problem in undersized band rooms. Since the instruments are large and expensive, they need to be stored in a secure area until they are needed. The classrooms are crowded when they have 60-80 students at a time, for instrumental or vocal music.

The music rooms should be located away from classrooms and other teaching spaces to prevent disruption from noise transmission. Two rooms are recommended, each **1000 sq.ft.** in size. Existing music rooms in Joel and especially Pierson are very undersized:

School	Total size (sq.ft.)	
Joel	1,577	Two rooms
Pierson	695	Single room
Eliot	1,968	Two rooms

Art

The art classroom should be large, **1000 sq.ft.**, with storage for supplies and in-progress projects, and several utility-size sinks. Good natural light is essential. Existing art rooms:

School	Size (sq.ft.)	Comment
Joel	1,866	Single room
Pierson	758	Single room
Eliot	1,594	Single room, operable partition

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Gymnasium

A teaching station in a gymnasium is 3,000 sq.ft. A full-size gym with a basketball court and no bleachers is 6,000 sq.ft. A good size community use gym, with some benches beyond the basketball court boundaries, requires **7,000 sq.ft.** Locker rooms are not required in elementary schools, as the students do not change clothes for gym class. The existing gyms are minimally sized:

School	Size (sq.ft.)
Joel	6,205
Pierson	2,649
Eliot	6,813

Expanding an existing gym can be more expensive than building a new one, because removing an exterior wall will compromise the seismic integrity of the structure, requiring a lot of extra bracing to meet today's code.

Auditorium or Meeting Space

Existing Auditorium-use spaces:

School	Size (sq.ft.)	Comment
Joel	4,105	Cafetorium
Pierson	2,649	Gymatorium
Eliot	5,220	Cafetorium

An auditorium is a large space used for assemblies and performances, usually with a raised platform at the front. A dedicated auditorium has fixed seats on a sloped floor, for better visibility to the stage. An auditorium that is combined with another use, such as the cafeteria (called "cafetorium"), or with the gymnasium (called a "gymatorium"), or with all three (called the "multi-purpose room"), has loose seating on a flat floor. If there were no raised platform at the front, such a room would be called a "meeting space," with loose seating for maximum flexibility, or maybe even no seating other than a carpeted floor. Such a room would be used for short meetings of several classes at a time, up to an entire grade.

The size of the auditorium depends on the proposed functions for the space. A small auditorium would usually seat half of the school enrollment, with a large platform sized for performances by the school band and chorus. A larger auditorium would seat the entire school. Sometimes, community functions (such as the town meeting or community theater) require an even larger auditorium, beyond what would be needed for the elementary school alone.

In Connecticut, the state reimbursement formula is based on the number of students in the school times a square footage per student. In order to build a dedicated auditorium, the total area of the school usually exceeds the reimbursable cap,

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essentially making the local community responsible for 100% of the excess cost. None of the existing elementary schools has a dedicated auditorium, for which many educators have made requests during the course of this study. Presently, they have to bus students to the high school for access to dedicated auditorium space.

Temporary Spaces

Two of the existing schools are using classrooms in temporary structures to help house their current enrollment; as enrollments drop, there will come a time when these structures can be retired. This is good, because these structures have a limited life expectancy, and these units will be reaching their limits soon. For reference, the following table lists the number of classrooms of each type; capacities based on room availability have been worked out in Chapter 5, Planning Options:

	Joel	Pierson	Eliot
Classrooms			
(incl. PK, not incl. Annex/Modular)	27	14	21
Specials and Support Rooms	11	11	11
Annex/Modular	8	N/A	4
Total rooms			

Disregarding the undersized/underequipped status of current spaces, all planning options detailed in Chapter 5 accommodate projected grade-level enrollments (see Chapter 3) in every year of the projection following the implementation of particular options. As noted in the Executive Summary, certain options are recommended for implementation for 2016-17 and others for 2017-2018, with any maintenance to be performed as soon as possible in all cases.

Lastly, all planning options attempt to maximize value by preventing the creation of unused capacity; however, it should be noted that Option C (Chapter 5) leaves considerable unused space remaining in Pierson, and one extra classroom in Joel.

5

Planning Options

Planning Options

5.1 Introduction

The future of the Joel, Pierson, and Eliot Schools brings up concerns in multiple areas for students, staff and community. In addition to the general upkeep of systems at these schools, particular concerns like additional building space, traffic and parking have all been raised. With enrollments set to decline over the next few years, Clinton Public Schools have a special opportunity to address these issues as the schools' needs evolve. Strategies can be implemented to prevent overcapacity or underutilized space; options may involve reconfiguring grade levels, closing a school, and/or demolishing temporary structures (at Joel and Eliot) which have reached the end of their service life. The renovation and new building potentially involved in these options also carry with them the possibility of state reimbursement at various rates, making this an important time to plan carefully for the future.

This study process strives to be transparent and interactive, involving as many people from the community as possible. The schedule included three community workshops consisted of educators, parents, teachers, senior citizens, and representatives from the Board of Education. Lines of communication also included postings on the Internet.

5.2 Study Goals

Goals were gathered from the Board of Education Buildings & Grounds subcommittee, staff and community workshop attendees. These were used to generate criteria to measure the relative strengths and weaknesses of each option as they were developed. The Options Matrix (later in this chapter) contains these criteria in the "Considerations" column, grouped into four main categories: cost, construction issues, educational results, and project results.

5.3 Planning Assumptions

Enrollments trends: downward from the present though the horizon of the enrollment projection (2021-22).

Class size: targeting 18-24 students per classroom, depending on grade level.

Grade configuration: open to exploring different options.

Pre-Kindergarten: limited to 2 classrooms, with 20 students in each on a half-day basis (i.e., 10 students at a time).

Early Childhood Center (ECC): This program can be implemented in any option where Kindergarten and Pre-Kindergarten facilities exist in the same building (program requires these grade levels to be physically adjacent).

Phasing: Regardless of options' implementation dates, all maintenance is best performed as soon as possible.

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5.4 Planning Options Considered

A full range of options has been considered. The options were sorted into 5 families, as described in the “Families of Options” chart below, with details following. *Please note that no options include any potential costs for hazardous waste disposal made necessary by demolition.*

FAMILY LABEL		DESCRIPTION
A	Do Nothing	DO NOTHING means deciding to continue using the three school buildings in the same grade configuration, and accommodating the new ECC, SBH and FRC programs without major improvement projects. Upgrades and repairs are undertaken in reaction to deteriorating conditions as needed.
B	Maintain All Schools & Demo	Maintain all schools, with selective demo work at Joel (annex building 9,000 SF) and at Eliot (portables 4,000 SF).
C	Maintain All Schools, Grade Reconfiguration, & All New Programs in Pierson	Maintain all schools, and renovate Pierson to fit ECC, SBH, and FRC Programs; move 4th and 5th grades to Joel.
D	Close a School	Five options considering closure of Pierson and reconfiguring grades at Joel and Eliot. Selective additions and demo work required to fit grade reconfiguration, as well as the new ECC and/or SBH programs in some versions.
E	All New Buildings	Two options considering all new buildings, accommodating the new FRC, SBH, and ECC programs.

OPTIONS for grade configurations

(options under a gray tone below have been discarded as unworkable)

PK	K	1	2	3	4	5	6	7	8
SCHOOL YEAR 2013-14			CURRENT GRADE CONFIGURATION 2013-14						
Joel Elementary-- 97,000 SF -- 35 CR Capacity PK: 40 Capacity K-3: 678			Enrollment Gr. PK:38 Gr. K-3: 604		Pierson-- 48,500 SF -- 14 CR Capacity 4-5: 252 Enrollment Gr. 4-5: 296		Eliot Middle School-- 86,000 SF -- 25 CR Capacity 6-8: 600 Enrollment Gr. 6-8: 468		

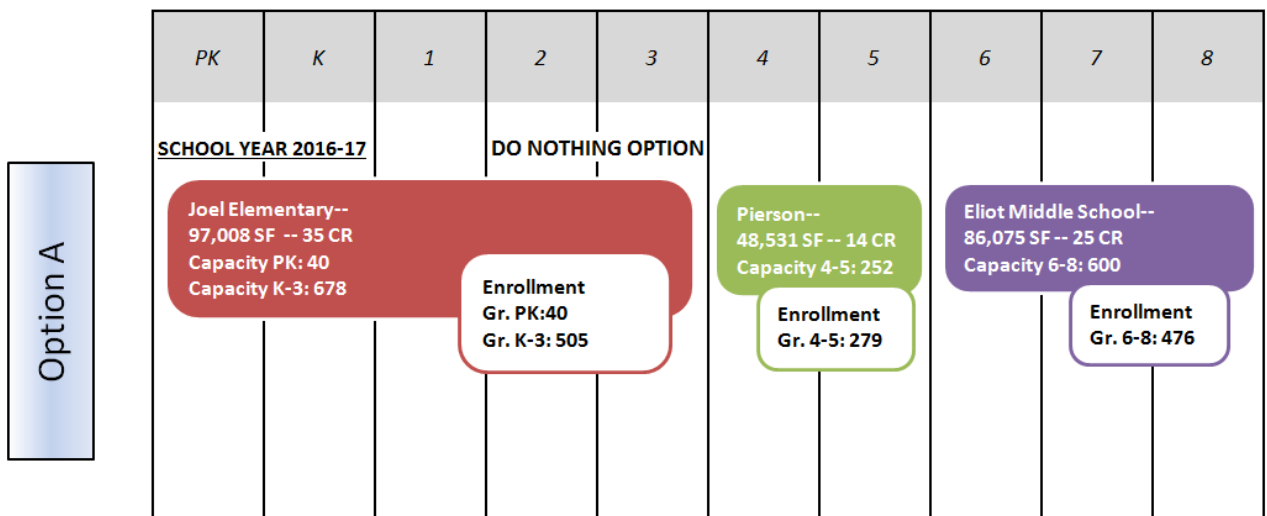
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A. Do Nothing

This option involves making no major changes to any existing buildings or sites. The ECC program can be accommodated in Joel, as can the SBH and FRC programs. This option is not cost-free, however, and DRA, working from the surveys supplied by Consulting Engineering Services, Inc., (CES) has identified systems* likely to fail within the next ten years, noting the likely costs of repair/replacement on an emergency basis. Secondly, we anticipate small costs related to minimal renovation of limited areas in Joel to accommodate the ECC, SBH and FRC programs in existing spaces (see below); these costs have not been taken into account in this option. No costs related to this option are eligible for reimbursement by the State of Connecticut.

As of 2015-16, there will be enough excess classroom space to house the SBH and FRC programs. The SBH can be accommodated by combining the existing nurse's area with the adjacent Pre-Kindergarten classroom (this classroom can then be relocated to one of the excess Kindergarten spaces); two or three further excess classrooms can be combined to house the FRC. (The ECC program can be accommodated without this delay.)

**In Options A and B, these systems are identified (with reference to the CES surveys) as those scoring a "System Rating" of "1" or "2" (on a scale of 1 to 5, five being the highest, or best condition); AND/OR those systems with a projected replacement date within ten years (or already past).*



B. Maintain All Schools & Demo

In this option, the same urgent maintenance identified in Option A is now performed on a proactive basis at significant cost savings. This option also involves demolishing the temporary/low-quality structures at Joel and Eliot; the parking hill at Joel is removed, and the affected parking rebuilt (see diagram with test fit drawings later in this chapter). Joel houses an ECC program; the SBH and FRC programs are not

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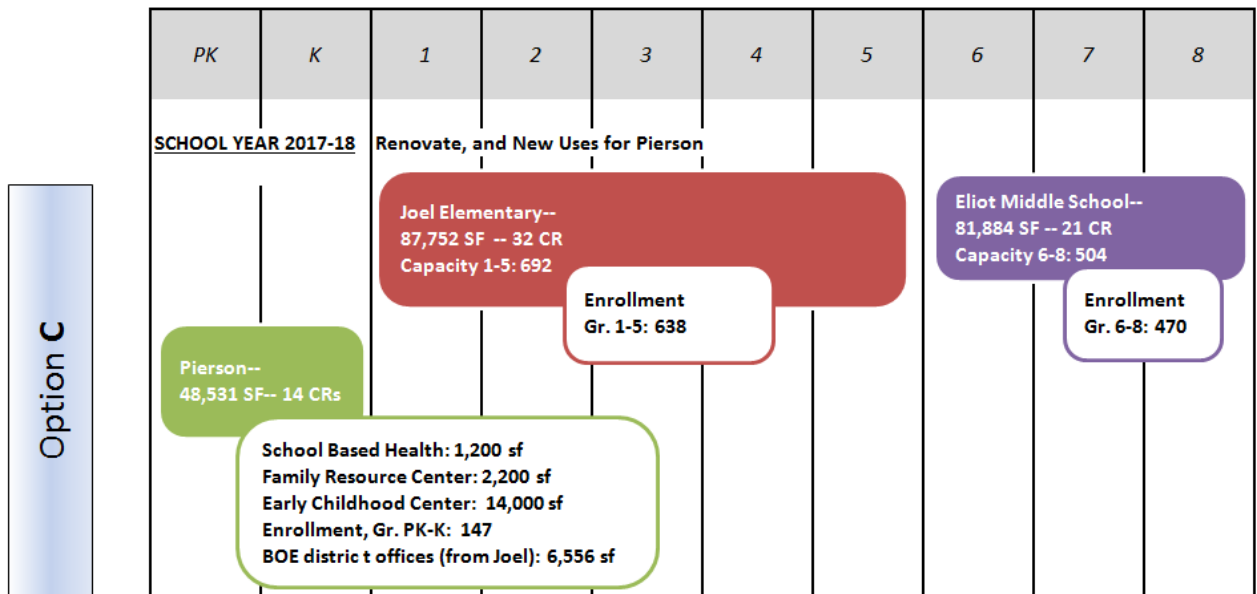
accommodated. No costs related to this option are eligible for reimbursement by the State of Connecticut. This option is implemented for the 2017-18 school year at the earliest.

	PK	K	1	2	3	4	5	6	7	8
	SCHOOL YEAR 2017-18		Maintain All Schools & Demo- Demo a portion of Joel and Eliot to fit declining population							
Option B	Joel Elementary-- 87,752 SF -- 27 CR Capacity PK: 40 Capacity K-3: 514		Enrollment Gr. PK: 40 Gr. K-3: 464			Pierson-- 48,531 SF -- 14 CR Capacity 4-5: 252 Enrollment Gr. 4-5: 281		Eliot Middle School-- 81,884 SF -- 21 CR Capacity 6-8: 504 Enrollment Gr. 6-8: 470		

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C. Maintain All Schools, Grade Reconfiguration, Renovations, & All New Programs in Pierson

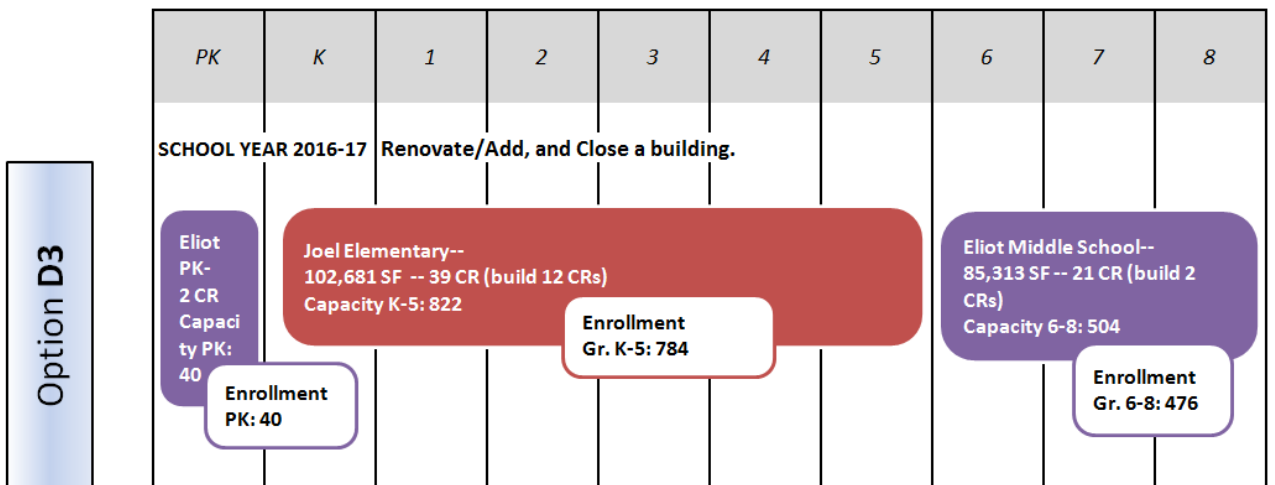
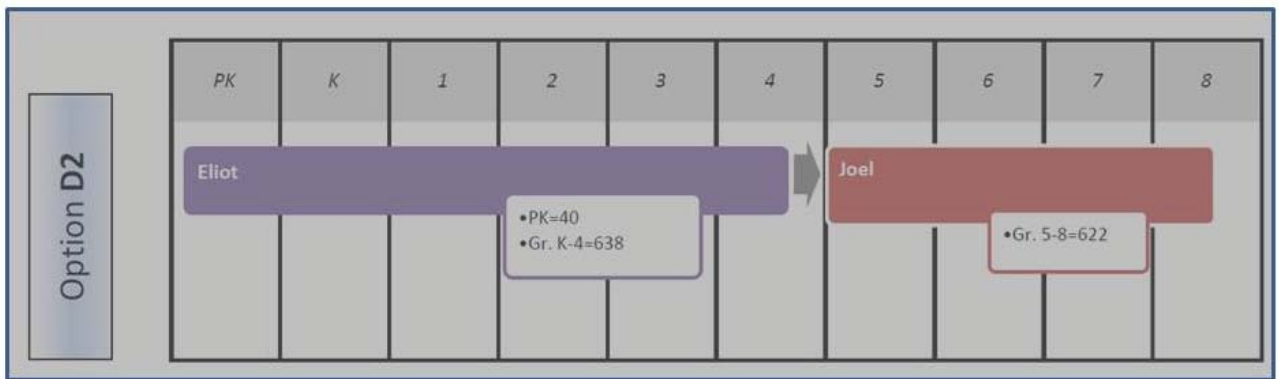
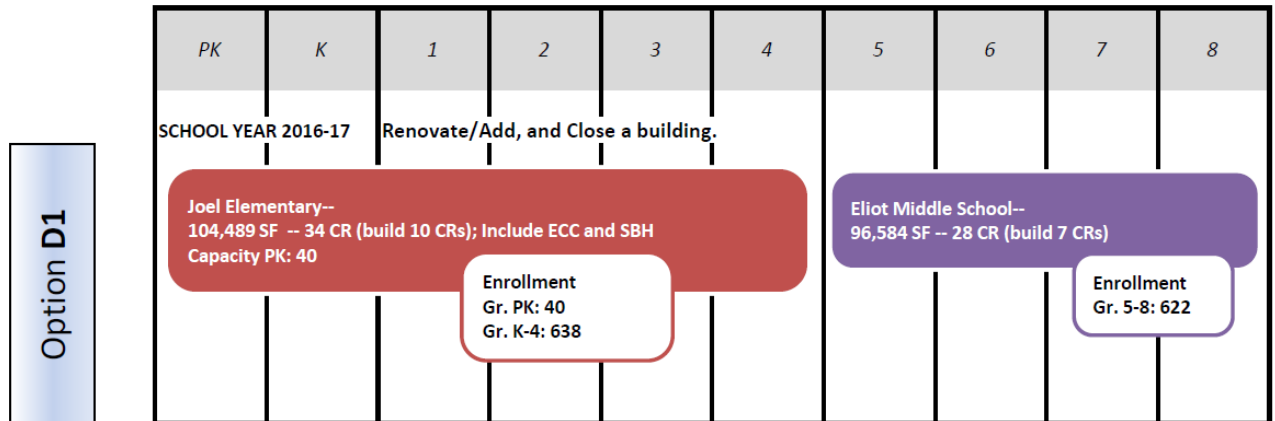
All systems surveyed by CES are replaced across all schools. The temporary/low-quality structures at Joel and Eliot are demolished; the parking hill at Joel is removed, and the affected parking rebuilt. 4th and 5th grades move to Joel. Pierson is renovated and used to host the ECC, SBH and FRC programs, as well as the district offices currently housed in Joel; note that Pierson will contain as much as 7,000 sq. ft. of unprogrammed space in this scenario. The vacated district office space in Joel is renovated to serve as classroom space. Under this option, all schools are designated “renovate as new,” which qualifies all work there for possible 41.43% reimbursement by the State of Connecticut; the district office space planned in Pierson is potentially reimbursable at 20.715%. This option is implemented for the 2017-18 school year at the earliest.



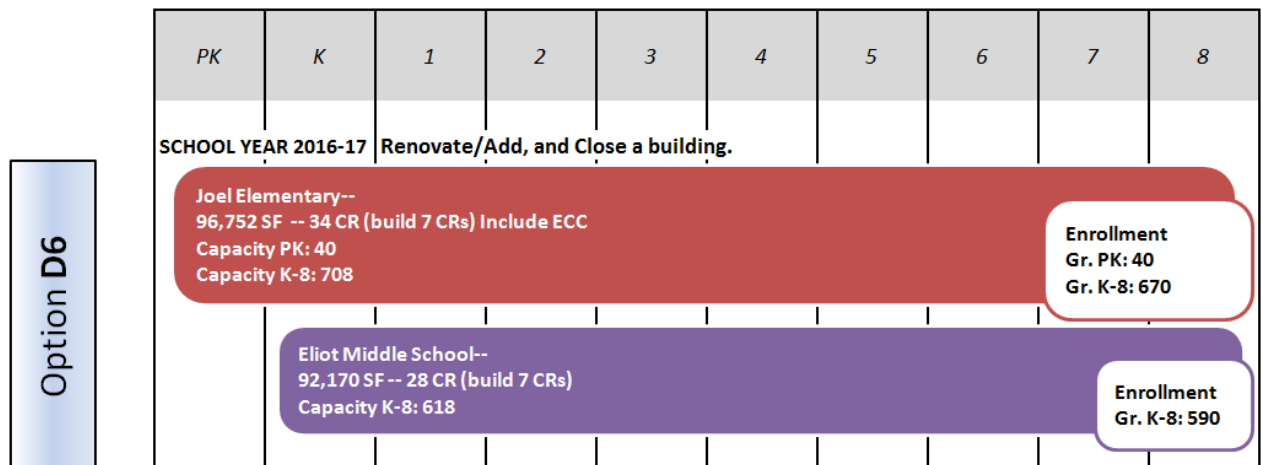
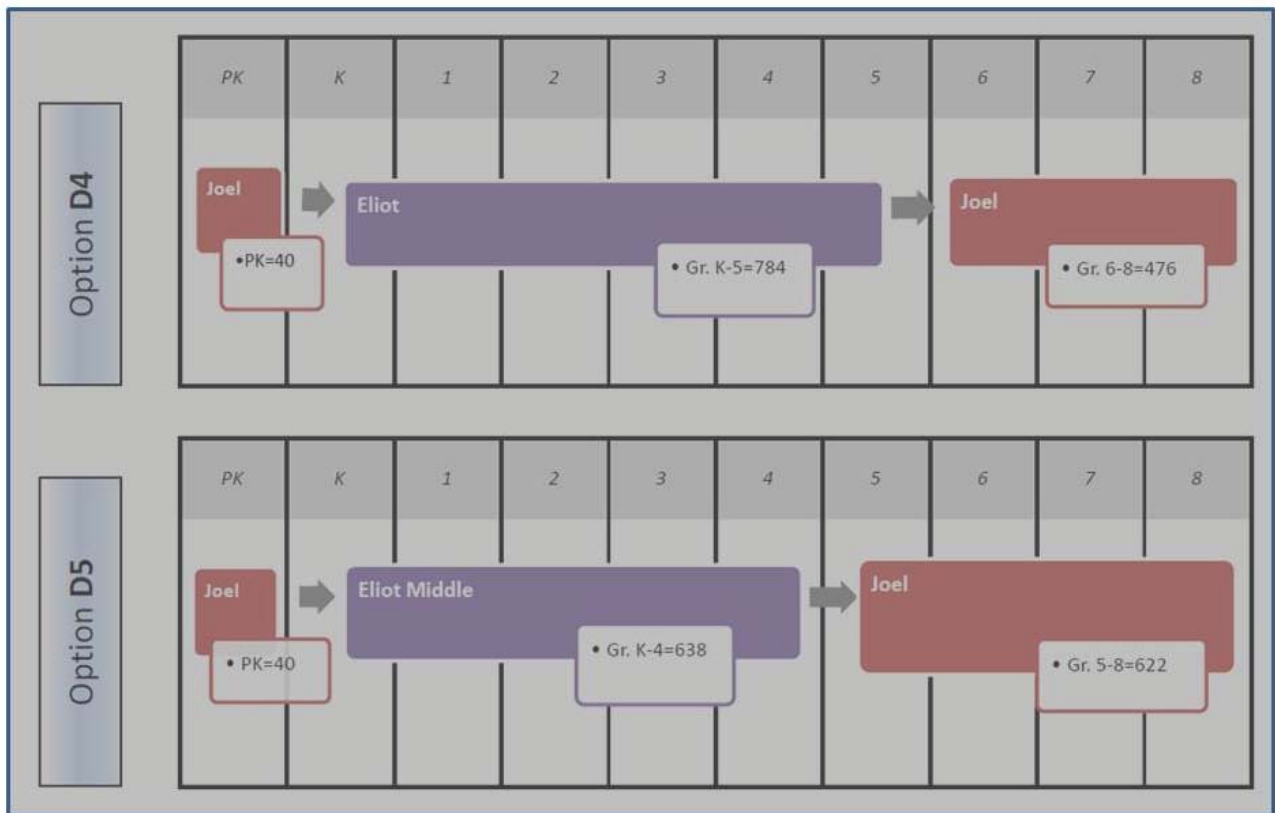
D. Close a School

All systems surveyed by CES are replaced in Joel and Eliot. The temporary/low-quality structures at Joel and Eliot are demolished; the parking hill at Joel is removed, and the affected parking rebuilt. This family of options involves closing Pierson and variously reconfiguring grades at Joel and Eliot. The ECC and SBH programs may or may not be accommodated in different versions; the FRC program is not accommodated. Both buildings receive additions of varying sizes. Under these options, Joel and Eliot (after demolitions) are designated as “renovate as new,” which qualifies these projects for possible 41.43% reimbursement by the State of Connecticut; the newly built additions are potentially reimbursable at 31.43%. These options are implemented for the 2016-17 school year at the earliest.

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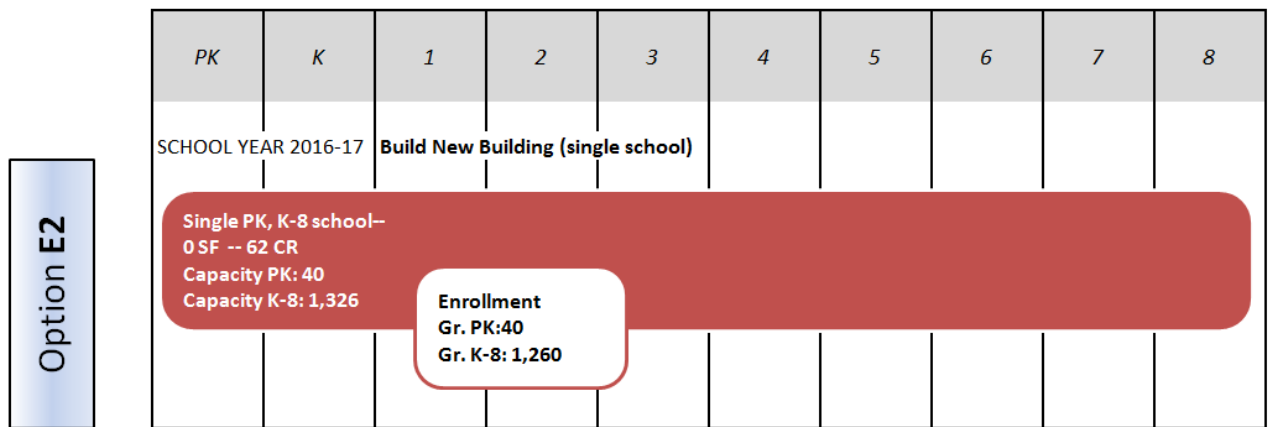
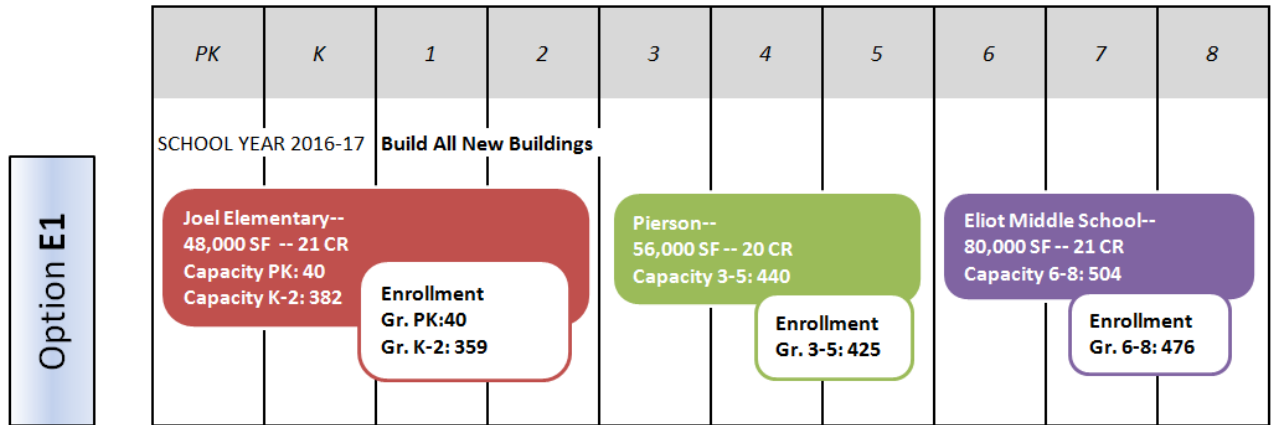


E. All New Buildings

All three current schools are demolished, and either three new schools or one large K-8 school are built with appropriate square footages, on their current sites or others; one version considers a single PK-8 school. In these options, the ECC, SBH and FRC programs are all accommodated, and all new building qualifies for possible 31.43% reimbursement by the State of Connecticut. Joel parking hill is demolished (this project may be eliminated if the current Joel site is not re-used). No potential

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additional costs for the preparation of new building sites have been included in this option. These options are implemented for the 2016-17 school year at the earliest.



5.5 Pros and Cons

The following table compares the advantages and disadvantages of each option.

OPTION		PROS	CONS
A	<ul style="list-style-type: none"> Retain existing configuration. Repairs undertaken in reaction to deteriorating conditions. Potential Cost (based on anticipated repairs): \$17- 19m 	<ul style="list-style-type: none"> Grade configuration remains the same and all schools remain in operation. Very low upfront cost. Comfort with status quo. Additional programs (ECC, SBH, FRC) are accommodated. Fixes immediate concerns. Provides flexibility for future needs. Conservative approach. 	<ul style="list-style-type: none"> Excess of space due to declining enrollment, other space needs still exist. Doesn't improve, just "fixes". No progress means no planning for the future. No possibility of state reimbursement. Reactive approach. Long-term cost increase (future facility improvements will cost more). Very high premium paid on emergency repairs.

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			<ul style="list-style-type: none"> False perception of low overall cost.
B	<ul style="list-style-type: none"> Retain existing configuration. Upgrades and repairs undertaken in reaction to deteriorating conditions, but on a proactive basis. Demo excess square footage at Eliot and Joel to fit declining enrollment. Cost: \$14-16m 	<ul style="list-style-type: none"> Eliot & Joel are a better fit for their population. Eliminates low-quality/nonpermanent structures. Decreased SF lowers operational cost. ECC program accommodated. Grade configuration remains the same and all schools remain in operation. Proactive approach. Bundled repairs cost less. Comfort with status quo. Fixes immediate concerns Flexibility for future needs. Low upfront cost. 	<ul style="list-style-type: none"> No planning for future educational improvements. No possibility of state reimbursement. SBH and FRC not accommodated. Long-term cost increase (future facility improvements will cost more).
C	<ul style="list-style-type: none"> Pierson School no longer functions as an Elementary school; it houses the SBH, FRC, & ECC programs in addition to the B.O.E. district offices. Joel serves Gr. 1-5, Eliot serves Gr. 6-8. Cost: \$85-94m 	<ul style="list-style-type: none"> Keeps all schools operational; provides flexibility for future needs. Uses all existing buildings. Creates ideal 3-grade Middle School. Accommodates additional programs in a central location. Buildings are right sized for the populations. Shared staff. Moderate upfront cost. Opportunity for educational improvements (ECC, etc.). Possible state reimbursement. Proactive approach. New school-neutral location for B.O.E. district offices. 	<ul style="list-style-type: none"> Lost educational benefit unique to Pierson's location. Pierson would require significant renovations for the change in use. Building operational cost are not improved.
OPTION		PROS	CONS
D1	<ul style="list-style-type: none"> Pierson School is returned to town use. Additions/Reno needed at Joel and Eliot to fit additional grades (Additions: 17 classrooms plus support spaces, approx. 30,500 sq. ft. total). Annex construction at both Joel and Eliot to be replaced with permanent construction. Joel houses ECC & serves Gr. PK-4, Eliot serves Gr. 5-8. Cost: \$80-89m 	<ul style="list-style-type: none"> Less one building's operational cost. Efficiency of operation (less administration/staff). Eliminates low-quality/nonpermanent structures. Fewer transitions for students. Decreased transportation costs. Improves traffic. Accommodates ECC and SBH programs, benefiting the community. Shared resources (materials) combined for efficiency. Moderate upfront cost. Opportunity for educational improvements. 	<ul style="list-style-type: none"> Lost Educational benefit unique to Pierson's location. FRC program is not accommodated.

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		<ul style="list-style-type: none"> • Possible state reimbursement. • Proactive approach. 	
D3	<ul style="list-style-type: none"> • Pierson School is returned to town use. • Additions/Reno needed at Joel and Eliot to fit additional grades (Additions: 14 classrooms, approx. 18,000 sq ft. total). • Annex construction at both Joel and Eliot to be replaced with permanent construction. • Joel serves Gr. K-5, Eliot serves Gr. Pk, 6-8. • Cost: \$80-88m 	<ul style="list-style-type: none"> • Less one building's operational cost. • Efficiency of operation (less administration/staff). • Eliminates low-quality/nonpermanent structures. • Decreased transportation costs. • Improves traffic. • Creates ideal 3-grade middle school. • Shared resources (materials) combined for efficiency. • Opportunity for educational improvements. • Moderate upfront cost. • Possible state reimbursement. • Proactive approach. 	<ul style="list-style-type: none"> • Lost Educational benefit unique to Pierson's location. • ECC, SBH and FRC programs not accommodated. • Pk-K transition for students.
D6	<ul style="list-style-type: none"> • Pierson School is returned to town use. • Additions/Reno needed at Joel and Eliot to fit additional grades (Additions: 14 classrooms, approx. 18,000 sq ft. total). • Annex construction at both Joel and Eliot to be replaced with permanent construction. • Joel houses ECC & serves Gr. PK-8, Eliot serves Gr. K-8. • Cost: \$83-91m 	<ul style="list-style-type: none"> • Less one building's operational cost. • Efficiency of operation (less administration/staff). • Eliminates low-quality/nonpermanent structures. • Decreased transportation costs. • Improves traffic. • Shared resources (materials) combined for efficiency. • Opportunity for educational improvements. • Moderate upfront cost. • Possible state reimbursement. • Proactive approach. 	<ul style="list-style-type: none"> • Grade levels K-8 each divided between two schools. • SBH and FRC programs not accommodated.
E1	<ul style="list-style-type: none"> • All new school buildings - 3 schools total, grade configuration remains as it is currently. • Cost: \$95-105m 	<ul style="list-style-type: none"> • New state-of-the-art schools. • Grade configuration remains the same. • All new facilities provide parity among the schools. • ECC, SBH and FRC programs are accommodated. • Efficiency of operation (less administration/staff). • Opportunity to improve education and community programs. • Opportunity for educationally advantageous mixing of grades e.g. reading buddy, peer buddy. • Possible state reimbursement. • Proactive approach. 	<ul style="list-style-type: none"> • Highest upfront cost. • Significant planning and design strategies necessary to keep younger students separate from older (unless there is specific program or event specifically intended for mixing of grades.)
E2	<ul style="list-style-type: none"> • Build single new Pk-8 school. • All existing schools return to town 	<ul style="list-style-type: none"> • New state-of-the-art school. • ECC, SBH and FRC programs 	<ul style="list-style-type: none"> • High upfront cost. • Significant planning and

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	<p>use.</p> <ul style="list-style-type: none">• Pierson for SBH, FRC, and B.O.E. district offices.• Cost: \$92-102m	<p>are accommodated.</p> <ul style="list-style-type: none">• Opportunity to improve education and community programs.• Fewer transitions for students.• Decreased transportation costs.• Improves traffic.• Less two buildings' operational cost.• Maximal efficiency of operation (less administration/staff).• Opportunity for educationally advantageous mixing of grades e.g. reading buddy, peer buddy.• Possible state reimbursement.• Proactive approach.	<p>design strategies necessary to keep younger students separate from older (unless there is a program or event specifically intended for mixing of grades.)</p> <ul style="list-style-type: none">• At 1,300 students approx., may be an overly large school.• Logistical challenges of cafeteria schedules, etc.
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5.6 Opinion of Probable Cost

Construction cost (“hard costs”) includes construction costs, contractor’s general overhead and profit, project general conditions, bonds, and an estimating design contingency. Project “soft costs” are those project related cost centers beyond “brick and mortar”. These “soft cost” centers include, but are not limited to legal fees, technology, design fees, furniture-fixtures-&-equipment, construction contingency, site surveys, borings, geotechnical studies, testing, inspections, independent structural reviews, telephone, and security systems. The “hard costs” and the “soft costs” taken together form the total project cost for a project scope of work.

Construction costs for feasibility study purposes are based on standard industry costs per square foot for demolition, renovation, and/ or new construction. Land acquisition costs (if any) are not made part of the Opinion of Probable Cost at this time. Costs reported are given in year 2014 (current-year) dollar values and do not include escalation or inflation.

An additional contingency is used (Option A only) to account for the additional costs of replacing systems only when they fail, i.e., on an emergency rather than a proactive basis – this contingency represents increased costs for labor and materials on an emergency basis, clean-up and collateral repairs from the system failure, and so on; this contingency is established at 20%.

The overall Opinion of Probable Cost is developed utilizing gross square footage cost centers and combining those square footage calculations as they are divided between renovation and new construction scopes of work. The following tables capture the cost centers described in this section, and a final likely cost range is provided (+/- 5% of the raw cost, rounded).

Clinton Public Schools – Long-Range Facilities Assessment Study

Final note: Demolitions may LOWER the costs of SOME maintenance (Joel loses plumbing facilities in its demolished annex, for example).

State of Connecticut Reimbursement

We have chosen to use the most conservative interpretation of the State's **current (2014-15)** reimbursement program, which specifies:

- 41.43%, for “renovate-as-new” renovation
- 31.43%, for new construction
- 20.715%, for renovation/construction related to Board of Education facilities

The **net cost to Clinton** in the case of each recommended option has been calculated by applying these rates to the appropriate types of construction where it seems logical to do so. These net costs are given below:

Option B Probable Costs

<u>Work</u>	<u>Square feet</u>	<u>Cost per SF</u>	<u>Total cost</u>
Demo: Joel annex	9,256 SF	@ \$10 / SF	= \$93,000
Demo: Joel parking hill			= \$320,000 (flat estimate)
Demo: Eliot modulares	4,191 SF	@ \$10 / SF	= \$42,000
Urgent Maintenance: Joel			= \$6,477,000
Urgent Maintenance: Pierson			= \$2,997,000
Urgent Maintenance: Eliot			= \$5,181,000
Total cost range:			= \$14m – \$16m

No Connecticut state reimbursement

Clinton Public Schools – Long-Range Facilities Assessment Study

Option C Probable Costs

<u>Work</u>	<u>Square feet</u>	<u>Cost per SF</u>	<u>Total cost</u>
Demo: Joel annex	9,256 SF	@ \$10 / SF	= \$93,000
Demo: Joel parking hill			= \$320,000 (flat estimate)
Demo: Eliot modulars	4,191 SF	@ \$10 / SF	= \$42,000
“Renovate as new”: Joel	78,386 SF	@ \$425 / SF	= \$33,314,000
“Renovate as new”: Pierson	48,531 SF	@ \$425 / SF	= \$20,626,000
“Renovate as new”: Eliot	81,884 SF	@ \$425 / SF	= \$34,801,000

Total cost range: = \$85m – \$94m

**NET cost range to Clinton,
with Connecticut state reimbursement:** = \$51m – \$57m

Option D1 Probable Costs

<u>Work</u>	<u>Square feet</u>	<u>Cost per SF</u>	<u>Total cost</u>
Demo: Joel annex	9,256 SF	@ \$10 / SF	= \$93,000
Demo: Joel parking hill			= \$320,000 (flat estimate)
Demo: Eliot modulars	4,191 SF	@ \$10 / SF	= \$42,000
“Renovate as new”: Joel	78,386 SF	@ \$425 / SF	= \$33,314,000
“Renovate as new”: Eliot	81,884 SF	@ \$425 / SF	= \$34,801,000
Addition: Joel	15,800 SF	@ \$525 / SF	= \$8,295,000
Addition: Eliot	14,700 SF	@ \$525 / SF	= \$7,717,500

Total cost range: = \$80m – \$89m

**NET cost range to Clinton,
with Connecticut state reimbursement:** = \$51m – \$56m

Clinton Public Schools – Long-Range Facilities Assessment Study

5.7 *Planning Options Evaluation Matrix*

In the evaluation matrix following this list, please note that **higher** numerical ratings for any item always indicate **more advantageous** circumstances (i.e., *lower* cost, *more* flexibility, *less* cost, and so on). The terms in this matrix under “Considerations” are defined as follows:

COST

Overall Cost

The overall cost of the project combines the Project Cost (a term for Construction Cost plus “soft costs,” all of which are reimbursable under the state program) and non-reimbursable cost items. Financing costs are **not** included in this Overall Cost. However, they are reimbursable.

Probable Reimbursement

As detailed above, Connecticut’s rate of reimbursement varies for different types of work performed up to the maximum reimbursable square footage (based on number of students).

Cost Predictability

This number takes into account the possibility that actual cost could be higher than the early estimated costs, based on the amount of dollars, the length of construction, and the unknown conditions, which are inherent in the option. Examples: the actual amount of hazardous materials to be removed, the actual cost to use temporary space, the extra costs and time to correct hidden deficiencies, etc. Renovation costs generally have a greater uncertainty than new construction costs.

Cost Rating

This number is assigned to the option based on both the Overall Cost and the Cost to Clinton.

CONSTRUCTION ISSUES

Technology Upgrades

Technology can support good education. Components to be considered include networks, communications & computer equipment, software, training, and availability.

Phasing

Construction proceeds in limited areas to allow schools to remain in operation, with temporary provisions for instructional space during construction. The more new space that is built early in the project, the less temporary space is required for phasing.

Disruption to Existing Programs

This factor measures the changes that could reduce the students’ ability to concentrate on learning. Examples: multiple student moves (to temporary space, then back to

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renovated or new space), longer construction period, larger class sizes, or the crowding which another school might experience while providing “swing” space for the displaced students.

Site

This criterion measures the anticipated usability of the site for both students and their parents during construction. The construction site could be crowded with construction equipment, stored materials, delivery trucks, and worker parking, as well as the building construction footprint. With the existing school occupied during construction, students and parents will experience problems using the site, such as a limited play space, limited drop-off and parking areas, and increased traffic conflicts.

EDUCATIONAL RESULTS

Program Fit

Buildings that support best practices of instruction.

Classroom Size

Physical space in classrooms for multiple layouts of student desks, instructional centers, space for students with special needs and aides, space for instructional technology, and storage space for essential books, supplies, and equipment.

Flexibility

School’s ability to adapt to future change as needed.

Transition Between Buildings

Between buildings ability to adapt to future change as needed.

PROJECT RESULTS

Accommodation

Accommodates additional programs-ECC, FRC, and SBH.

Community Improvements

Community-use spaces, such as cafetorium, gym, music, and computer lab, could benefit the greater community if they were available after school, without compromising the security of the rest of the building.

Safety

Control over visitor access to the school and security at the entrances.

Flexibility

Sufficient storage, provisions for summer use of the facilities, support for both school and community activities, and spaces that could be repurposed as needs change.

Traffic

Clinton Public Schools – Long-Range Facilities Assessment Study

This criterion measures the success of providing sufficient parking, drop-off/pick-up areas, service areas, and bus loop areas, as well as connecting drives and curb cuts.

Future Operations

Sustainable (“green”) features can result in less harmful environmental impact; operating costs can be lowered with more efficient systems and improved controls; and consolidated operations can reduce staffing costs. On the other hand, more square feet can lead to higher overall operating costs.

Accessibility

Compliance with handicapped accessibility standards, including the *Americans with Disabilities Act*.

Clinton Public Schools – Long-Range Facilities Assessment Study

Town of Clinton - Facility Utilization Study

OPTIONS MATRIX

1/23/2014

Considerations:		OPTION A	OPTION B	OPTION C	OPTION D						OPTION E	OPTION E
		'DO NOTHING'	MAINTAIN ALL SCHOOLS & DEMO	MAINTAIN ALL SCHOOLS, SELECTIVE GRADE RECONFIG., & FIT ALL NEW PROGRAMS IN PIERSON.	CLOSE A SCHOOL						ALL NEW BUILDINGS	ALL NEW BUILDINGS
					A	B	C	D1	D2	D3		
1. COST												
Overall Cost*	Project cost (\$Millions)	3	4	3	4	1	3	1	1	3	1	1
Probable Reimbursement*	(\$Millions)	1	2	4	4	4	4	4	4	4	3	3
Cost Predictability	Need for Contingency	1	2	3	3	3	3	3	3	4	4	4
Cost Rating	Amount of dollars both overall cost and cost to Clinton	2	3	4	4	4	4	4	4	4	3	1
2. CONSTRUCTION ISSUES												
Technology Upgrades		-	3	5	5	5	5	5	5	5	5	5
Phasing	Order of Construction Temporary Provisions	-	4	3	3	3	3	3	3	2	4	4
Disruption to Existing Programs		-	3	3	2	2	2	2	2	2	3	3
Site	During Construction Contractor Set-up Areas	-	3	3	3	3	3	3	3	3	2	2
3. EDUCATIONAL RESULTS												
Program Fit	Small Group Areas Needs vs. Capacity	-	3	3	3	3	3	3	3	5	5	5
Classroom Size		-	3	3	3	3	3	3	3	5	5	5
Flexibility	ability to adapt to future change as needed	-	4	3	3	3	3	3	3	4	5	5
Transitions Between Buildings		-	3	4	4	4	3	3	3	5	3	5
4. PROJECT RESULTS												
Accommodates addtnl programs- ECC, FRC, & SBH		-	3	4	3	3	4	3	3	5	5	5
Community Improvements	Shared Spaces	-	3	4	3	3	3	3	3	4	4	4
Safety	Building Security Control Visitor Traffic	-	3	4	4	4	4	4	4	4	5	5
Flexibility	Sufficient Storage Summer Use Serve Multi-users	-	4	4	3	3	3	3	3	5	5	5
Traffic	Neighborhood Impact Busing Sustainability	-	4	3	3	3	3	3	3	3	5	1
Future Operat	Staff Costs Maintenance Costs	-	3	3	4	4	4	4	4	5	5	5
Accessibility	ADA Compliance	-	3	5	5	5	5	5	5	5	5	5
TOTALS		7	60	68	66	63	65	62	62	77	77	73

MATRIX SCORING

5	Most Advantageous
3	Mixed Adv./Disadv.
1	Least Advantageous

*COST NOTES

1. All costs are reported in 2014 dollars.

5.8 *Selection of the Three Recommended Options*

After comparing all input and alternatives in detail, we have chosen to recommend a choice from among the following three options, all of which provide for the anticipated drop in enrollments over the next eight years (remarks on relative cost all assume the anticipated state reimbursements):

Option B – This least expensive of all options provides for maintaining the three schools largely as they are on a relatively inexpensive basis, while also taking proactive care for aging systems and removing temporary structures that are at or past the end of their service life.

Option C – This option, while more expensive, attempts to make the best use of existing space without undertaking new construction. Advantages include moving the 5th grade to Joel, since this grade level is ideally taught as part of an elementary school curriculum. The SBH and FRC programs will also be accommodated at Pierson.

The ECC will be housed in Pierson as well, with the disadvantage that Kindergarten and Pre-Kindergarten students will not have the chance to acclimatize to Joel's elementary school environment prior to entering the 1st grade there, creating a new transition point. In addition, provision will have to be made for these students to enter the building at ground level according to code; this is not currently possible in Pierson's configurations, and renovation will have to take this problem into account. However, ECC students will be able to make use of Pierson's advantageous location near multiple fieldtrip/educational enrichment sites.

Lastly, undertaking the "renovation-as-new" of all three buildings creates the possibility of state reimbursement as a predominantly high rate (41.43%).

Option D1 – This alternative, while more expensive, attempts to optimize future arrangements by combining new construction with other approaches. The closure of Pierson will consolidate administrative and physical plant resources in Joel and Eliot; the ECC at Joel also eliminates Option C's transition problem, and all Kindergarten and pre-Kindergarten classrooms can now be brought into line with best practices regarding size, toilet access, etc.; the SBH program can also be accommodated, though the FRC program will not be. Lastly, test fits indicate that some currently needed support spaces can be added or enlarged, e.g., staff lounge, teacher prep room, and ECC playspace (Joel); computer room, language classroom, central copy room, extra special education space, and testing space (Eliot); conference space and staff toilets (both schools). New construction will also yield classrooms meeting recommended size guidelines, in contrast to many undersized existing spaces. Again, state reimbursement (at various rates for different parts of the project) may also be available.

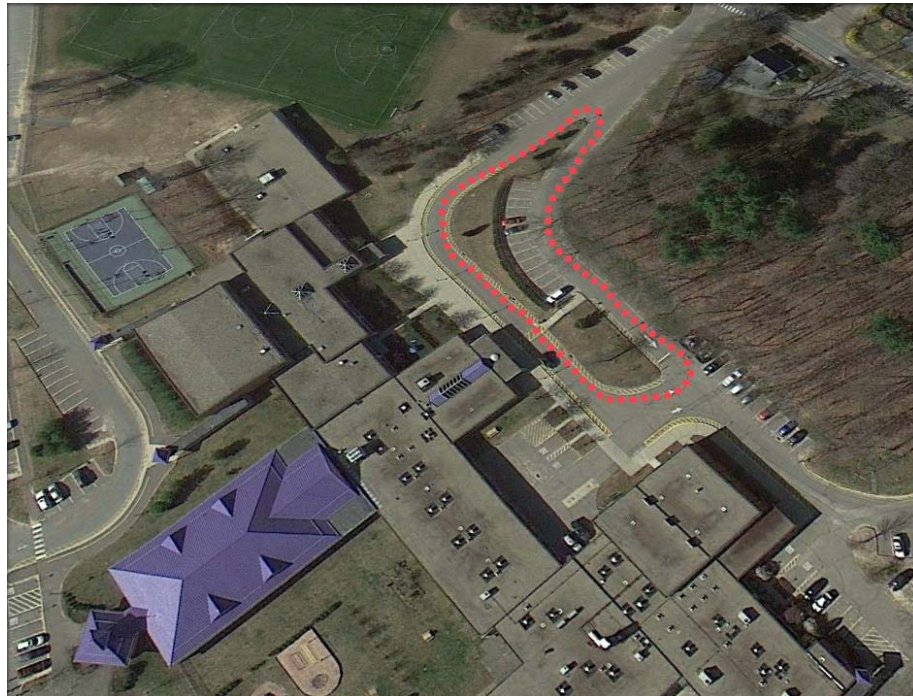
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The other options considered did not address the schools' issues proactively enough (Option A), or were too cost prohibitive, as well as raising controversial issues regarding the advisability of comprehensive (PK-8) schools and parity among parallel programs (Options E1 and E2). Various other alternatives in the D-options family were also discarded due to undesirable and/or excessive student transitions or repurposing of existing buildings.

5.9 *Test Fit Plans*

The following are “test fit” plans only, meaning that they are provided here on a highly schematic basis to show the *general* feasibility of these options. Test fit plans are *not* design documents, and eventual design plans and construction documents may differ significantly from the diagrams below.

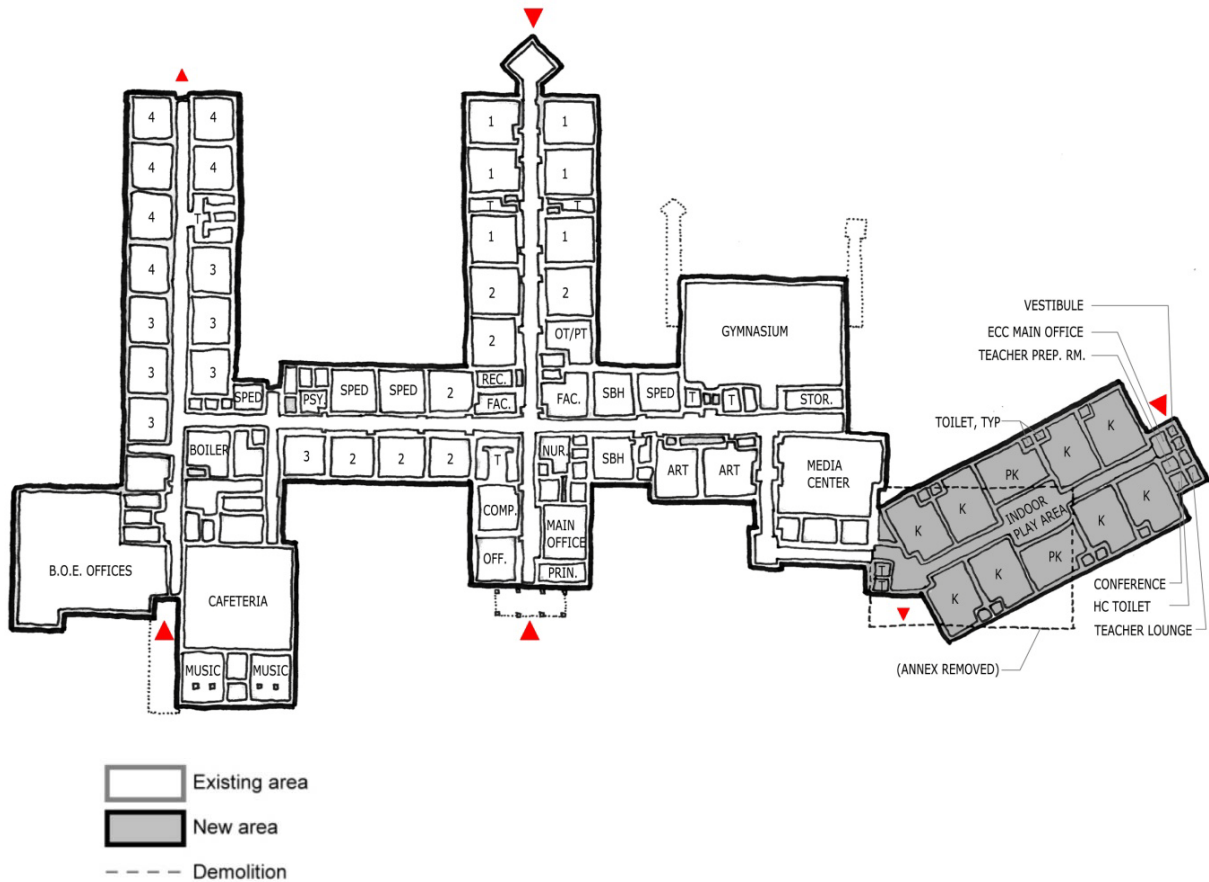
Joel Parking Hill Demolition Test Fit Plan (All Options):



The parking hill at Joel would be removed (dotted line), and the affected parking rebuilt.

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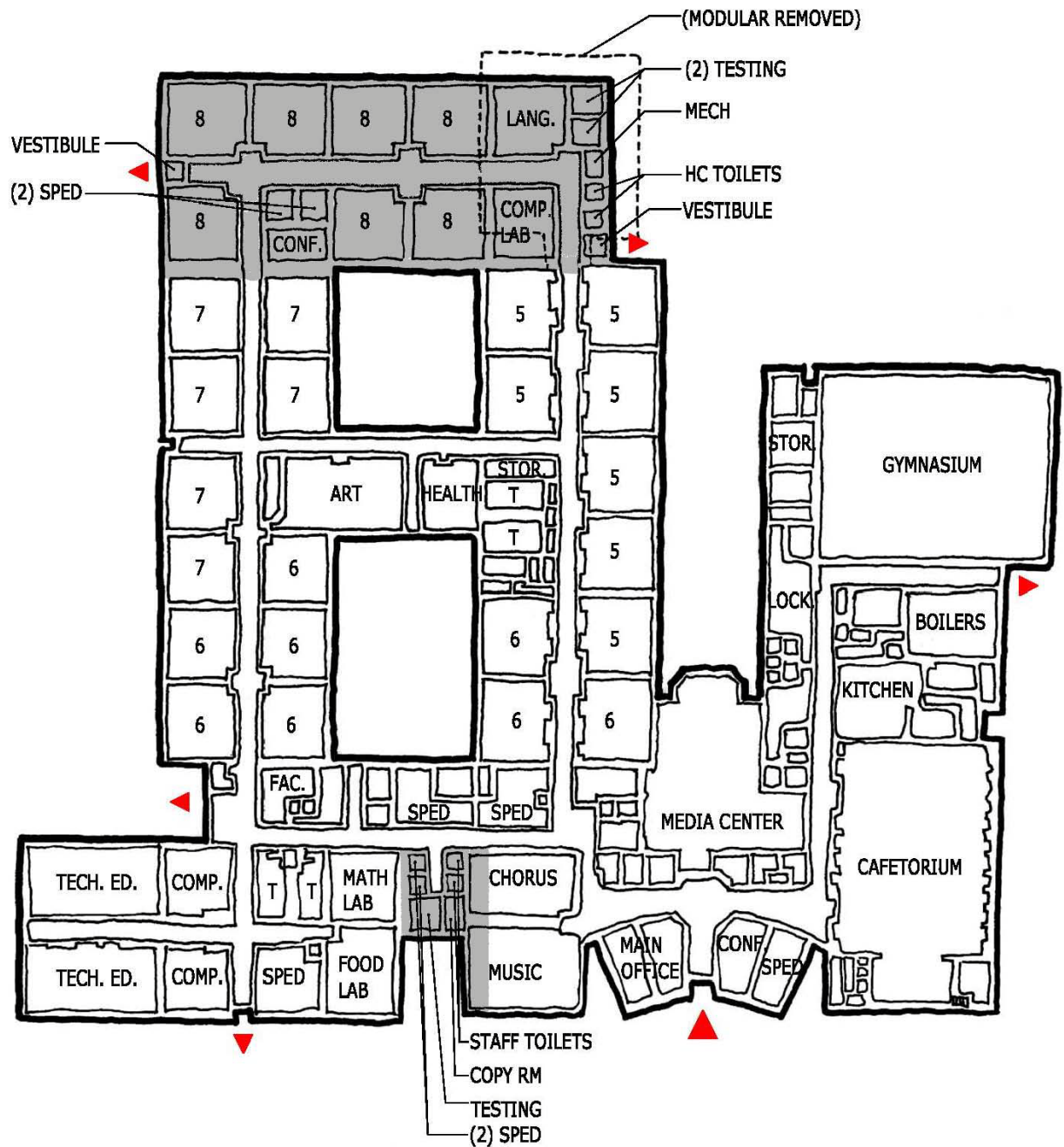
Option D1 School Test Fit Plan (Joel):



The new ECC can be built at the right, in a new wing with its own entrance on the approximate site of the current annex, but now aligned with important features of the site (athletic fields, etc.) – at the same time, the wing’s unique angle also emphasizes the somewhat separate status of the ECC from other grade-level programming. All related facilities would be properly sized and equipped (larger classrooms, child-sized toilet fixtures, etc.), and this wing would also be convenient to the parent drop-off / pick-up area. Multiple needed support spaces are included, and the SBH program could be housed in the current Pre-Kindergarten spaces.

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Option D1 School Test Fit Plan (Eliot):



The new classrooms and some support spaces are added at the top of the diagram, on the approximate site of the current modulars, but now in a permanent addition that creates a second courtyard; further support spaces (including enlarged music and chorus rooms) are accommodated with a small further addition (bottom of diagram).

6

Appendices

▪ Architectural Assessment Report	Appendix-A
▪ MEP Analysis Report	Appendix-B
▪ Enrollment Projections	Appendix-C
▪ Board of Education Maintenance Facility Analysis and Test Fits	Appendix-D
▪ History of Additions at Selected Clinton Schools	Appendix-E
▪ Workshop Notes and Faculty Interview Notes	Appendix-F

Appendix A

Architectural Assessment Report

Drummey Rosane Anderson, Inc.

Clinton Public Schools – Long-Range Facilities Assessment Study

Executive Summary

LEWIN G. JOEL, JR ELEMENTARY SCHOOL

GENERAL INFORMATION

CONSTRUCTED: 1963

ADDITIONS: 1966, 1971, 1991, 2003

ACREAGE: 5.2

SQUARE FOOTAGE: 97,945 (Total)
23,000 (Original Building)
32,000 - 1966 Addition
10,000 - 1971 Addition
20,000 - 1991 Addition
13,000 - 2003 Addition

GRADES: PK - 3

ENROLLMENT: 645 (as of 1/8/12)

BUILDING STRUCTURE:



EXTERIOR ENVELOPE:



The original was constructed in 1963 with multiple additions all using similar construction.

Exterior Walls - The exterior walls of the 1963 original building consist of 4" brick with 8" concrete block backup. The 1966, 71, 91 and 2003 additions were constructed using similar 4" brick exterior and concrete block back-up. All additions met the codes of that time period and are all in fair to good condition.

Windows - New aluminum windows with insulated glass were installed in 2003 meeting current codes for rescue and ventilation requirements.

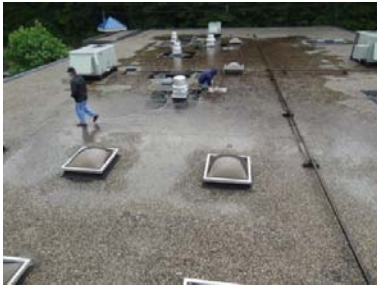
Doors - Glazing systems have been replaced recently in the entry vestibules and doors are in satisfactory condition.

Roof - The oldest roof on the Gymnasium, Library and Art area (EDPM) was installed 1993 on the building and is at the end of its warranty. In 1995 the roof on the Main Office, Old Wing and B.O.E. was replaced with a built-up roof system and is near the end of its warranty. In 2000 the roof on the Annex Wing also received a built-up roof system also has a 20 year warranty. The newest roof installed in 2004, is a Standing Seam Metal roof System that was installed over the new K Wing and Exterior Covered Walkways.

Clinton Public Schools – Long-Range Facilities Assessment Study

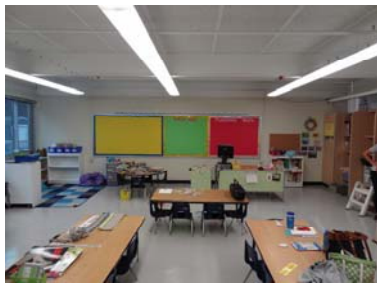
Executive Summary

LEWIN G. JOEL, JR ELEMENTARY SCHOOL



When re-roofing is performed, tapered insulation should be utilized to eliminate significant ponding that has been occurring over the years.

INTERIOR FINISHES & FIXTURES:



Interior Walls - Nearly all of the interior walls are constructed using concrete masonry units (CMU), some with a glazed surface and others painted. Also, brick has been used as a wainscot on some of the interior walls, most notably along the corridors. These partitions were noted as being in sound, good condition with little need for repair/maintenance at this time.

Interior Floors - The corridor, cafeteria and all the classrooms floors are surfaced with vinyl tile, these are in fair condition.



Ceilings - Most Classrooms had exposed tectum deck ceilings and corridors, staff and Office areas having suspended acoustical ceilings installed and were noted to be in fair condition on average.

Classroom Casework - Most of these are in fair condition but are showing signs of wear and deterioration, having exceeded their anticipated life span.

Doors and Frames - Solid core wood doors are mounted in hollow metal door frames throughout the building. Many doors have shown signs of wear and should be replaced due to the high cost of refinishing and repairing.

Door Handles - Lever type hardware is required on doors throughout the building.

Ceramic Tiles - Generally located in toilet rooms, these are in good condition.

Carpeting - Carpet has been installed in staff and Office areas. These are in fairly good condition and have been maintained well.



BUILDING & FIRE CODES:

Construction Type - Building appears to be of Type II B construction (using the 2005 CT Building Code/2003 IBC).

Clinton Public Schools – Long-Range Facilities Assessment Study

Executive Summary

LEWIN G. JOEL, JR ELEMENTARY SCHOOL

ADA / ACCESSIBILITY:



Toilet Facilities - Most are non-compliant for turning radii, accessibility, fixtures types and clearances at doors and fixtures.

Signage - Tactile signage is required for all spaces.

Doors - Push and pull side of many doors appear to not meet ADA requirements.

HAZARDOUS MATERIALS:

**All Information from AHERA
Report Dated February 1, 2013**

Fitting Insulation - Rooms 5, 10, 11, Custodian's room adjacent to room 28, 1st grade girls Restroom and Kitchen Storage. Approximately 50 linear feet.

Sheetrock and Wallboard - Throughout Building

Window Caulking Compound - Throughout Building

Fire Doors - Throughout Building

Cove Moldings and Adhesives - Rooms 27, 29, 31, and 20. Approximately 400 Square feet.

Transite Panels - Window walls on BOE wing, New South Central Wing and Gymnasium.

9x9 Brown Floor Tile and Mastic - Rooms 27, 29, 31 20 and Closet off Cafeteria. Approximately 5600 Square feet.

1x1 White Floor Tile and Mastic - Room 26. Approximately 800 Square feet.

12x12 Brown Floor Tile and Mastic - Room 10. Approximately 600 Square feet.

Suspect Material Beneath Carpet - Administration wing, classrooms, offices and additions 17-19 and 43-47.

Clinton Public Schools – Long-Range Facilities Assessment Study

Executive Summary

PIERSON ELEMENTARY SCHOOL

GENERAL INFORMATION

CONSTRUCTED: 1932

ADDITIONS: 1952 and 2000

ACREAGE: 4

SQUARE FOOTAGE: 50,945 (Total)
25,000 (Original Building)
23,000 - 1952 Addition
3,000 - 2000 Library Addition

GRADES: 4 – 5

ENROLLMENT: 446 (as of 1/8/12)

BUILDING STRUCTURE: The original was constructed in 1932 with 2 additions all using similar construction.



EXTERIOR ENVELOPE:



Exterior Walls - Exterior walls consist of 4" brick, 1" air space, 2" of ridged insulation with a backup 6" concrete block wall.

Windows - Windows are aluminum with clear insulated glass and installed in the mid 90's.

Roof - The oldest roof is on the original structure which is a Slate Shingle Roof installed 1932. Repairs on this section are ongoing as needed.. In 1993 the roof on the roof on the 1952 addition was replaced with a EPDM roof system and has a 20 year warranty. In 2001 the roof on the Library also received a EPDM roof system also has a 20 year warranty. The newest roof installed in 2008 is a built-up roof system and has a 20 year warranty and due for replacement in 2028.

Clinton Public Schools – Long-Range Facilities Assessment Study

Executive Summary

PIERSON ELEMENTARY SCHOOL

INTERIOR FINISHES & FIXTURES:



Interior Walls - Interior partitions and corridors are mainly painted CMU, glazed block, painted plaster and painted brick walls, these walls are in have been noted in fair condition.

Restrooms are mainly ceramic tile and painted plaster walls, ceramic tiles are in poor condition and should be replaced.

Interior Floors - The corridor floors cafeteria and most classrooms have 12" vinyl tile and are in fair condition. In the original wing of the school, classrooms have wood floors that are in very good condition. Carpet is found in staff areas that are in fair condition.



Ceilings - Most spaces have suspended acoustical ceilings installed and were noted to be in fair condition on average.

Classroom Casework - In many locations wear and deterioration were noted. Replacement should be considered.

BUILDING & FIRE CODES:

Construction Type - Building appears to be Type II B construction (using the 2005 CT Building Code/2003 IBC).

Stage Curtain - This does not appear to be fire resistant and therefore will require replacement.

ADA / ACCESSIBILITY:



Exterior Entries - Entrance to Main offices is not accessible due to vestibule being too small and stairs down with no ADA access. Many of the exterior entries are not accessible due to raised entry steps.



Door Handles and Clearances - Door handles throughout the facility shall be changed to the lever type. Push and pull clearances do not comply with ADA requirements.

Stage Access - Current stage does not have ADA access -No ramp or lift.

Clinton Public Schools – Long-Range Facilities Assessment Study

Executive Summary

PIERSON ELEMENTARY SCHOOL



HAZARDOUS MATERIALS:

All Information from AHERA
Report Dated February 1, 2013

Toilet Facilities - With the exception of one unisex toilet, toilet facilities do not comply with current standards for turning radii, clearances, accessibility or types of fixtures.

1x1 Gray Floor Tile and Mastic - Stair treads throughout building and selected landings. Approximately 1000 Square feet.

1x1 White/ Gray Floor Tile and Mastic - Cafeteria and Basement Hallway. Approximately 1800 Square feet.

1x1 Black and White Floor Tile and Mastic - Art room basement level. Approximately 800 Square feet.

1x1 Gray Floor Tile and Mastic - Stair treads throughout building and selected landings. Approximately 1000 Square feet.

1x1 Pink Floor Tile and Mastic - Elevator Lobbies all floors. Approximately 1000 Square feet.

1x1 Brown Floor Tile and Mastic - Second floor closet/ bathroom. Approximately 100 Square feet.

1x1 White Floor Tile and Mastic - Bathroom first floor opposite the Main Office. Approximately 100 Square feet.

9x9 Green/Brown Floor Tile and Mastic - Girls Bathroom basement level and first floor closet. Approximately 700 Square feet.

Suspect Materials Beneath Carpet - Main Hallways, Classrooms and Offices. Unknown amount.

Fitting insulation - Lower Level: Girls bathroom, Cafeteria, Music room, Kitchen, Library, Hallway above ceiling, Cafeteria mechanical room and Custodians room. Approximately 40 linear feet.

Exposed Glue Daubs - Above suspended ceiling in lower level hall and Cafeteria mechanical room. Approximately 2000 Square feet.

Sheetrock and Wallboard - Throughout Building

Window Caulking Compound - Throughout Building

Fire Doors - Throughout Building

Cove Moldings and Adhesives - Throughout Building. Approximately 1400 Square feet.

Clinton Public Schools – Long-Range Facilities Assessment Study

Executive Summary

JARED ELIOT MIDDLE SCHOOL

GENERAL INFORMATION

CONSTRUCTED: 1959

ADDITIONS: 1964 - South Addition
1970 - Portables
1982 - Gymnasium
1991 - Library and Office

ACREAGE: 12.0

SQUARE FOOTAGE: 85,369 (Total)
34,000 (Original Building)
34,000 - 1965 Addition
17,369 - 1991 Addition

GRADES: 6 – 8

ENROLLMENT: 446 (as of 1/8/12)

BUILDING STRUCTURE:

The original was constructed in 1960 with 2 additions, one using similar construction and the other using portables but constructed to be permanent.



EXTERIOR ENVELOPE:

Exterior Walls - Exterior walls of the building consist of 4" brick with interior painted concrete masonry units in most areas and glazed CMU in locker rooms. Most of these walls appear to be in very good condition showing little need for remedial work with the possible exception of cracks created by thermal expansion. Cracked masonry should be re-constructed and new expansion joints created in wall. Recommend cleaning all exterior brick facades.



Windows - Windows are aluminum with clear insulating glass and appear to be in good to fair condition.



Roof - The oldest roof is on the Library and Main Office areas installed 1989 using both built-up and standing seam metal roof systems. These roof's are nearing the end of their life expectancy of 30 years. In 1994 a built-up and Asphalt roof system roof were installed on the Annex and 6th grade wing and is nearing the end of its Warranty. In 2004 a built-up roof system was installed on the 8th grade and Unified Arts wing and has an estimated 30 year life expectancy. In 2008 the roof on the Gymnasium received a new built-up roof system also has a 20 year warranty. The newest roof installed in 2010 is an asphalt shingle roof system and has an estimated 35 year life expectancy.

Clinton Public Schools – Long-Range Facilities Assessment Study

Executive Summary

JARED ELIOT MIDDLE SCHOOL

INTERIOR FINISHES & FIXTURES:



Corridor Walls - Most are constructed using painted concrete masonry units and painted brick and are in very good condition. Some walls consist of exposed brick facing and are also in excellent condition.

Floors - Corridor and Cafeteria floorings are covered with vinyl tile material and generally in good condition. However, some cracks have developed as a result of expansion and/or slight settlement. Classroom floorings are either vinyl tile (VCT) or carpet. VCT floors appear to be in better condition than the Carpet flooring.

Ceilings - Most Staff area spaces have suspended acoustical ceiling panels and are generally in good condition. Classrooms have exposed wood ceilings and are in good condition.

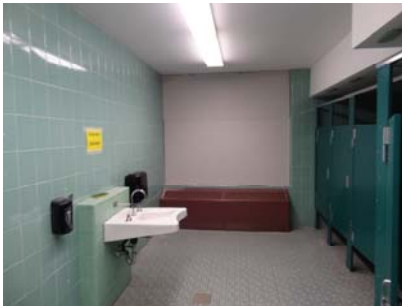
Classroom Casework and Wardrobes - These are showing wear and deterioration and have exceeded their expected life span. Replacement should be considered.



BUILDING & FIRE CODES:

Construction Type - Building appears to be Type II B construction (using the 2005 CT Building Code/2003 IBC).

ADA / ACCESSIBILITY:



Toilet Facilities - With the exception of 2 Staff toilets all others are non-compliant for clearances, turning radii, accessibility or type of fixtures.



Exterior Entries - Many are not accessible due to raised steps which require elimination, possibly by ramping.

Clinton Public Schools – Long-Range Facilities Assessment Study

Executive Summary

JARED ELIOT MIDDLE SCHOOL



Door Clearance - Pull and push side clearance on multiple doors do not meet ADA requirements.

Door Handles - Lever type hardware is required on doors throughout the building.



Ramp Handrails - Handrails on ramp to stage do not meet ADA requirements.

HAZARDOUS MATERIALS:

All Information from AHERA
Report Dated February 1, 2013

1x1 Brown Floor Tile and Mastic - All major Hallways, Woodshop (room 28) and front of stage in Cafeteria. Approximately 24,800 Square feet.

9x9 Brown Floor Tile and Mastic - Room 30. Approximately 600 Square feet.

9x9 Gray Floor Tile and Mastic - Room 30, 24, 25, 27, 33, 34, Faculty room adjacent to Room 34 and Paper storage room opposite exit H. Approximately 6800 Square feet.

Suspect Materials Beneath Carpet - Classrooms, Offices, Library and Teacher's rooms. Unknown amount.

Transite Panels - Beneath some windows and radiators on exterior walls. Rooms 14-34. Approximately 1000 Square feet.

Fitting insulation - Above Kitchen mechanical room and Paper Storage room adjacent to Room 26 and across from Exit H. Above ceiling in Hall across from Cafeteria and Foyer of boys bathroom across from Room 8. Approximately 515 linear feet.

Sheetrock and Wallboard - Throughout Building. Unknown

Window Caulking Compound - Throughout Building with the exception of Rooms 3-12. Unknown

Fire Doors - Throughout Building

Cove Moldings and Adhesives - Throughout Building. Approximately 1400 linear feet.

HAZARDOUS MATERIALS:
CONTINUED

Clinton Public Schools – Long-Range Facilities Assessment Study

Executive Summary

JARED ELIOT MIDDLE SCHOOL

Sinks and Countertops - Rooms 11 and 12. Approximately 50 Square feet.

Flex Connectors - Boys Locker Room. Approximately 20 Square feet.

Appendix B

MEP Analysis Report

Consulting Engineering Services, Inc.

Mechanical and Electrical Systems

Existing Conditions Narrative

Lewin G. Joel Jr. Elementary School
Clinton, CT

Date: March 12, 2014

Prepared by:
Consulting Engineering Services, Inc.
811 Middle Street, Middletown, Connecticut 06457
CES PN 2013178.00

MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION NARRATIVE

APPLICABLE CODES AND STANDARDS

The mechanical, electrical, plumbing, and fire protection systems will be reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

1. 2005 Connecticut State Building Code with 2009 supplements
2. 2005 Connecticut State Fire Safety Code with 2009 supplements
3. 2003 International Building Code (IBC)
4. 2003 International Plumbing Code (IPC)
5. 2003 International Mechanical Code (IMC)
6. 2009 International Energy Conservation Code (IECC)
7. NFPA, All Latest Adopted Versions
8. ASHRAE 90.1
9. Illuminating Engineering Society Lighting Handbook (IESNA), 9th Edition.

PLUMBING SYSTEMS:

Existing Plumbing Utilities

1. Domestic Water: The existing building is currently served by a 4" domestic water service fed from the local water company. The service equipment includes two (2) meters with bypass and isolation valves.

Existing Water Service Equipment



2. Natural Gas Service: The existing building is currently served by a single natural gas service which enters the building at the boiler room. The gas service serves the boilers and kitchen equipment.
3. Sanitary Service: The existing building is currently provided with multiple sanitary waste water laterals that exit the building and are routed to pump stations on site and then to the septic system. The existing piping material is cast iron.
4. Storm Service: The existing building is currently provided with multiple storm laterals that exit the building and are routed to an existing storm system on site. The existing piping material is cast iron.

Existing Plumbing Fixtures and Specialties

1. Water closets are either wall mounted or floor vitreous china fixtures with manual flush valves. The fixtures are in good condition and ADA compliant fixtures are provided.

Typ. wall mounted water closet



Typ. floor mtd. water closet



2. Urinals are wall hung, vitreous china, with manual flush valves. The fixtures are in good condition and ADA compliant fixtures are provided.

Typical urinals



3. Lavatories are wall hung vitreous china. Some faucets are single lever type and some are two twist handle type. ADA lavatories are provided with insulation wrap for exposed piping below fixture. The fixtures are in good condition and ADA compliant fixtures are provided.

Typical Single Lever Lavatories



Typ. Two Handle Lavatory



4. Drinking fountains are mostly wall mounted stainless steel water coolers. Some units are single bowl and some are bi-level double bowl units. Most are in good condition and ADA compliant fixtures are provided. The older enameled steel units are in fair condition.

Two Tier Drinking Fountain



Individual Drinking Fountains



Old Style Drinking Fountain



New Drinking Fountain with
Bottle Filler



5. Classroom sinks vary throughout the building. Some are stainless steel sinks with single lever faucets. Others are ganged type sinks for the technology areas. There are combination sink/bubblers in the Kindergarten area of the building. Most of these sinks are in good condition and are ADA compliant in some locations.

Stainless Steel Sink



Stainless Steel Sink



Gang-Type Washfountain



Typical Sink and Bubbler Combination



6. Janitor sinks are floor mounted mop basins with two lever faucets. Faucets have integral vacuum breakers. Chemical shot feeders are provided in some custodial closets. These sinks are in fair to poor condition.

Terrazzo Floor Type Janitor's Sink



Fiberglass Type Janitor's Sink



Original Cast Iron Janitor's Sink



Existing Plumbing and Piping Systems

1. Sanitary waste and vent piping:

- A. Sanitary waste and vent piping is plain end cast iron with stainless steel clamp and shield assemblies or copper piping. Waste services exit the building below slab at multiple locations. All sanitary waste is piped to the new on-site septic system. Vent piping exits the building through the roof with a 4" diameter pipe and extends a minimum of 12" above the finished roofline.
- B. Floor cleanouts are provided to serve the buried waste system.
- C. Floor drains do not appear to have water based trap primers.

2. Storm piping:

- A. Storm piping is plain end cast iron with stainless steel clamp and shield assemblies. Storm services exit the building below slab at multiple locations. All storm is piped to the new on-site storm system.
- B. No secondary storm piping with overflow drains are provided. There was significant ponding of water on the day of the site visit. This was caused by debris clogging the drains. The debris was removed and the water drained properly.

Typical Roof Drain with Ponding Water



Area of Roof with Ponding Water



- C. Floor cleanouts are provided to serve the buried storm system.
3. Domestic hot water, cold water and re-circulating hot water piping is copper with rigid molded noncombustible glass fiber insulation.
4. Natural gas piping is typically run on the roof of the building. This pipe is schedule 40 black steel pipe. Shut-off valves and regulators are provided where required. Natural gas supply is regulated at the building exterior prior to the gas piping entering the building.

Domestic Hot Water Systems

1. Existing Domestic Hot Water System: The majority of the Schools domestic hot water is generated by a single A.O. Smith Model HW-300-932 gas fired water heater. This water heater was installed in 2003 and is in very good condition. A second A.O. Smith electric water heater is located in a closet in the Annex. This was installed in 2011 and is in good condition.

Existing Water Heater



2. The existing domestic hot water system also incorporates re-circulating pumps, isolation valves and thermostatic mixing valves. The existing domestic hot water system is in good condition.

FIRE PROTECTION SYSTEMS

1. Existing Fire Protection Services: The existing building is currently served by multiple 4" fire protection services fed from the municipal water company. The service equipment located within the building incorporates a double check valve, monitored isolation valves, gauges, bells and drains. The existing equipment appears to be in good condition.

Typical Fire Service with Double Check Valve



2. The existing building is provided with complete sprinkler coverage consisting of multiple zoned areas of the building.

MECHANICAL SYSTEMS:

Existing Boiler Plant

1. Heating is provided for the building with two (2) HB Smith 28 Series hot water boilers with Power Flame dual fuel burners. Both boilers were installed in 2003. The boilers are 10 years old and are in good condition. The combustion air is in accordance with current code requirements.

Boiler Plant



2. Heating hot water is circulated to the air handling units, radiation, unit heaters, and cabinet unit heaters by (2) heating hot water pumps with variable frequency drives. These pumps are approximately 10 years old and are in good condition.
3. Fuel oil is stored in an underground fuel oil storage tank. The fuel oil piping to the boilers has recently been replaced. The fuel oil system is approximately 10 years old and is in good condition.

Existing Heating, Ventilating and Air Conditioning Systems

1. Heating and ventilation is provided to the school via roof mounted and indoor air handling units with hot water coils. Some of the units have DX cooling built in or have remote mounted DX condensing units with indoor cooling coils. The air handling units distribute air to the spaces to maintain temperature. Variable frequency drives are provided for the air handling units to reduce supply air flow during low load periods. The air handling units vary from approximately 20 years old to 10 years old and vary in condition from fair to good.

Typical Indoor Air Handling Unit



Typical Roof Mounted Air Handling Unit



2. Baseboard radiation is provided in classrooms and other areas for heating. This equipment is in fair to good condition.

Typical Classroom Radiation



Typical Classroom Radiation



3. Exhaust is provided for the building by several roof mounted exhaust fans which are approximately (10) years old. Most exhaust fans are in good condition.

Typical Roof Mounted Exhaust Fans



4. Cabinet unit heaters are provided in the corridors and entrance vestibules for heating. All cabinet unit heaters are approximately ten (10) years old and are in good condition.

One Style of Cabinet Unit Heater



Typical Unit Heater



Typical Ceiling Mounted Cabinet Unit
Heater



Typical Wall Mounted Cabinet Unit
Heater



Building Management System

1. The building systems are controlled by a pneumatic control system that is approximately 10 years old. This system includes an air compressor and air dryer in the boiler room. This equipment is in fair condition.

BMS Air Compressor and Dryer



Electrical Systems:

1. The existing electrical service is a 1200amp, 480/277volt, 3-phase, 4-wire service that consists of a main disconnect switch and distribution. The service equipment was installed in 2003 and back feeds the original distribution equipment. The service equipment is in good condition.

Main Switchboard



2. There is a mixture of original panelboards and newer panelboards in the building. The original panelboards are in fair condition and have no spare capacity. The newer panelboards are in good condition.

Typical Older Electrical Panel



Typical Newer Electrical Panel



3. Lighting throughout the facility consists of a number of type of light fixtures including surface mounted acrylic lensed fixtures, recessed acrylic lensed fixtures, recessed parabolic fixtures, T8 high performance fluorescent fixtures in the Gymnasium, and pendant mounted fixtures. All of these fixtures have been upgraded with T8 lamps.

Pendant Mounted Lighting



Typ. Recessed Parabolic Fixtures



Gymnasium Lighting



Typ. Wall Mtd. Lighting in Toilet Rooms



4. Motion detectors have been installed in most of the areas in the building. This equipment is in good working condition.

5. The fire alarm system consists of a Fire Lite fire alarm control panel, remote annunciator, and manual fire alarm pull stations and horn strobes, some smoke detectors, and duct smoke detectors. The fire alarm control panel is in good condition. The equipment is 10 years old and in good condition.

Fire Alarm Control Panels



Typical Manual Fire Alarm Pullstation



Typical Heat Detector



Typ. Horn Strobe Unit



6. The exit signs throughout the building are plastic fluorescent type with integral batteries. These units are in good condition.

Typical Exit Sign



7. The emergency lighting in the building is a mixture of surface ceiling or wall mounted fixtures, 2-head units with integral batteries. There are also some 9x9 self-contained emergency fixtures in the building. The existing equipment is in fair to good condition.

Typical 2-Head Emergency Light



Typical Recessed Emergency Light



8. The site lighting consists of pole mounted shoe-box fixtures, wall mounted flood lights on the exterior of the building or surface mounted fixtures in vestibules or covered entrances. Some of these fixtures are new and in good condition. Other fixtures are in fair condition.
9. Security features in the building consist of interior and exterior cameras, motion detectors, and intercom stations at various access points around the building. All of this equipment is in good condition.
10. Data/technology consists of wired computer stations throughout the building. There are also projectors in a number of classrooms. Most of this has been added over the years as needed or technology changes. This equipment is in good condition.

Recommendations:

- Provide isolation valves on the hot and cold water distribution system.
- Provide trap primers or seals on all floor drains. This is a current code requirement.
- Replace the missing dome strainers on the roof drains.
- Provide secondary overflow drains. This will be required if the roof is replaced or the building is renovated unless scuppers are provided.
- Replace existing water closets with high efficiency, low flow, 1.28 Gallons Per Flush (GPF) water closets. This will be required if the building is renovated.
- Replace existing urinals with high efficiency, low flow, 0.125 GPF urinals. This will be required if the building is renovated.
- Replace older indoor air handling units with new high efficiency equipment. The equipment is at the end of its expected service life.
- Install variable frequency drives on all motors. This can be done now if the temperature control system is upgraded for energy savings. Recommended also if the building is renovated.
- Upgrade the HVAC control system to a new electronic system with energy management capability. Recommended for energy efficiency and savings.
- Upgrade the exterior lighting with new fixtures using LED or induction type lamps. Recommended for energy savings and lower maintenance costs.

- Upgrade the electrical service and panelboards. This will be required if the building is renovated.

Clinton School District								
Capital Needs Survey Form								
Lewin G., Joel Jr. Elem. School								
March 12, 2014						97,425		97425
SYSTEM	System Priority 1 to 4 (1-Health & Safety, 2-High, 3-Medium, 4-Low)	System Rating 1 to 5 (1 Poor, 5 Excellent)	Last Major Reconstruction (Year)	Projected Replacement (Year) Based on 20Year Service Life	Quantity	Unit Price	Current Replacement Cost	REMARKS
Division 2 - Site Construction								
Site - Lighting	1	4	2012	2032	18	\$ 1,500	\$ 27,000.00	
Building Mounted Fixtures								
Pole Mounted Fixtures								
Site - Fuel Tanks - Oil	3	5	2003	2023	1	\$ 30,000	\$ 30,000	
Division 21/22/23 - Mechanical								
Water Main	1	3	2003	2053	1	\$ 50,000.00	\$ 50,000.00	This is an exception to the 20 year service life. Typically the piping lasts much longer
Water Distribution System	1	3	2003	2053	1	\$ 50,000.00	\$ 50,000.00	This is an exception to the 20 year service life. Typically the piping lasts much longer
Plumbing Drainage System	1	3	2003	2053	1	\$ 60,000.00	\$ 60,000.00	This is an exception to the 20 year service life. Typically the piping lasts much longer
Fire Protection System	1	3	2003	2023	97,425	\$ 4.50	\$ 438,412.50	
Plumbing Fixtures / Equipment	1	3	2003	2023	97,425	\$ 6.00	\$ 584,550.00	
Water Heater - 2011	1	4	2011	2031	1	\$ 5,000.00	\$ 5,000.00	
Water Heater - 2003	1	3	2003	2023	1	\$ 15,000.00	\$ 15,000.00	
Boiler	2	1	2003	2023	2	\$ 35,000.00	\$ 70,000.00	
Heating Hot Water Pumps	2	4	2003	2023	2	\$ 15,000.00	\$ 30,000.00	
Ventilation Systems	2	3	2003	2023	97,425	\$ 25.00	\$ 2,435,625.00	
Air Handling Systems - General	3	2	2003	2023			Inc w/ vent sys	
Terminal Units	3	3					Inc w/ vent sys	
Exhaust Systems - General	4	3	2003	2023			Inc w/ vent sys	
Exhaust Systems - Kitchen Hood	2	1			1	\$ 5,212.50	\$ 5,212.50	
Control Systems	3	3	2003	2023	97,425	\$ 5.00	\$ 487,125.00	
Cold Rooms								None noted.
Indoor Air Quality								No issues noted.
Division 26 - Electrical								
General Electrical (Starters, VFD's, etc...)								
Electrical Service / Distribution	1	4	1992	2012	1	\$150,000.00	\$ 150,000.00	
Transformer	1	5	2003	2023	1	\$ -	\$ -	Utility company owned
Lighting - General	1	4	2003	2023	97,425	\$ 6.00	\$ 584,550.00	
Emergency Lighting	1	3		2015	97,425	\$ 1.50	\$ 146,137.50	
Communication Systems	1	3	1992	2012	97,425	\$ 2.00	\$ 194,850.00	
Technology Systems	2	3		2013	97,425	\$ 2.00	\$ 194,850.00	
Fire Alarm System	1	3	1992	2012	97,425	\$ 2.50	\$ 243,562.50	
Clock System	3	3	1992	2012	97,425	\$ 1.00	\$ 97,425.00	

Mechanical and Electrical Systems
Existing Conditions Narrative

Abraham Pierson Elementary School
Clinton, CT

Date: March 6, 2014

Prepared by:
Consulting Engineering Services, Inc.
811 Middle Street, Middletown, Connecticut 06457
CES PN 2013178.00

MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION NARRATIVE

APPLICABLE CODES AND STANDARDS

The mechanical, electrical, plumbing, and fire protection systems will be reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

1. 2005 Connecticut State Building Code with 2009 supplements
2. 2005 Connecticut State Fire Safety Code with 2009 supplements
3. 2003 International Building Code (IBC)
4. 2003 International Plumbing Code (IPC)
5. 2003 International Mechanical Code (IMC)
6. 2009 International Energy Conservation Code (IECC)
7. NFPA, All Latest Adopted Versions
8. ASHRAE 90.1
9. Illuminating Engineering Society Lighting Handbook (IESNA), 9th Edition.

PLUMBING SYSTEMS:

Existing Plumbing Utilities

1. Domestic Water: The existing building is currently served by a 2" domestic water service fed from the local water company. The service equipment includes a meter with bypass and isolation valves.

Exist. Water Meter Assembly



2. Natural Gas Service: The existing building is currently served by a single natural gas service the gas service serves the boilers, domestic hot water heater, and kitchen equipment.

Existing Gas Meter



3. Sanitary Service: The existing building is currently provided with multiple sanitary waste water laterals that exit the building and are routed to the septic system. The existing piping material is cast iron.
4. Storm Service: The existing building is currently provided with multiple storm laterals that exit the building and are routed to an existing storm system on site. The existing piping material is cast iron.

Existing Plumbing Fixtures and Specialties

1. Water closets are either wall mounted or floor vitreous china fixtures with manual 1.6 GPF flush valves. The fixtures are in good condition and ADA compliant fixtures are provided.

Older Floor Mtd. Water Closet



Newer Floor Mtd. Water Closet



2. Urinals are wall hung, vitreous china, with manual flush valves. The fixtures are in fair condition. ADA compliant fixtures are not provided.

Wall Mtd. Urinal



3. Lavatories are wall hung vitreous china. Some faucets are single lever type and some are two twist handle type. ADA lavatories are provided with insulation wrap for exposed piping below fixture. The fixtures are in good condition and ADA compliant fixtures are provided.

Wall Mtd. Lavatories



Wall Mtd. Lavatory - ADA



4. Drinking fountains are wall mounted vitreous china or stainless steel water coolers. Most are in good condition and ADA compliant fixtures are provided.

Original Drinking Fountain



New Electric Water Cooler



5. Classroom sinks vary throughout the building. Some are enameled steel sinks with double lever faucets. Most of these sinks are in good condition and are ADA compliant in some locations.

Typical Older Classroom Sink



6. Janitor sinks are wall mounted cast iron sinks with two lever faucets. Faucets do not have integral vacuum breakers. Chemical shot feeders are provided in some custodial closets. These sinks are in poor condition.

Typical Janitor Sink



Existing Plumbing and Piping Systems

1. Sanitary waste and vent piping:

- A. Sanitary waste and vent piping is plain end cast iron with stainless steel clamp and shield assemblies. Waste services exit the building below slab at multiple locations. All sanitary waste is piped to the on-site septic system. Vent piping exits the building through the roof with a 4" diameter pipe and extends a minimum of 12" above the finished roofline.
- B. Floor cleanouts are provided to serve the buried waste system.
- C. Floor drains do not appear to have water based trap primers.

2. Storm piping:

- A. Storm piping is plain end cast iron with stainless steel clamp and shield assemblies. Storm services exit the building below slab at multiple locations. All storm water is piped to the new on-site storm system.
- B. No secondary storm piping with overflow drains are provided. Some of the roof drains are missing the domed covers.

Existing Roof Drain



Existing Roof Drain Missing Dome



- C. Floor cleanouts are provided to serve the buried storm system.

3. Domestic hot water, cold water and re-circulating hot water piping are copper with rigid molded noncombustible glass fiber insulation.
4. Natural gas piping within the building is schedule 40 black steel pipe. Shut-off valves and regulators are provided where required. Natural gas supply is regulated at the building exterior prior to the gas piping entering the building.

Domestic Hot Water Systems

1. Existing Domestic Hot Water System: The majority of the Schools domestic hot water is generated by a single A.O. Smith gas fired water heater. This water heater is in good condition.

Hot Water Heater



2. The existing domestic hot water system also incorporates re-circulating pumps, isolation valves and thermostatic mixing valves. The existing domestic hot water system is in good condition.

MECHANICAL SYSTEMS:

Existing Boiler Plant

1. Heating is provided for the building with two (2) HB Smith 28 Series steam boilers with Power Flame dual fuel burners. One of the boilers was installed in 1993 and the other in 2011. The boilers are between 20 and 3 years old and are in fair to good condition. The older boiler is reaching the end of its service life. The combustion air is in accordance with current code requirements; however, a motorized damper should be installed to close when the boilers are not operating to prevent cold air from entering the boiler room.

Existing 2011 Steam Boiler



Existing Combustion Louver



Existing 1993 Steam Boiler



2. Fuel oil is stored in an underground fuel oil storage tank. The fuel oil system is in fair condition.

Existing Heating, Ventilating and Air Conditioning Systems

1. Heating and ventilation is provided to the school via roof mounted exhaust fans and indoor air handling units with steam coils. The air handling units distribute air to the spaces to maintain temperature. The air handling units in the 1952 portion of the building are in poor condition. The exhaust fans vary in age and range from fair to good condition.

Existing Indoor Air Handling Unit



Existing Exhaust Fans



2. There is a roof mounted air handling unit on the rear of the building in the 2000 addition. This unit is in good condition.

Existing Roof Top Air Handling Unit



- Heat is provided throughout the building using cabinet unit heaters, cast iron radiators and other unit heaters. Most of this equipment is dated and in poor condition.

Ceiling Mtd. Cabinet Unit Heater



Steam Unit Heater



Wall Mounted Radiation



Classroom Radiation



- Exhaust is provided for the building by several roof mounted exhaust fans. Most exhaust fans are in fair condition.

Roof Mtd. Exhaust Fan w/Exposed
Ductwork



Roof Mounted Exhaust Fans



Building Management System

1. The building systems are controlled by a mix of older pneumatic controls and newer electronic controls. There have been upgrades to the system and the basic equipment is in place if the entire facility wanted to upgrade to 100% electronic controls. The old pneumatic system includes an air compressor and air dryer in the boiler room. This equipment is in fair condition.

BMS Compressor and Air Dryer



Electrical Systems:

1. The existing electrical service is a 208/120volt, 3-phase, 4-wire service that consists of a main disconnect switch and distribution. The service equipment is in fair condition.

Main Electrical Service
Disconnect Switch



Electrical Distribution Panel



2. There is a mixture of original panelboards and newer panelboards in the building. The original panelboards are in fair condition and have no spare capacity. The newer panelboards are in good condition.

Original Electrical Panel

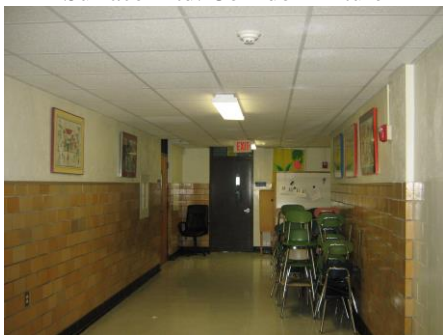


Newer Electrical Panels



3. Lighting throughout the facility consists of a number of type of light fixtures including surface mounted acrylic lensed fixtures, recessed acrylic lensed fixtures, recessed parabolic fixtures, T8 high performance fluorescent fixtures in the Gymnasium, and pendant mounted etc. All of these fixtures have been upgraded with T8 lamps.

Surface Mtd. Corridor Fixture



Typical Acrylic Lens Fluorescent Fixture



Gymnasium Light Fixture



Typical Surface Mtd. Classroom Fixture



4. Motion detectors have been installed in most of the areas in the building. This equipment is in good working condition.

5. The fire alarm system consists of a Fire-Lite fire alarm control panel, remote annunciator, and manual fire alarm pull stations and horn strobes, some smoke detectors, and duct smoke detectors. The fire alarm control panel is in good condition. Some of the manual fire alarm pull stations and horn strobe units are not ADA compliant. The fire alarm control panel is 5-years old while other equipment ranges from 20 years old to less than 10 years old. The entire system is in good condition.

Fire Alarm Control Panel



Newer Horn/Strobe - ADA



Typical Manual Pull Station



Older Horn Strobe – NON-ADA



6. The exit signs throughout the building are plastic fluorescent type with integral batteries. These units are in good condition.

Typical Exit Sign



7. The emergency lighting in the building is a mixture of surface ceiling or wall mounted fixtures, 2-head units with integral batteries. The existing equipment is in fair condition.

One Style of Two Head Emergency
Light



One Style of Two Head Emergency
Light



8. The site lighting consists of wall mounted flood lights on the exterior of the building or surface mounted fixtures in vestibules or covered entrances. Some of these fixtures are new and in good condition. Other fixtures are in fair condition.

Exterior Flood Lights



Typical Wall Pack Light Fixture



Light Fixture Under Canopy



9. Security features in the building consist of interior and exterior cameras, motion detectors, and intercom stations at various access points around the building. All of this equipment is in good condition.
10. Data/technology consists of wired computer stations throughout the building. Most of this has been added over the years as needed or technology changes. This equipment is in good condition.

Recommendations:

- Provide isolation valves on the hot and cold water distribution system.
- Provide vacuum breakers on janitors sinks. This is a current code requirement.
- Provide trap primers or seals on all floor drains. This is a current code requirement.
- Replace the missing dome strainers on the roof drains.
- Provide secondary overflow drains. This will be required if the roof is replaced or the building is renovated unless scuppers are provided.
- Provide a motorized damper on the boiler combustion air louver. Energy savings.
- Replace existing water closets with high efficiency, low flow, 1.28 Gallons per Flush (GPF) water closets. This will be required if the building is renovated.
- Replace existing urinals with high efficiency, low flow, 0.125 GPF urinals. This will be required if the building is renovated.
- Upgrade the heating system to a hot water system. This is recommended if the building is renovated for the efficiency of the hot water system vs. the steam system.
- Replace older indoor air handling units with new high efficiency equipment. The equipment is at the end of its expected service life.
- Install variable frequency drives on all motors. This can be done now if the temperature control system is upgraded for energy savings. Recommended also if the building is renovated.
- Upgrade the HVAC control system to a new electronic system with energy management capability. Recommended for energy efficiency and savings.
- Upgrade the exterior lighting with new fixtures using LED or induction type lamps. Recommended for energy savings and lower maintenance costs.
- Upgrade any older T12 lamps with 800 Series T8 lamps. This is required since T12 lamps are no longer being produced.
- If the building is renovated, replace the 1993 boiler with new.
- Provide a NFPA 13 sprinkler system. This will be required if the building is renovated.
- Upgrade the electrical service and panelboards. This will be required if the building is renovated.

Clinton School District									
Capital Needs Survey Form									
Abraham Pierson School									
March 6, 2014						50,635			50635
SYSTEM	System Priority 1 to 4 (1-Health & Safety, 2-High, 3-Medium, 4-Low)	System Rating 1 to 5 (1 Poor, 5 Excellent)	Last Major Reconstruction (Year)	Projected Replacement (Year) Based on 20 Year Service Life	Quantity	Unit Price	Current Replacement Cost	REMARKS	
Division 2 - Site Construction									
Site - Electrical									
Site - Lighting	1	2	2000	2020	10	\$ 1,500.00	\$ 15,000.00		
Building Mounted Fixtures	1	2			10	\$ 1,000.00	\$ 10,000.00		
Pole Mounted Fixtures									
Site - Fuel Tanks - Oil	3	3	2000	2020	1	\$ 30,000.00	\$ 30,000.00		
Division 21/22/23 - Mechanical									
Water Main	1	2	1952	2002	1	\$ 50,000.00	\$ 50,000.00	This is an exception to the 20 year service life. Typically the piping lasts much longer	
Water Distribution System	1	2	1952	2002	1	\$ 50,000.00	\$ 50,000.00	This is an exception to the 20 year service life. Typically the piping lasts much longer	
Plumbing Drainage System	1	2	1952	2002	1	\$ 60,000.00	\$ 60,000.00	This is an exception to the 20 year service life. Typically the piping lasts much longer	
Plumbing Fixtures / Equipment	1	3	1952	1972	40,000	\$ 6.00	\$ 240,000.00	This applies to original 1952 Fixtures.	
Plumbing Fixtures / Equipment	1	3	2000	2020	10,635	\$ 6.00	\$ 63,810.00	This applies to equipment added in 2000	
Water Heaters	1	3	2000	2020	1	\$ 7,500.00	\$ 7,500.00		
Boiler - 1993	2	2	1993	2013	1	\$ 35,000.00	\$ 35,000.00		
Boiler - 2011	2	4	2011	2031	1	\$ 35,000.00	\$ 35,000.00		
Heating Hot Water Pumps	2	4	2000	2020	2	\$ 15,000.00	\$ 30,000.00		
Ventilation Systems	1	1	1952	1972	50,635	\$ 25.00	\$ 1,265,875.00		
Air Handling Systems - General	2	2	2000	2020			Inc w/ vent sys		
Air Handling Systems - Admin	1	1	1952	1972	2	\$ 12,400.00	\$ 24,800.00		
Terminal Units	3	3					Inc w/ vent sys		
Exhaust Systems - General	4	3	2000	2020			Inc w/ vent sys		

Clinton School District								
Capital Needs Survey Form								
Abraham Pierson School								
March 6, 2014						50,635		50635
SYSTEM	System Priority 1 to 4 (1-Health & Safety, 2-High, 3-Medium, 4-Low)	System Rating 1 to 5 (1 Poor, 5 Excellent)	Last Major Reconstruction (Year)	Projected Replacement (Year) Based on 20 Year Service Life	Quantity	Unit Price	Current Replacement Cost	REMARKS
Exhaust Systems - Kitchen Hood	2	1		2012	1	\$ 5,212.50	\$ 5,212.50	
Control Systems	3	3			50635	\$ 5.00	\$ 253,175.00	
Cold Rooms								None noted.
Indoor Air Quality								No issues noted.
Division 26 - Electrical								
General Electrical (Starters, VFD's, etc...)								
Electrical Service / Distribution	1	3	1992	2012	1	\$150,000.00	\$ 150,000.00	
Transformer	1	5	2003	2023	1	\$ -	0	Utility company owned
Lighting - General	1	4	2003	2023	50635	\$ 6.00	\$ 303,810.00	
Emergency Lighting	1	3		2015	50635	\$ 1.50	\$ 75,952.50	
Communication Systems	1	3	1992	2012	50635	\$ 2.00	\$ 101,270.00	
Technology Systems	2	3		2013	50635	\$ 2.00	\$ 101,270.00	
Fire Alarm System	1	3	1992	2012	50635	\$ 2.50	\$ 126,587.50	
Clock System	3	3	1992	2012	50635	\$ 1.00	\$ 50,635.00	

Mechanical and Electrical Systems
Existing Conditions Narrative

Jared Eliot Middle School
Clinton, CT

Date: March 12, 2014

Prepared by:
Consulting Engineering Services, Inc.
811 Middle Street, Middletown, Connecticut 06457
CES PN 2013178.00

MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION NARRATIVE

APPLICABLE CODES AND STANDARDS

The mechanical, electrical, plumbing, and fire protection systems will be reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

1. 2005 Connecticut State Building Code with 2009 supplements
2. 2005 Connecticut State Fire Safety Code with 2009 supplements
3. 2003 International Building Code (IBC)
4. 2003 International Plumbing Code (IPC)
5. 2003 International Mechanical Code (IMC)
6. 2009 International Energy Conservation Code (IECC)
7. NFPA, All Latest Adopted Versions
8. ASHRAE 90.1
9. Illuminating Engineering Society Lighting Handbook (IESNA), 9th Edition.

PLUMBING SYSTEMS:

Existing Plumbing Utilities

1. Domestic Water: The existing building is currently served by a 4" domestic water service fed from the local water company. The service equipment includes two (2) meters with bypass and isolation valves.

Exist. Water Meter Assembly



2. Natural Gas Service: The existing building is currently served by a single natural gas service which enters the building at the boiler room. The gas service serves the boilers and kitchen equipment.

Existing Gas Service



3. Sanitary Service: The existing building is currently provided with multiple sanitary waste water laterals that exit the building and are routed to pump stations on site and then to the septic system. The existing piping material is cast iron.
4. Storm Service: The existing building is currently provided with multiple storm laterals that exit the building and are routed to an existing storm system on site. The existing piping material is cast iron.

Existing Plumbing Fixtures and Specialties

1. Water closets are either wall mounted or floor vitreous china fixtures with manual flush valves. The fixtures are in good condition and ADA compliant fixtures are provided.

Typ. Floor Mtd. Water Closet



Typ. Wall Mtd. Water Closet



2. Urinals are wall hung, vitreous china, with manual flush valves. The fixtures are in good condition and ADA compliant fixtures are provided.

Typical Urinal



3. Lavatories are wall hung vitreous china. Some faucets are single lever type and some are two twist handle type. ADA lavatories are provided with insulation wrap for exposed piping below fixture. The fixtures are in good condition and ADA compliant fixtures are provided.

Typ. Wall Hung Lavatory



4. Drinking fountains are wall mounted stainless steel water coolers. Some units are single bowl and some are bi-level double bowl units. Most are in good condition and ADA compliant fixtures are provided.

Typical Double Bowl Water Cooler



Typical Single Bowl Water Cooler



5. Classroom sinks vary throughout the building. Some are stainless steel sinks with single and dual lever faucets. Others are ganged type sinks outside the ganged toilet rooms. Most of these sinks are in good condition and are ADA compliant in some locations. The ganged sinks are not ADA compliant and should be replaced.

Classroom Sink



Non-ADA Ganged Wash Sink



6. Janitor sinks are wall mounted mop basins with two lever faucets. Faucets do not have integral vacuum breakers. Chemical shot feeders are provided in some custodial closets. These sinks are in poor condition.

Typical Janitor's Sink



Existing Plumbing and Piping Systems

1. Sanitary waste and vent piping:
 - A. Sanitary waste and vent piping is plain end cast iron with stainless steel clamp and shield assemblies. Waste services exit the building below slab at multiple locations. All sanitary waste is piped to the new on-site septic system. Vent piping exits the building through the roof with a 4" diameter pipe and extends a minimum of 12" above the finished roofline.
 - B. Waste water and vent piping from science classroom fixtures is acid resistant piping and is piped to a central dilution/neutralization tank. Tank is provided with limestone chips to neutralize the acid waste water prior to discharge into the main waste water system. Tank top has screws to secure the top and also provided with caulk to seal all potential sewer gases.
 - C. Floor cleanouts are provided to serve the buried waste system.
 - D. Floor drains do not appear to have water based trap primers.
2. Storm piping:
 - A. Storm piping is plain end cast iron with stainless steel clamp and shield assemblies. Storm services exit the building below slab at multiple locations. All storm water is piped to the on-site storm system.
 - B. No secondary storm piping with overflow drains are provided.
 - C. Floor cleanouts are provided to serve the buried storm system.
3. Domestic hot water, cold water and re-circulating hot water piping is copper with rigid molded noncombustible glass fiber insulation.
4. Natural gas piping within the building is schedule 40 black steel pipe. Shut-off valves and regulators are provided where required. Natural gas supply is regulated at the building exterior prior to the gas piping entering the building.

Domestic Hot Water Systems

1. Existing Domestic Hot Water System: The majority of the Schools domestic hot water is generated by a single Lochinvar gas fired water heater. This water heater was installed in 2012 and is in very good condition. A second A.O. Smith electric water heater is located in a closet by the foods room. This was installed in 2005 and is in good condition.

2012 Hot water heater



2. The existing domestic hot water system also incorporates re-circulating pumps, isolation valves and thermostatic mixing valves. The existing domestic hot water system is in good condition.

MECHANICAL SYSTEMS:

Existing Boiler Plant

1. Heating is provided for the building with two (2) HB Smith 28 Series oil fired hot water boilers with Power Flame dual fuel burners. One of the boilers was installed in 1988 and the other in 2001. 1988 Boiler shows signs of sections having failed and repaired. The boilers are between 25 and 12 years old and are in fair condition. The older boiler is reaching the end of its service life. The combustion air is in accordance with current code requirements.

1988 Boiler



2003 Boiler



2. Heating hot water is circulated to the air handling units, unit ventilators, radiation and cabinet unit heaters by four (4) constant volume heating hot water pumps. These pumps are approximately 10 years old and are in good condition.

Hot Water Pumps



3. Fuel oil is stored in an underground fuel oil storage tank. The fuel oil piping to the boilers has recently been replaced. The fuel oil system is approximately 5 years old and is in good condition.

Existing Heating, Ventilating and Air Conditioning Systems

1. Heating and ventilation is provided to the school via roof mounted and indoor air handling units with hot water coils. The air handling units distribute air to the spaces to maintain temperature. Variable frequency drives are provided for the air handling units to reduce supply air flow during low load periods. The air handling units vary from approximately 30 years old to 10 years old and vary in condition from fair to good.

Mezzanine Air Handling Unit



Mezzanine Air Handling Unit



Gymnasium Air Handling Unit



Roof Top Air Handling Unit



Roof Top Cendensing Unit



Roof Top Air Handling Unit



- Unit ventilators are provided in classrooms for heating and ventilation. This equipment is in fair condition. The use of unit ventilators within teaching spaces is no longer permitted by the State of Connecticut due to noise concerns.

Typical Classroom Unit Ventilator



3. Exhaust is provided for the building by several roof mounted exhaust fans which are approximately ten to twenty years old. The condition ranges from fair to poor.

Roof Mounted Exhaust Fans



Older Roof Mounted Exhaust Fan



4. Cabinet unit heaters are provided in the corridors and entrance vestibules for heating. All cabinet unit heaters are approximately ten (10) years old and are in good condition.

Typ. Ceiling Mtd. Cabinet Unit Heater



Building Management System

1. The building systems are controlled by an older pneumatic control system that is approximately 30 years old. This system includes an air compressor and air dryer in the boiler room. This equipment is in fair condition.

BMS Air Compressor



BMS Air Dryer



Electrical Systems:

1. The existing electrical service is a 1000amp, 208/120volt, 3-phase, 4-wire service that consists of a main disconnect switch and distribution. The service equipment is in fair condition.
2. A 190kW diesel fired emergency generator was installed in 2007. This serves as back-up power to the building. This equipment is located outside the building in a weatherproof enclosure and is equipped with a sled-base fuel tank. This equipment is in good condition.

Exterior Emergency Generator



3. There is a mixture of original panelboards and newer panelboards in the building. The original panelboards are in fair condition and have no spare capacity. The newer panelboards are in good condition.

Newer Panelboards



4. Lighting throughout the facility consists of a number of type of light fixtures including surface mounted 2x2 acrylic lensed fixtures, recessed acrylic lensed fixtures, recessed parabolic fixtures, T8 high performance fluorescent fixtures in the Gymnasium, and pendant mounted etc. All of these fixtures have been upgraded with T8 lamps.

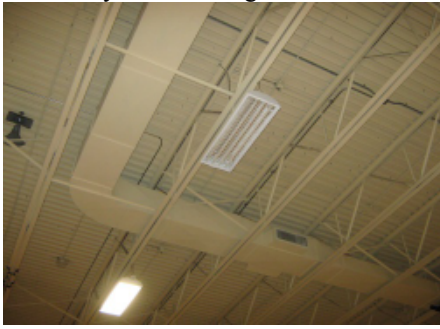
Typ. Surface Mtd. Fluorescent Fixture



Typ. Recessed Acrylic Lens Fixture



Gymnasium Light Fixture



Pendant and Recessed Fixtures



5. Motion detectors have been installed in most of the areas in the building. This equipment is in good working condition.
6. The fire alarm system consists of a Honeywell/Gamewell fire alarm control panel, remote annunciator, and manual fire alarm pull stations and horn strobes, some smoke detectors, and duct smoke detectors. The fire alarm control panel is in good condition. The majority of the manual fire alarm pull stations and horn strobe units are not ADA compliant. The fire alarm control panel is (1) year old and in good condition. Additional fire alarm horn strobes are required to meet current code requirements.

Fire Alarm Control Panel



7. The exit signs throughout the building are plastic fluorescent type with integral batteries. These units are in good condition.

Typical Exit Sign



8. The emergency lighting in the building is a mixture of surface ceiling or wall mounted fixtures, 2-head units with integral batteries. The existing equipment is in fair to poor condition.

Two Head Emergency Lighting Unit



Two Head Emergency Lighting Unit



9. The site lighting consists of pole mounted shoe-box fixtures, wall mounted flood lights on the exterior of the building or surface mounted fixtures in vestibules or covered entrances. Some of these fixtures are new and in good condition. Other fixtures are in fair condition.

Wall Mounted Site Lighting Fixtures



Surface Mounted Fixture Under Canopy



Wall Mounted Flood Light Fixtures



10. Security features in the building consist of interior and exterior cameras, motion detectors, and intercom stations at various access points around the building. All of this equipment is in good condition.

Security Keypad



11. Data/technology consists of wired computer stations throughout the building. There are also projectors in a number of classrooms. Most of this has been added over the years as needed or technology changes. This equipment is in good condition.

Recommendations:

- Provide isolation valves on the hot and cold water distribution system.
- Provide vacuum breakers on janitors sinks. This is a current code requirement.
- Provide trap primers or seals on all floor drains. This is a current code requirement.
- Provide secondary overflow drains. This will be required if the roof is replaced or the building is renovated unless scuppers are provided.
- Replace existing water closets with high efficiency, low flow, 1.28 Gallons Per Flush (GPF) water closets. This will be required if the building is renovated.
- Replace existing urinals with high efficiency, low flow, 0.125 GPF urinals. This will be required if the building is renovated.
- Replace older indoor air handling units with new high efficiency equipment. The equipment is at the end of its expected service life.
- Install variable frequency drives on all motors. This can be done now if the temperature control system is upgraded for energy savings. Recommended also if the building is renovated.
- Upgrade the HVAC control system to a new electronic system with energy management capability. Recommended for energy efficiency and savings.
- Upgrade the exterior lighting with new fixtures using LED or induction type lamps. Recommended for energy savings and lower maintenance costs.
- Upgrade any older T12 lamps with 800 Series T8 lamps. This is required since T12 lamps are no longer being produced.
- If the building is renovated, replace the 1988 boiler with new.
- Provide a NFPA 13 sprinkler system. This will be required if the building is renovated.

- Upgrade the electrical service and panelboards. This will be required if the building is renovated.

Clinton School District									
Capital Needs Survey Form									
Joel Eliot School									
March 12, 2014						88,230		88230	
</									

Appendix C

Enrollment Projections

Milone & MacBroom

SCHOOL ENROLLMENT PROJECTIONS Clinton

NOVEMBER 2013

PREPARED FOR:
CLINTON PUBLIC SCHOOLS

PREPARED BY:



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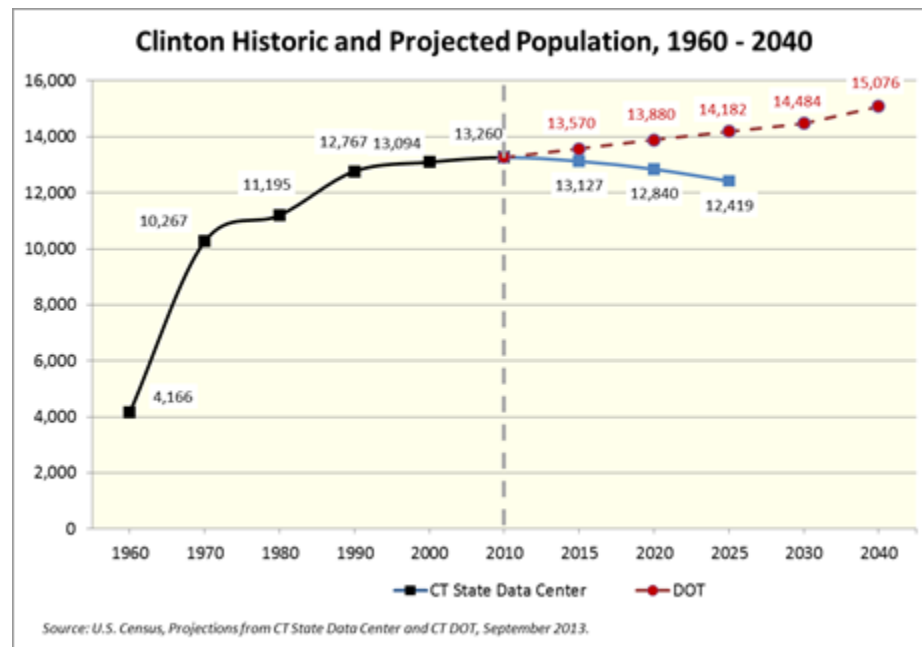
INTRODUCTION

Clinton Public Schools contracted with Milone & MacBroom, Inc. to develop enrollment projections for the district as part of larger facility planning study. This report examines factors that influence school enrollments, namely, trends in demographics, births, housing and development, and regional school enrollments. These trends are accounted for in the methodology used to project district-wide enrollments on a grade-by-grade level.

DEMOGRAPHICS

Clinton's population increased only 1.3% from 2000 to 2010, compared to a 6.8% increase for Middlesex County and a 4.9% increase for the State during the same time period. While Clinton grew over the decade, the total increase was only 166 people.

FIGURE 1



Clinton has a variety of neighborhood types, from more rural areas in the northern portion of Town with population densities of 400 – 600 people per square mile, to the more densely settled Town Center, shoreline and Route 1 corridor with more than 1,500 people per square mile. The population density map shows where concentrations of population are located within Clinton.

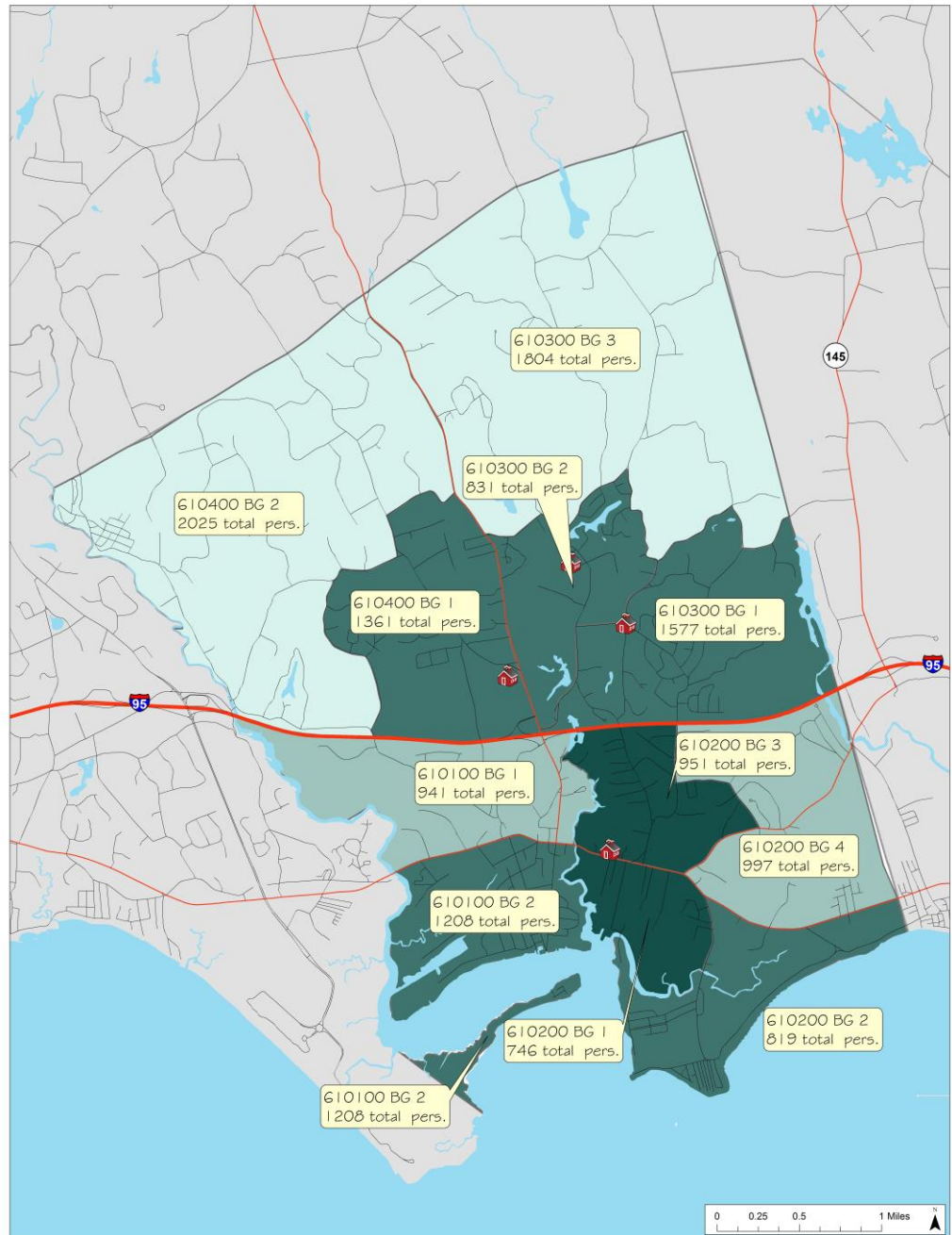
While the Town's overall population remained relatively unchanged between 2000 and 2010, the northern neighborhoods gained population, while those south of I-95 largely lost population. The following series of maps and tables highlight changes in population dynamics from 2000 to 2010 at the Census Block Group level. Most neighborhoods lost school-age population (ages 5-18). Indeed, the Town's school-age population declined 8.9% overall from 2000 to 2010. The number of females of child-bearing age (ages 18-39) decreased dramatically by 21.4%, indicating that lower birth rates can be expected for the next few years.

Population projections from the CT State Data Center and the CT Department of Transportation show a range of potential total population (see Figure 1). The projections show either a very slowly growing (+.46% per year) or slightly declining (-.42% per year) total population to 2025. Given recent housing growth, discussed later in this report, some growth in population over the next ten years is anticipated; however, growth will be tempered by expected continued low birth rates.

MAP 1

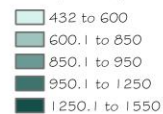
TABLE 1

	Total Population		
	2000	2010	Change
Tract 6101.00 BG 1	1,058	941	-11.1%
Tract 6101.00 BG 2	1,384	1,208	-12.7%
Tract 6102.00 BG 1	734	746	1.6%
Tract 6102.00 BG 2	921	819	-11.1%
Tract 6102.00 BG 3	784	951	21.3%
Tract 6102.00 BG 4	1,042	997	-4.3%
Tract 6103.00 BG 1	1,499	1,577	5.2%
Tract 6103.00 BG 2	863	831	-3.7%
Tract 6103.00 BG 3	1,465	1,804	23.1%
Tract 6104.00 BG 1	1,393	1,361	-2.3%
Tract 6104.00 BG 2	1,951	2,025	3.8%
TOTAL:	13,094	13,260	1.3%



Clinton Public Schools
Comprehensive Enrollment Analysis

Persons per Square Mile



Population Density 2010
by Census Block Group

Sources:
© Base Map Data, CT DEEP, 2012
© Streets, StreetMap USA, 2012.

This map is intended for planning
purposes only. Distortions may not
be exact.

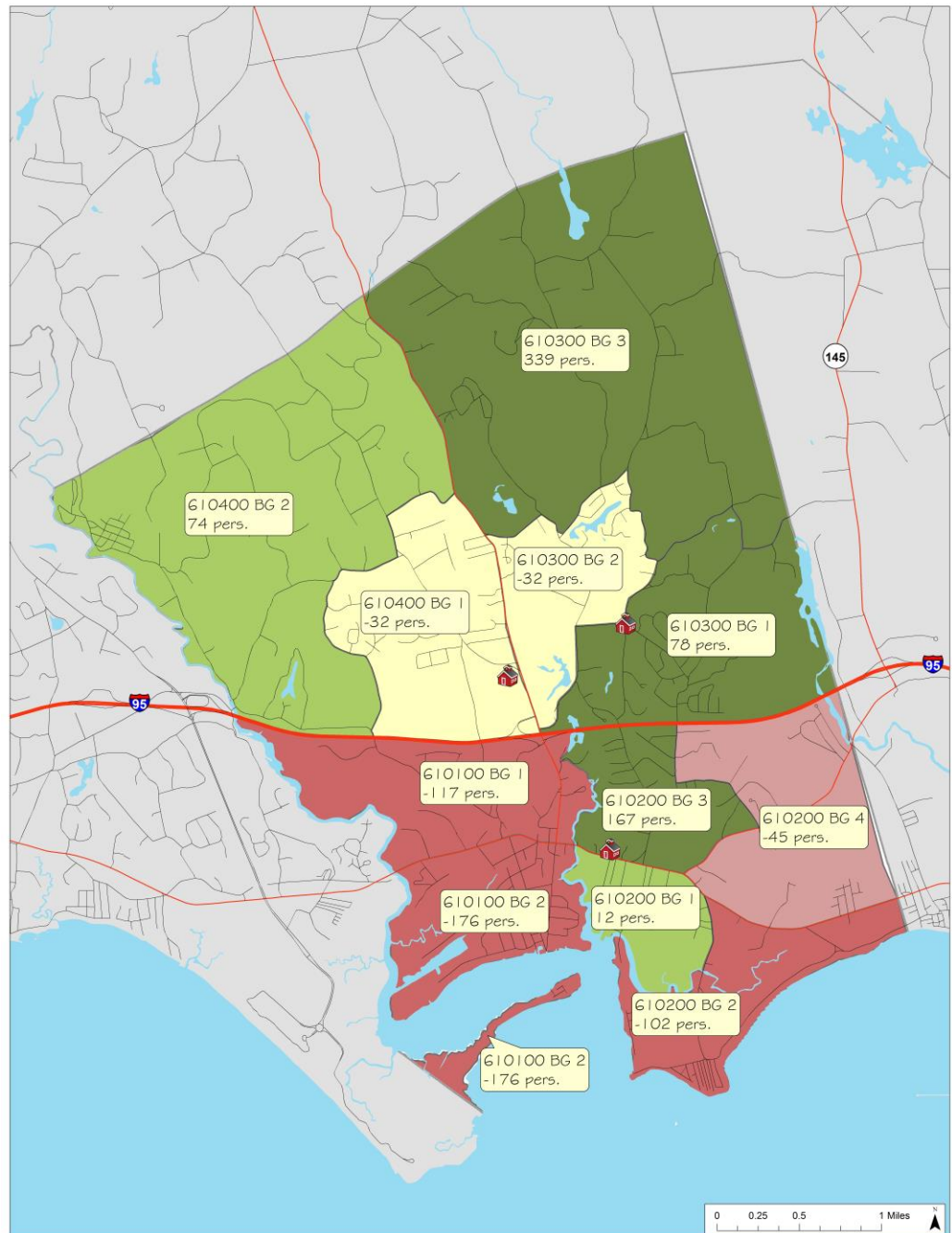
September 2013

MILONE & MACBROOM

MAP 2

TABLE 2

	School-Age Population (Ages 5-18)		
	2000	2010	Change
Tract 6101.00 BG 1	214	166	-22.4%
Tract 6101.00 BG 2	257	154	-40.1%
Tract 6102.00 BG 1	104	93	-10.6%
Tract 6102.00 BG 2	136	95	-30.1%
Tract 6102.00 BG 3	136	171	25.7%
Tract 6102.00 BG 4	177	131	-26.0%
Tract 6103.00 BG 1	321	309	-3.7%
Tract 6103.00 BG 2	188	163	-13.3%
Tract 6103.00 BG 3	309	382	23.6%
Tract 6104.00 BG 1	297	226	-23.9%
Tract 6104.00 BG 2	436	455	4.4%
TOTAL:	2575	2345	-8.9%



Clinton Public Schools
Comprehensive Enrollment Analysis

Total Population Change
2000 to 2010
by Census Block Group

Percentage Change

- 13% to -11%
- 10.9% to -4%
- 3.9% to 1%
- 1.01% to 5%
- 5.01% to 23%

Sources:
* Base Map Data, CT DEEP, 2012
* Streets, StreetMap USA, 2012

This map is intended for planning
purpose only. Calculations may not
be exact.

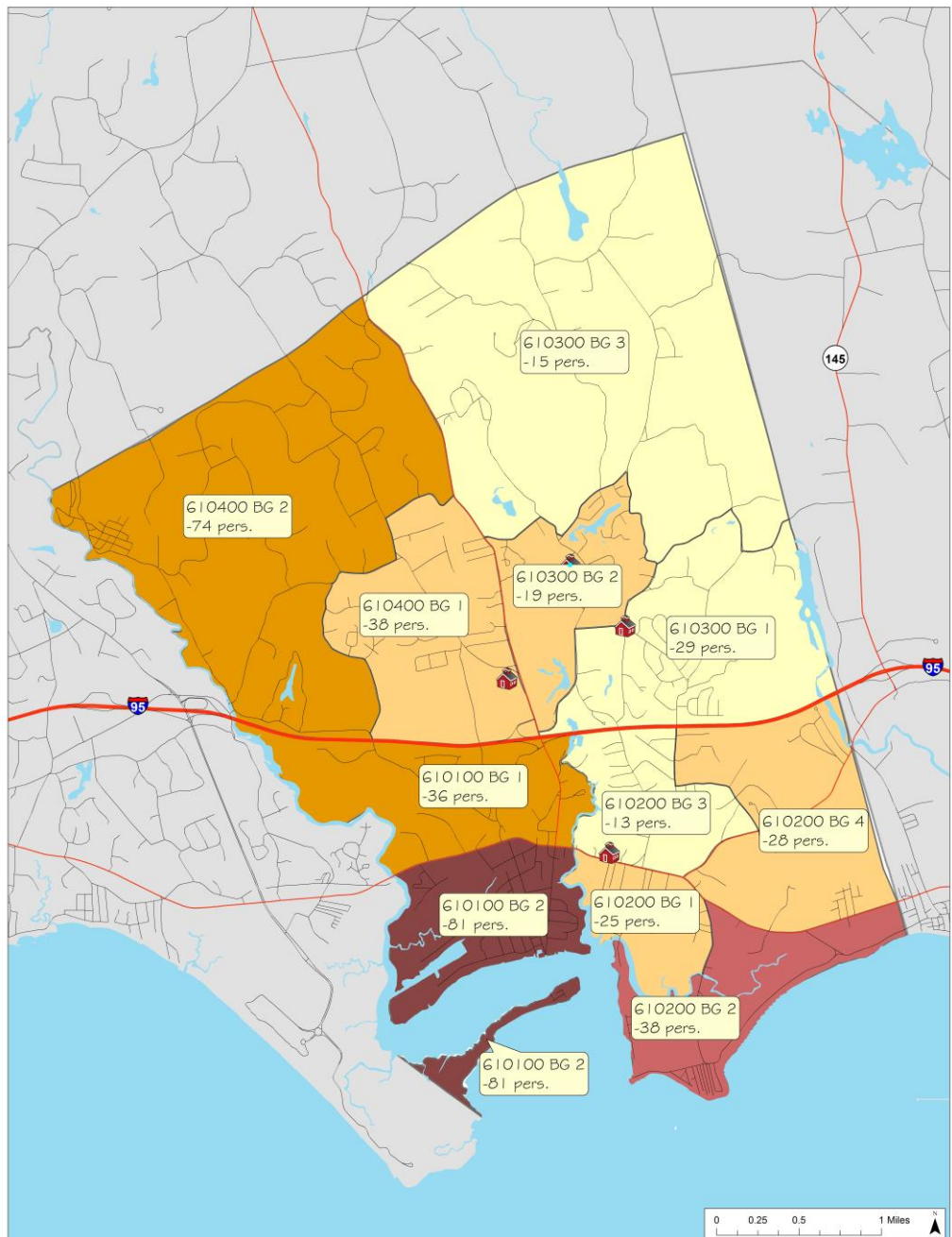
September 2013

MILONE & MACBROOM

MAP 3

TABLE 3

	Females of Child-Bearing Age (Ages 18-39)		
	2000	2010	Change
Tract 6101.00 BG 1	154	118	-23.4%
Tract 6101.00 BG 2	198	117	-40.9%
Tract 6102.00 BG 1	123	98	-20.3%
Tract 6102.00 BG 2	113	75	-33.6%
Tract 6102.00 BG 3	109	96	-11.9%
Tract 6102.00 BG 4	143	115	-19.6%
Tract 6103.00 BG 1	208	179	-13.9%
Tract 6103.00 BG 2	119	100	-16.0%
Tract 6103.00 BG 3	191	176	-7.9%
Tract 6104.00 BG 1	200	162	-19.0%
Tract 6104.00 BG 2	289	215	-25.6%
TOTAL:	1847	1451	-21.4%



Clinton Public Schools
Comprehensive Enrollment Analysis

Change in Females of Child-Bearing Age
(Ages 18-39) 2000 to 2010
by Census Block Group

Percentage Change

- 41% to -35%
- 34.9% to -28%
- 27.9% to -21%
- 20.9% to -14%
- 13.9% to -7%

Sources:
* Base Map Data, CT DEP, 2012
* Streets, StreetMap USA, 2012

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September 2013

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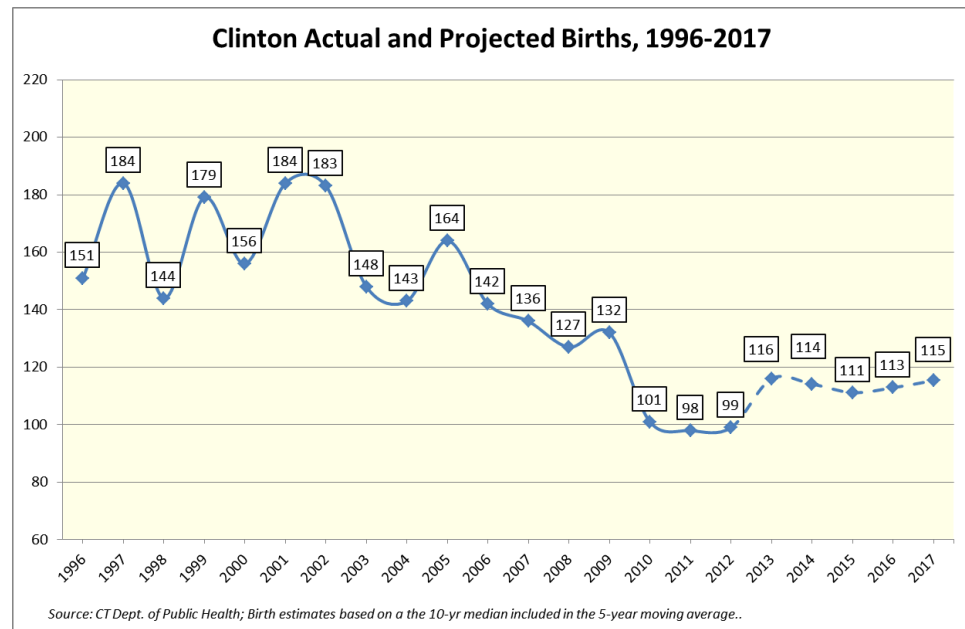
BIRTHS

During the late 1990s, annual births in Clinton averaged around 163 (see the following figure). The annual birth rate remained the same during the first half of the 2000s, with an annual average of 163 births from 2000 to 2004 and a peak of 184 births in 2001. Annual births in Clinton began to decrease from 2006 to 2009. Like in the rest of the region, state and country, birth rates dropped off significantly in 2008 (127 live births) and have not recovered. In 2010 the births dropped to 101 births and provisional births from the CT Department of Public Health for 2011 and 2012 are 98 and 99 respectively. Therefore, annual births in Clinton have averaged only 111 since 2008, or 32% below rates from the first half of the 2000s. The births from 2009 to 2013 correspond to the incoming kindergarten classes of 2014-15 through 2018-19.

The Census Bureau recently lowered its national population projections partially as a result of lower forecasted birth rates. In addition, some demographers have suggested that as more women enter college, and more households and families increasingly rely on female earnings, fertility rates may remain low.¹

In order to prepare eight-year enrollment projections, birth forecasts were also prepared. Taking into account the decline in females of child-bearing age, local housing and economic conditions, it is estimated that Clinton will average 114 births annually for the next five years. The enrollment projections presented later in this report are calculated based upon this birth estimate.

FIGURE 2



¹ Mather, Mark. 2012. *Fact Sheet: The Decline in U.S. Fertility*, Population Research Bureau.

HOUSING

The amount of housing in Clinton increased at a greater rate than the total population between 2000 and 2010. The number of housing units increased 5.4%, compared to 1.3% increase in population. Not surprisingly, average household sizes shrunk during the decade.

The following series of maps and charts highlight housing activity during the last decade in Clinton. New residential construction permits peaked in 2002. Permitting activity has not rebounded since the economic downturn began in 2008. Permits have averaged 9 units per year since 2008 with the highest number of permits issued in 2012 at 17 permits. These permits have all been for single family homes with the exception of one duplex. 2013 permit activity through September has resulted in 10 permits issued. All but one permit was for single family residences and one duplex. Currently there are no applications pending for housing permits.

FIGURE 3



Total housing sales reached a plateau at the 300 unit per year level from 2000 to 2002 and have since declined to the approximately 150 unit level for the past five years. The number of condo sales has remained steadier than single-family housing sales, largely because of fewer units available in that component of the housing stock. Single family sales followed the same trend as total sales with a 240 unit per year level from 2000 to 2002 declining to a 121 unit level for the past five years.

FIGURE 4

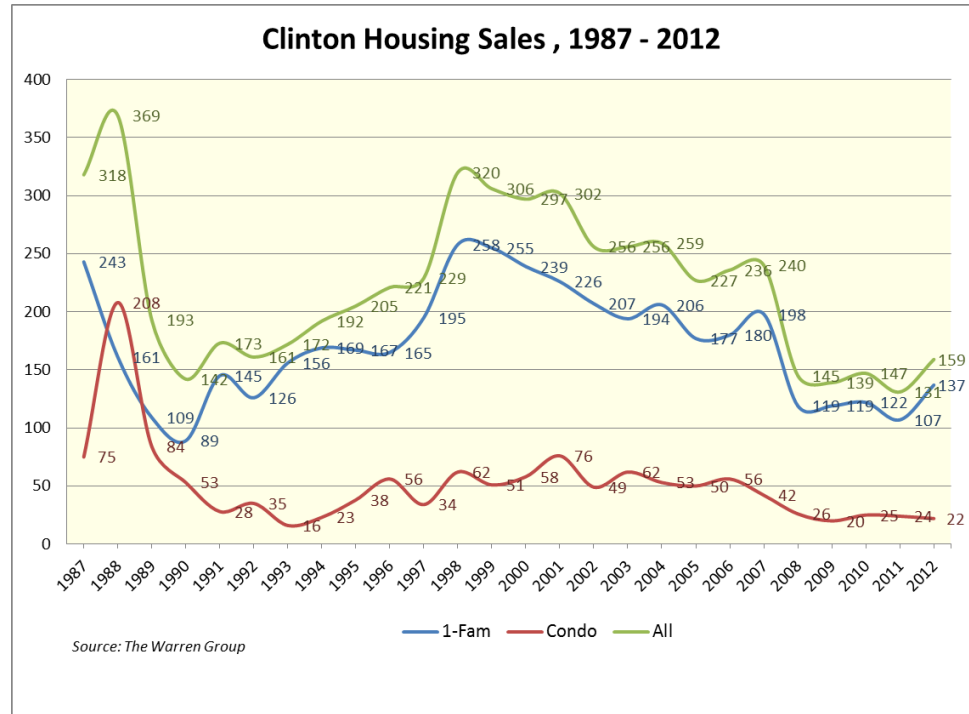
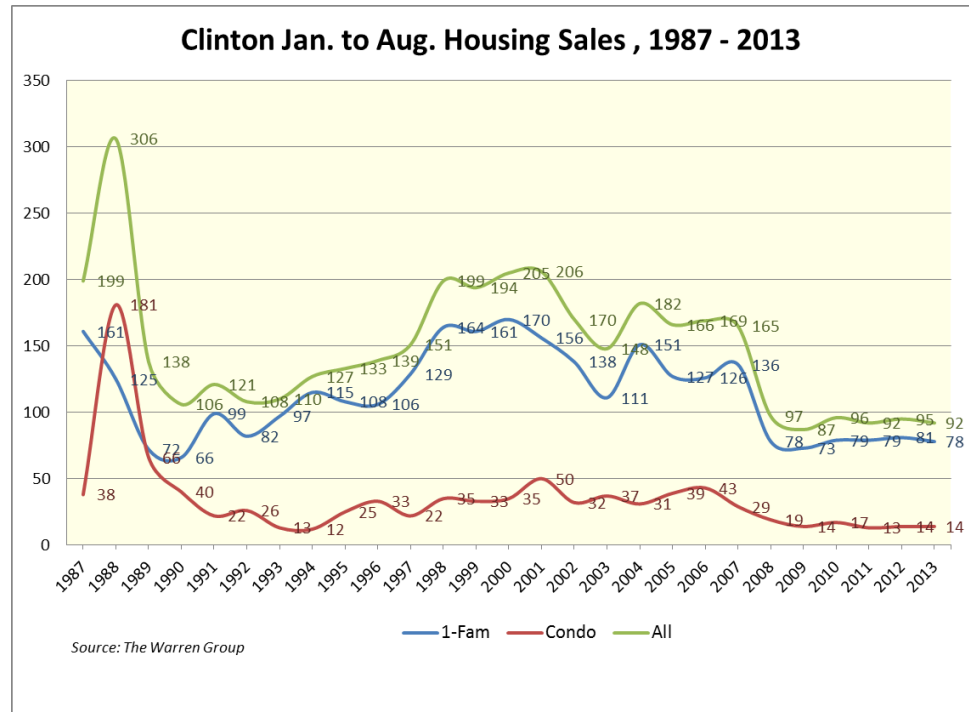
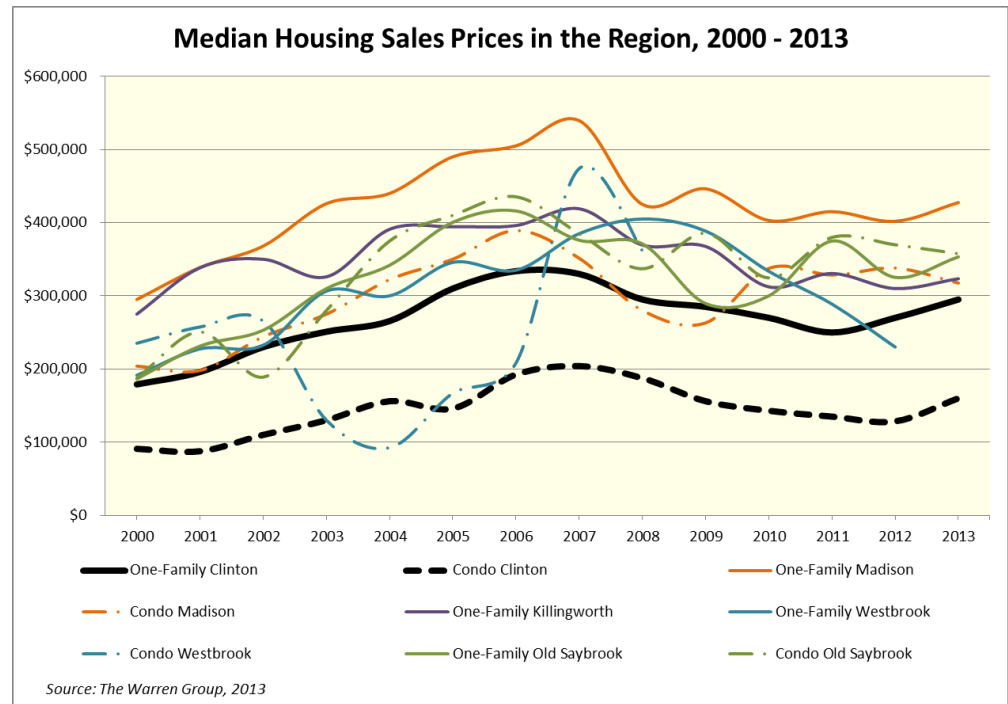


FIGURE 5



Median housing sales prices in Clinton and its neighboring communities indicate that single-family homes as well as condominiums in Clinton are relatively affordable. Clinton's median sales prices for both single-family and condominium homes are lower than its nearby towns. The lack of recent new construction in Clinton limits housing sales and pricing to the existing housing stock.

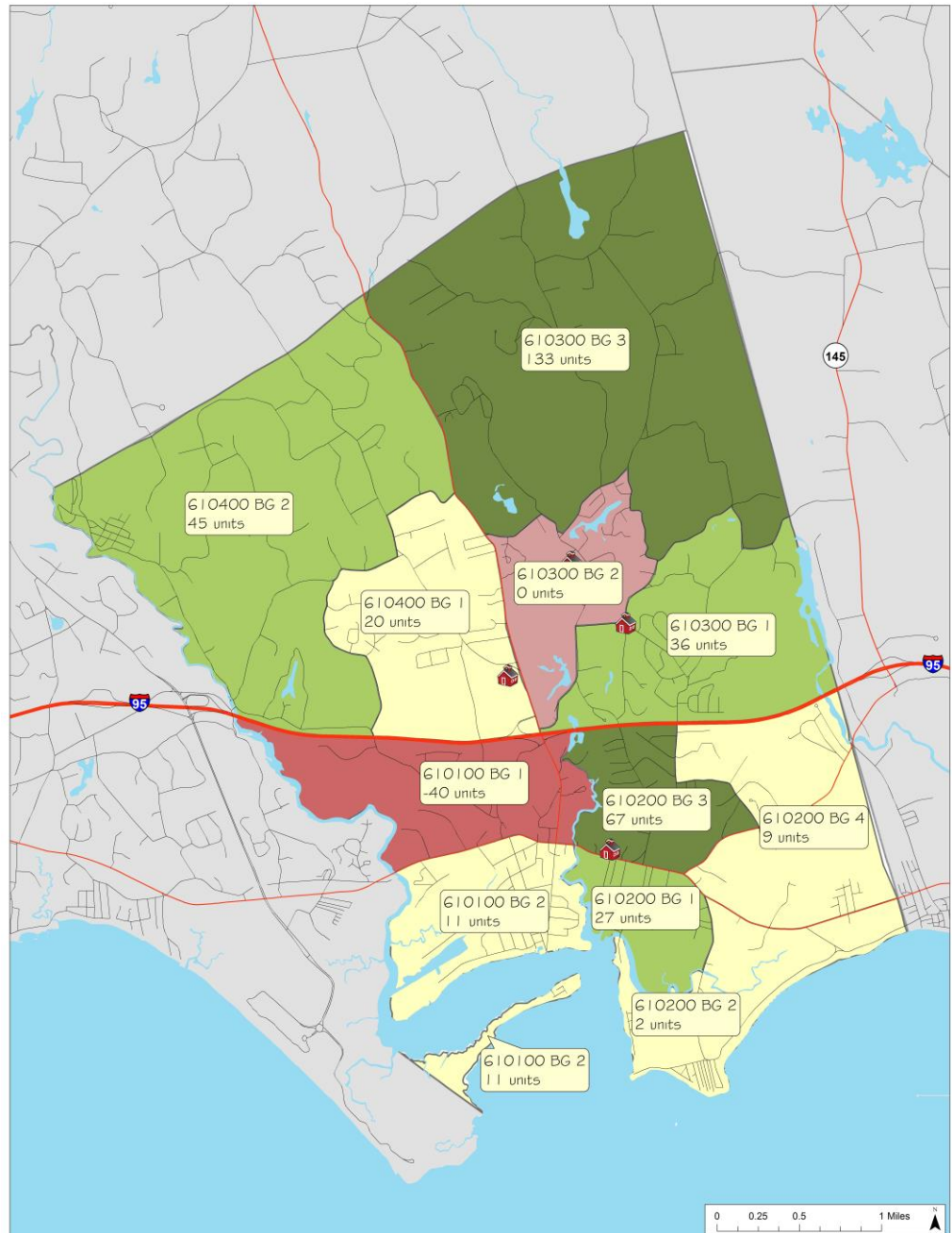
FIGURE 6



MAP 4

TABLE 4

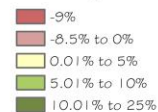
	Total Housing Units		
	2000	2010	Change
Tract 6101.00 BG 1	470	430	-8.5%
Tract 6101.00 BG 2	668	679	1.6%
Tract 6102.00 BG 1	377	404	7.2%
Tract 6102.00 BG 2	795	797	0.3%
Tract 6102.00 BG 3	328	395	20.4%
Tract 6102.00 BG 4	478	487	1.9%
Tract 6103.00 BG 1	579	615	6.2%
Tract 6103.00 BG 2	308	308	0.0%
Tract 6103.00 BG 3	565	698	23.5%
Tract 6104.00 BG 1	502	522	4.0%
Tract 6104.00 BG 2	687	732	6.6%
TOTAL:	5,757	6,067	5.4%



Clinton Public Schools
Comprehensive Enrollment Analysis

Change in Housing Units
2000 to 2010
by Census Block Group

Percentage Change



Sources:
* Base Map Data, CT DEEP, 2012
* Streets, StreetMap USA, 2012

This map is intended for planning purposes only. Distortions may not be exact.

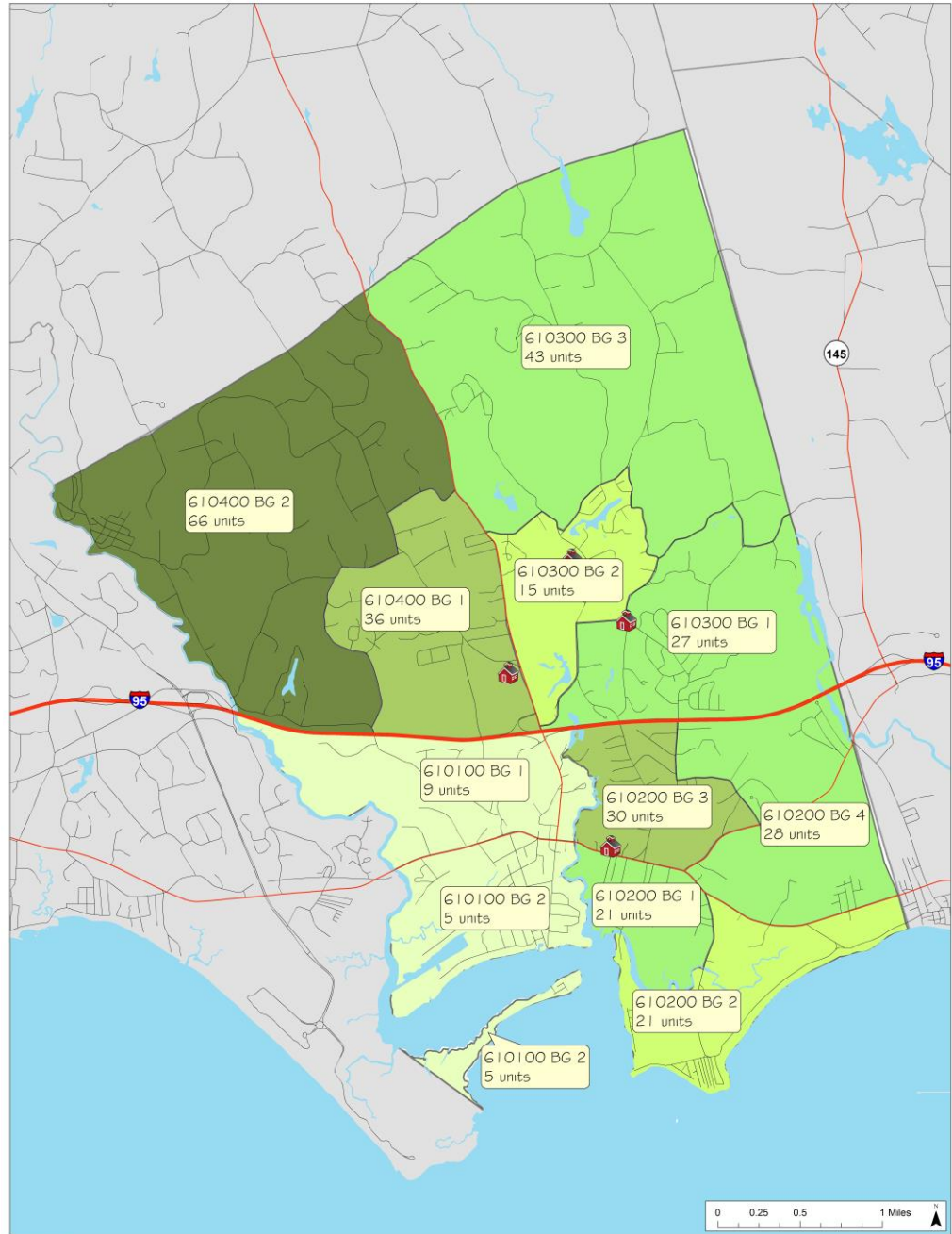
September 2013

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MAP 5

TABLE 5

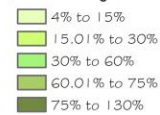
	Owner-Occupied Housing Units with Householder Age 65+		
	2000	2010	Change
Tract 6101.00 BG 1	70	79	12.9%
Tract 6101.00 BG 2	138	143	3.6%
Tract 6102.00 BG 1	39	60	53.8%
Tract 6102.00 BG 2	95	116	22.1%
Tract 6102.00 BG 3	40	70	75.0%
Tract 6102.00 BG 4	76	104	36.8%
Tract 6103.00 BG 1	88	115	30.7%
Tract 6103.00 BG 2	60	75	25.0%
Tract 6103.00 BG 3	91	134	47.3%
Tract 6104.00 BG 1	56	92	64.3%
Tract 6104.00 BG 2	51	117	129.4%
TOTAL:	804	1,105	37.4%



Clinton Public Schools
Comprehensive Enrollment Analysis

Change in Owner-Occupied Units
with Householders Age 65+
2000 to 2010
by Census Block Group

Percentage Change



Sources:
* Base Map Data, © 2007, 2012
* Streets, StreetMap USA, 2012

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September 2013

MILONE & MACBROOM

LOCAL ECONOMY

Employment & Business Profile – Clinton is a residential shoreline community employing approximately 4,111 workers with regional access from I-95. Manufacturing and construction account for only 17% of overall employment in the Town in 2011. In contrast, Middlesex County reports 18.5% in the same categories. Retail trade employment in Clinton as a share of total employment far surpasses the region at 36.3% with Clinton Crossing's 70 stores representing a significant portion of that base. Meanwhile services, inclusive of business, professional, health and education, account for 25.9% of total employment, which is substantially below the regional 46.3%. (Refer to Table 6 below)

TABLE 6: EMPLOYMENT PROFILE – 2011

	Clinton	Middlesex County
Total Employment	4,111	64,554
Utilities	****	
Construction	5.0%	4.0%
Manufacturing	12.0%	14.5%
Wholesale Trade	2.5%	3.3%
Retail Trade	36.3%	12.5%
Transportation & WH	1.1%	1.7%
Information	1.0%	1.0%
Finance & Insurance	1.1%	2.6%
Real Estate & Leasing	0.5%	0.7%
Professional & Tech.	1.6%	3.8%
Management	****	0.6%
Admin & Support	2.5%	3.6%
Educational Services	****	3.1%
Health Care	6.1%	16.8%
Arts & Entertainment	2.7%	1.7%
Accom. & Food Serv.	7.6%	8.7%
Other Serv.	2.8%	3.7%
Total Government	13.1%	16.6%
Federal	0.6%	0.5%
Local/Municipal	12.6%	9.7%

Source: CT DOL _Covered Employment Statistics 2011

Principal Employers – Major employers in Clinton are Clinton Crossing Premium Outlet with its 70 stores and the Connecticut Water Company. Unilever, one of Clinton's largest employers, closed its manufacturing plant at the end of 2012 with the loss of 185 jobs. Its large site is the subject of a Town-sponsored study to develop a conceptual plan for transit oriented development of the site and

adjoining areas. Other major employers are the Connecticut Water Company, the Town of Clinton and the Clinton Nurseries.

Employment Trends – According to CT DECD data on town employment trends, Clinton enjoyed only one year of job growth in five years when it saw a 2.3% gain in 2011 over the previous year. During the period of 2007 to 2010, the Town experienced a loss of 417 jobs, representing a decline of 9.43% overall. Data for 2011 and 2012 show a return in job growth at a rate over twice that of the region. The job loss in Clinton in recent years is reflective of the severity of the Great Recession that is still impacting the state and the country today despite a recovery that has been on-going for two years. Refer to Table 7 below for trends on employment.

TABLE 7: EMPLOYMENT TRENDS

	Clinton Total Employment	Empl % Change	Middlesex Cty LMA Total Employment	% Change
2007	4,435		70,670	
2008	4,335	-2.3%	70,462	-0.3%
2009	4,030	-7.0%	67,035	-4.9%
2010	4,018	-0.3%	63,979	-4.6%
2011	4,111	2.3%	64,554	0.9%
2012	4,195	2.0%	* Clinton now in New Haven LMA	

Source: CT DOL

Income Trends – Clinton's households generally reflect an income profile similar to the county and the state, with an estimated median household income of \$72,595 for 2011 as compared to \$70,340 for the state and \$73,499 for the county. Income projections indicate a flattening/deflationary trend over the next five years, dropping from an average annual increase of 1.8% from 2000 to 2010 to 1.4% for the 2011 to 2016 period. The distribution of household income among categories is very similar between the town and the county.

TABLE 8: HOUSEHOLD INCOME TRENDS & PROJECTIONS

	Median HH Income	
	Clinton	Middlesex County
2000	\$60,369	\$59,175
2011 (est)	\$72,595	\$73,499
2016 (projected)	\$83,623	\$84,649
2000-11 annual rate	1.8%	2.2%
2011-16 annual rate	1.4%	1.4%

Source: Census, ESRI

Table 9 displays the household income distribution for Clinton and Middlesex County. Clinton follows the county distribution fairly closely, except for the highest income category.

TABLE 9

HH Income Distribution		Clinton	Middlesex County
<u>2011 Total Households</u>		<u>5,292</u>	<u>67,391</u>
< \$15,000		7.0%	6.5%
\$15-\$25,000		7.3%	7.4%
\$25-\$34,999		6.7%	7.2%
\$35-\$49,999		11.0%	11.4%
\$50-\$74,999		19.3%	18.2%
\$75-\$99,999		15.9%	14.9%
\$100-\$149,999		21.6%	20.3%
\$150-\$199,999		7.2%	8.2%
\$200,000+		4.0%	5.8%

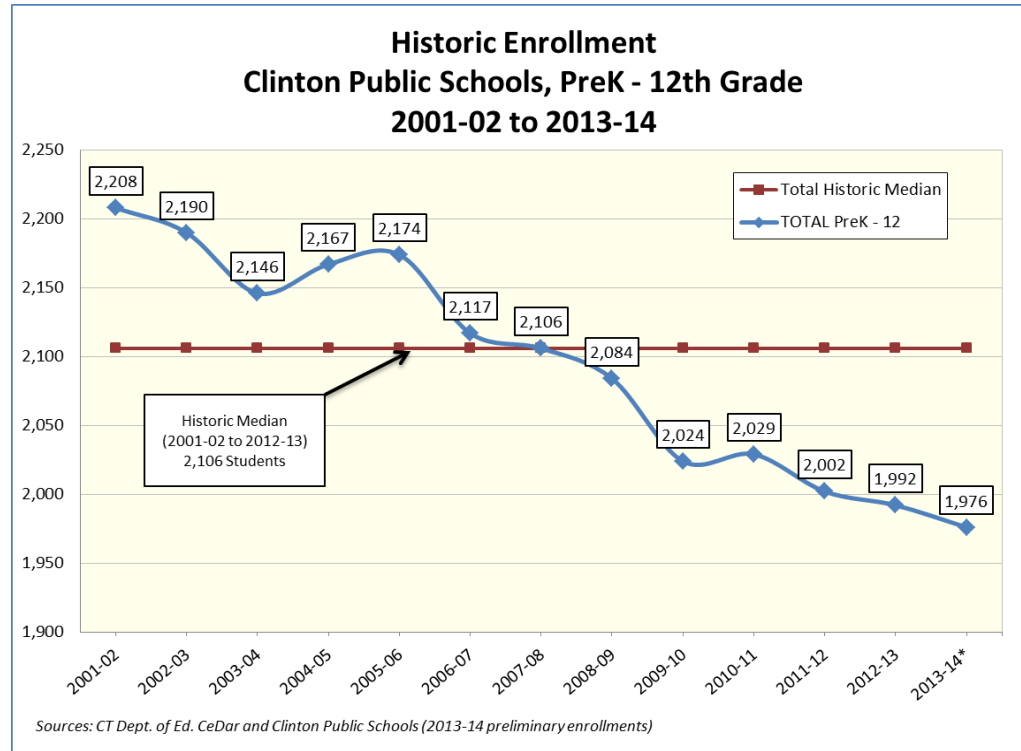
Source: Census, ESRI

The income profile for households between age 65 and 74, as well as over age 75, matches with Middlesex County. Clinton has a broad range of senior incomes due to the combination of retirees with relatively low incomes and higher income seniors who have moved to Clinton to be on or near Long Island Sound.

ENROLLMENT TRENDS

The total PreK – 12th grade enrollment in Clinton Public Schools has ranged from a high of 2,208 to a low of 1,976 for the period of 2001 to 2013. The historic median for this period is 2,106 students, as shown in Figure 7. Since 2007-08, total enrollments have declined by about 130 students, or 8.2%. The lowest recent total enrollment recorded is the current 2013-14 enrollment of 1,976 students.

FIGURE 7



The low current enrollment in 2013-14 is in part due to the smallest recent birth cohort feeding the incoming kindergarten class in 2013-14. The gradual enrollment decline experienced over the past decade continues to play out.

Table 10 shows by-grade historic enrollments for the district, along with births five years earlier. Births peaked in 2001 and slowly declined to 127 in 2008, the cohort which now comprises the incoming kindergarten class of 2013-14. This compares to an historic average of about 157 births per year for the past 13 years. The drop in births continues with 98 and 99 births recorded in 2011 and 2012. A lower number of kindergarteners can be expected to enter the system in the 2016-17 and 2017-18 school years.

TABLE 10

School Year	Birth Year	Births	K	1	2	3	4	5	6	7	8	9	10	11	12	PK	PreK-3 Grades	4-5 Grades	6-8 Grades	9-12 Grades	TOTAL PreK - 12
2001-02	1996	151	151	158	152	151	183	182	188	180	182	171	151	168	167	24	636	365	550	657	2,208
2002-03	1997	184	191	157	152	147	159	186	180	184	176	156	169	148	158	27	674	345	540	631	2,190
2003-04	1998	144	166	176	155	154	149	155	184	171	181	158	159	165	151	22	673	304	536	633	2,146
2004-05	1999	179	156	179	164	164	157	143	155	182	175	197	152	163	157	23	686	300	512	669	2,167
2005-06	2000	156	160	155	163	173	171	166	146	158	172	180	191	157	157	25	676	337	476	685	2,174
2006-07	2001	184	165	155	148	162	171	167	158	144	150	165	166	170	162	34	664	338	452	663	2,117
2007-08	2002	183	171	150	154	148	163	175	161	159	143	147	157	169	165	44	667	338	463	638	2,106
2008-09	2003	148	153	168	159	153	152	161	172	161	159	123	145	152	161	56	689	313	492	581	2,075
2009-10	2004	143	148	154	165	156	150	150	164	177	156	141	128	145	157	48	671	300	497	571	2,039
2010-11	2005	164	185	142	149	166	152	152	148	166	178	148	139	127	143	41	683	304	492	557	2,036
2011-12	2006	142	150	182	141	145	166	149	151	149	166	162	138	148	131	41	659	315	466	579	2,019
2012-13	2007	136	130	149	179	145	147	165	154	144	148	154	155	145	137	42	645	312	446	591	1,994
2013-14	2008	127	148	136	145	174	145	151	163	157	148	143	137	150	141	38	641	296	468	571	1,976

Sources: CT Dept. of Ed. CeDar for 2001-02 through 2010-11; Clinton Public Schools for 2013-14.

The following figures show historic enrollments at the various grade groupings present in Clinton Public Schools. In general, the system has experienced a 10.5% decrease in overall school enrollment since 2001-02. PreK – 3 enrollments have largely exhibited a cyclical pattern with a low of 636 students in 2001-02 and a peak of 689 in 2008-09. The 4th-5th grade configuration declined 19% over the period while the 6th – 8th grade configuration declined by 15%. High school 9th – 12th grade configuration has decreased by 13% since 2001-02.

FIGURE 8

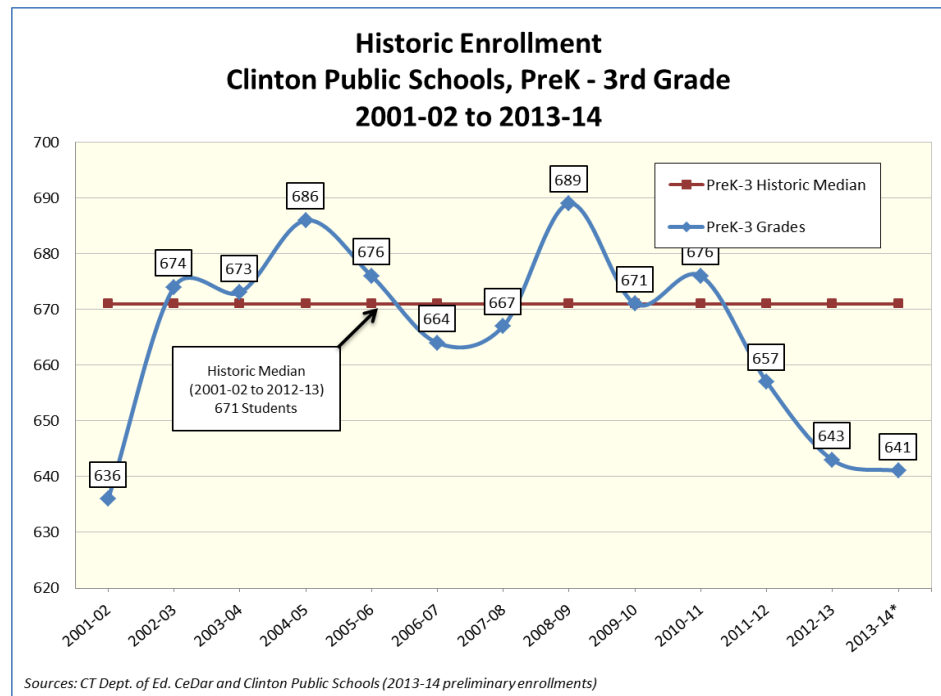


FIGURE 9

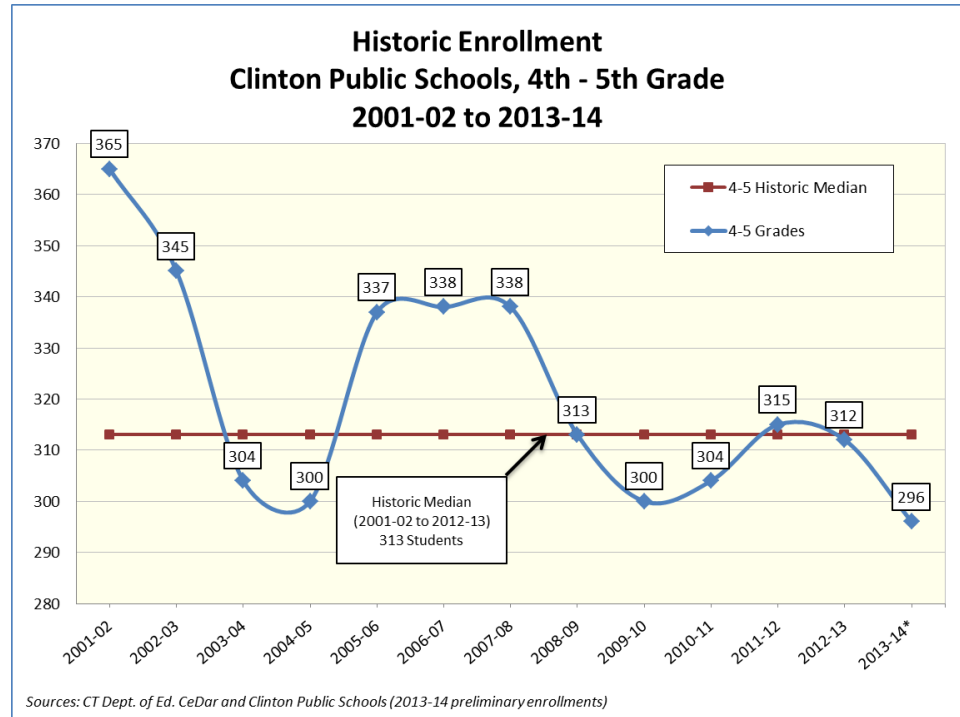


FIGURE 10

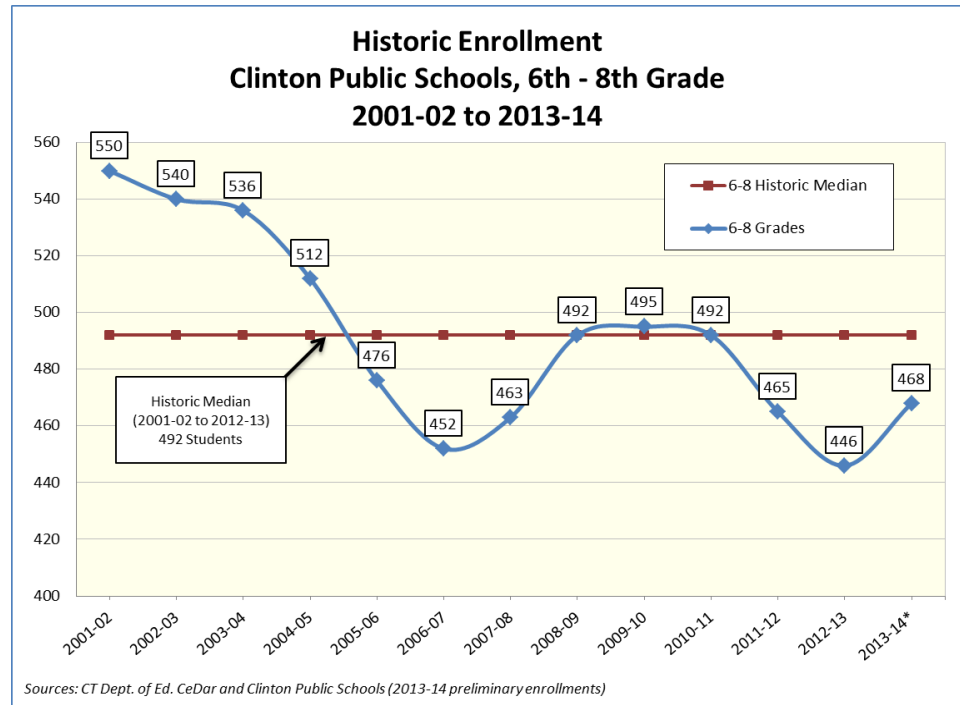
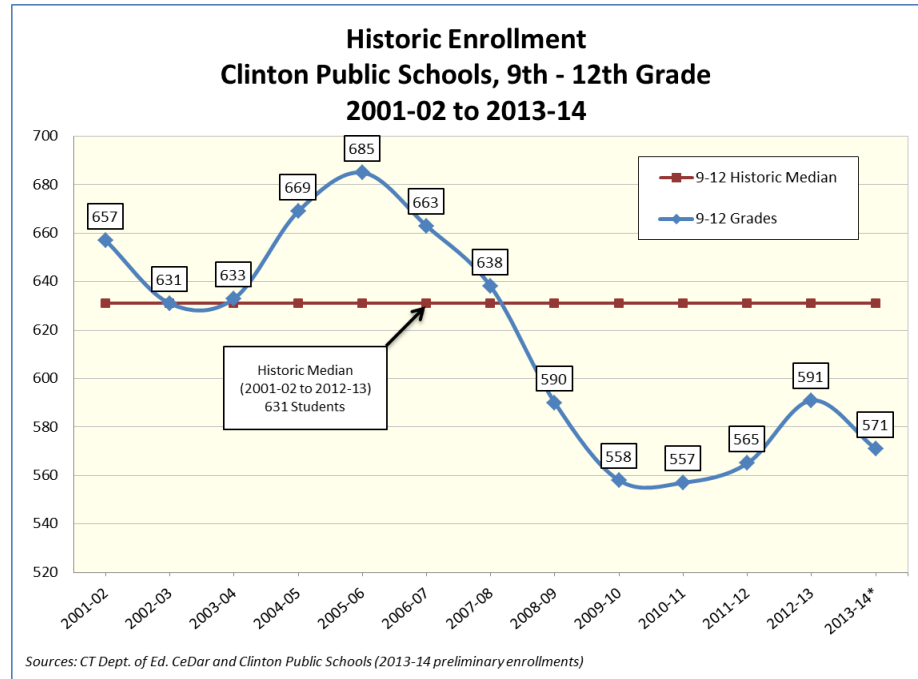


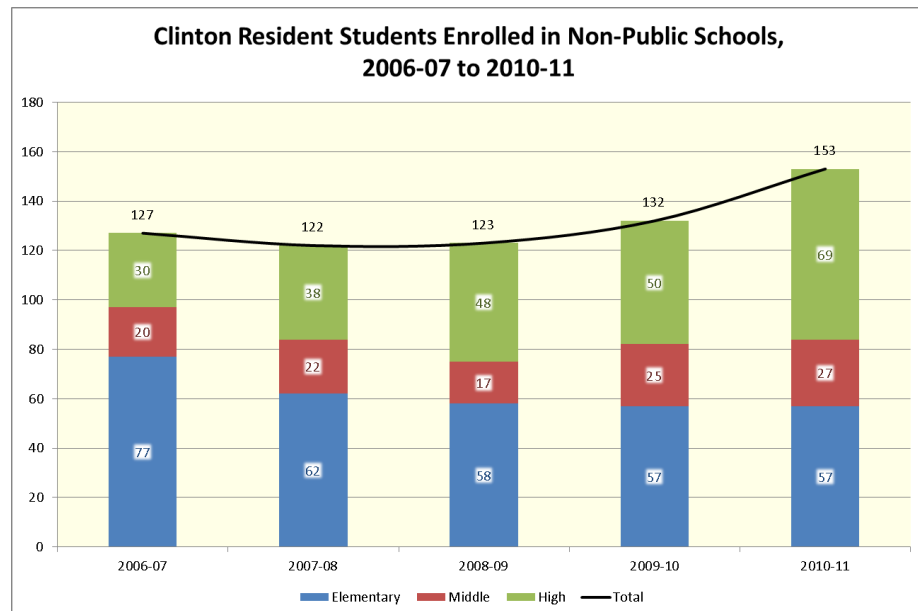
FIGURE 11



Resident Enrollment by Non-Public & Other Public School Trends

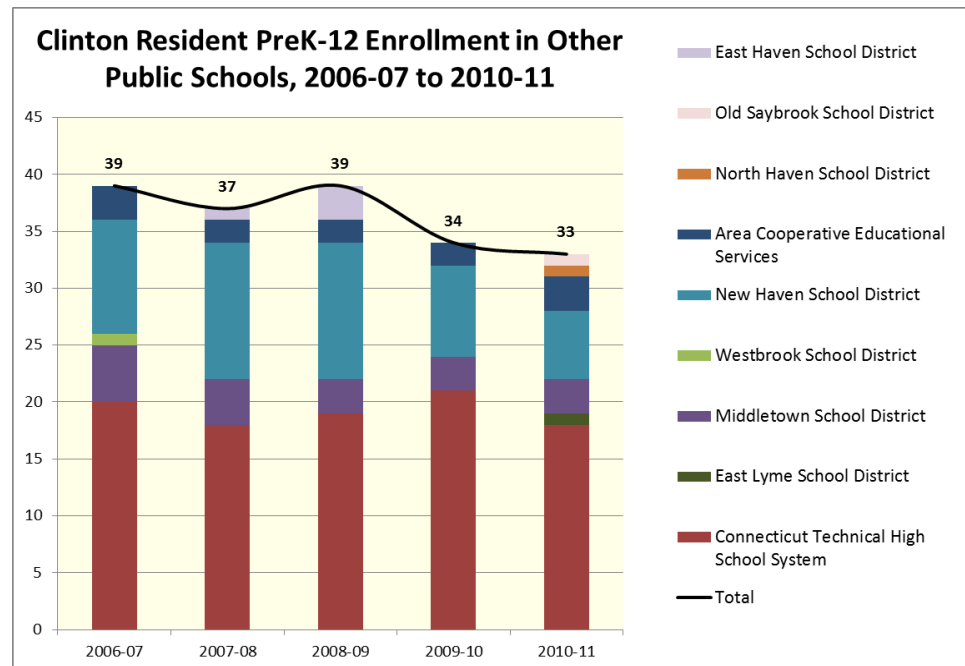
Changes in non-public school enrollment and regional public school enrollments are relatively small in total numbers and stable or slightly growing in participation rates, so their influence on total enrollments at Clinton Public Schools is minor. The following figure of Clinton Resident Students Enrolled in Non-Public Schools does not indicate the decline in private school enrollment that has been experienced elsewhere in Connecticut when the economic recession began in 2008-09. Approximately 186 Clinton students per year attend private or non-Clinton Public Schools.

FIGURE 12



Enrollments of Clinton resident students in non- public schools has increased 20% since 2007-08, as shown in Figure 12, but the total students participating is only around 150. While private school enrollment has increased, Clinton resident students opting for other public schools have been relatively flat, averaging approximately 35 students annually, with the Connecticut Technical High School System accommodating the largest number of resident students at approximately 20 students annually.

FIGURE 13



ENROLLMENT PROJECTIONS

The cohort-survival method, with some modifications, was used to calculate all projections in this report. This is a standard method for projecting populations and student enrollments. The cohort-survival methodology relies on observed data from the recent past to predict the near future. This methodology works well for stable populations, including those that are steadily growing or declining. However, the economic recession and stagnant housing market are factors that contribute to a much different enrollment climate than in the past. Therefore, adjustments were made in the projections to adequately capture these external factors.

A persistency ratio was calculated based on historic enrollment data to determine growth or loss in a class as it progresses through the school system. Persistency ratios of 1.00 mean that the class size remains the same as it advances from one grade to the next. A persistency ratio of 1.05 means the class size increases by 5%, or a class of 100 gains five additional students the next year. Enrollment data from 2001-02 through 2012-13 combined with birth data from 1996 to the present were used to calculate birth-K and grade-to-grade persistency ratios. Table 11 shows the calculated ratios.

TABLE 11

Kindergarten through 12th Grade Persistency Ratios by School Year 2001-02 to 2013-14															
Year	Birth-K	K-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	Est. Migration ¹	Pers. Avg
2002-03	1.038	1.040	0.962	0.967	1.053	1.016	0.989	0.979	0.978	0.857	0.988	0.980	0.940	-0.4%	0.984
2003-04	1.153	0.921	0.987	1.013	1.014	0.975	0.989	0.950	0.984	0.898	1.019	0.976	1.020	-1.4%	0.992
2004-05	0.872	1.078	0.932	1.058	1.019	0.960	1.000	0.989	1.023	1.088	0.962	1.025	0.952	0.8%	0.997
2005-06	1.026	0.994	0.911	1.055	1.043	1.057	1.021	1.019	0.945	1.029	0.970	1.033	0.963	2.2%	1.005
2006-07	0.897	0.969	0.955	0.994	0.988	0.977	0.952	0.986	0.949	0.959	0.922	0.890	1.032	-2.6%	0.959
2007-08	0.934	0.909	0.994	1.000	1.006	1.023	0.964	1.006	0.993	0.980	0.952	1.018	0.971	-0.1%	0.981
2008-09	1.034	0.982	1.060	0.994	1.027	0.988	0.983	1.000	1.000	0.860	0.986	0.968	0.953	-0.2%	0.987
2009-10	1.035	1.007	0.982	0.981	0.980	0.987	1.019	1.029	0.969	0.887	1.041	1.000	1.033	-0.5%	0.996
2010-11	1.128	0.959	0.968	1.006	0.974	1.013	0.987	1.012	1.006	0.949	0.986	0.992	0.986	0.0%	0.997
2011-12	1.056	0.984	0.993	0.973	1.000	0.980	0.993	1.007	1.000	0.910	0.932	1.065	1.031	-0.8%	0.994
2012-13	0.956	0.993	0.984	1.028	1.014	0.994	1.034	0.954	0.993	0.928	0.957	1.051	0.926	0.2%	0.985
2013-14	1.165	1.046	0.973	0.972	1.000	1.027	0.988	1.019	1.028	0.966	0.890	0.968	0.972	0.4%	1.001
Long Term Average	1.0245	0.9902	0.9750	1.0034	1.0099	0.9998	0.9932	0.9959	0.9890	0.9426	0.9670	0.9972	0.9816		
Last 5-Yr Average	1.0681	0.9979	0.9799	0.9922	0.9937	1.0003	1.0040	1.0042	0.9991	0.9279	0.9611	1.0151	0.9897		
Last 3-Yr Average	1.0592	1.0078	0.9832	0.9912	1.0046	1.0005	1.0050	0.9933	1.0070	0.9347	0.9263	1.0277	0.9765		
3-Year Weighted	1.0774	1.0182	0.9799	0.9910	1.0046	1.0083	1.0040	0.9954	1.0117	0.9440	0.9191	1.0116	0.9667		

Source: Calculated by MMI from State Department of Education, Public School Information System (2001-02 to 2012-13), Clinton Public Schools 2013-14, and CT Department of Public Health (CT DPH) Birth Data.

¹ Derived from the comparison of 3-8 enrollment aggregate one year with the 2-7 aggregate from the prior year

The dramatic change in persistency ratios for Birth-K between the last two years indicates a 21% increase in the kindergarten yield. Typically, the Birth-K ratio captures housing sales and starts, local economic conditions, student transfers in and out of the system and changes in programming. Clinton has experienced variability in this ratio; however, it should be noted that the previous Birth-K high was over a decade ago in 2003-04. From the estimates of migration, which are derived from the comparison of 3rd-8th enrollment aggregate one year with the 2nd-7th aggregate from the prior year, the last two years reported positive migration for the first time since 2004-05 to 2005-06 school years. This is an indication of a small level of in-migration beginning to occur.

Total enrollments are projected to decline slowly over the projection horizon, from 1,976 students this year to a low of 1,680 students in 2021-22, a decline of approximately 15% over eight years. PreK-3rd enrollments are expected to decline over the next five years before recovering from 2019-20 to 2021-22. The 4th-5th and 6th-8th grade groupings are projected to experience sharp declines in the latter half of the projection horizon due to the lag in the smaller birth and elementary cohorts matriculating through the system. Enrollments in the high school are projected to dip to around 550 students in 2014-15 and then remain fairly flat for the remainder of the time horizon. The cumulative impacts of declining elementary enrollments that occurred over the last two years and the decline in births will not be realized in this projection horizon. Table 12 shows the eight-year enrollment projections for Clinton Public Schools by grade.

TABLE 12

Clinton Enrollment Projections by Grade (2014-15 to 2021-22)																	PK-12th		PK-3rd		4rd-5th		6th-8th		9th-12th	
School Year	Birth Year	Births	K	1	2	3	4	5	6	7	8	9	10	11	12	PK	Total	Percent Change	Total	Percent Change	Total	Percent Change	Total	Percent Change	Total	Percent Change
2014-15	2008	132	142	151	133	144	175	146	152	162	159	140	131	139	145	40	1,958	-0.90%	610	-4.9%	321	8.4%	473	1.0%	555	-2.8%
2015-16	2009	101	109	145	148	132	144	176	147	151	164	150	128	133	134	40	1,901	-2.92%	573	-6.0%	321	-0.1%	462	-2.3%	545	-1.7%
2016-17	2010	98	106	111	142	146	133	146	177	146	153	155	138	130	129	40	1,850	-2.70%	545	-5.0%	278	-13.2%	476	3.0%	551	1.1%
2017-18	2011	99	107	107	109	141	147	134	146	176	148	144	142	139	126	40	1,806	-2.38%	503	-7.6%	281	0.9%	470	-1.2%	552	0.1%
2018-19	2012	116	125	109	105	108	141	148	134	145	178	140	132	144	135	40	1,785	-1.16%	486	-3.3%	289	3.1%	458	-2.6%	551	-0.1%
2019-20	2013	114	123	127	106	104	108	142	149	134	147	168	128	134	139	40	1,751	-1.89%	501	3.0%	251	-13.5%	430	-6.2%	570	3.3%
2020-21	2014	111	120	125	125	105	105	109	143	148	135	139	155	130	130	40	1,708	-2.44%	515	2.8%	214	-14.6%	426	-0.8%	553	-3.1%
2021-22	2015	113	122	122	123	124	106	106	109	142	150	128	128	156	125	40	1,680	-1.63%	530	2.9%	212	-1.0%	402	-5.8%	537	-2.9%

The following figures show historic enrollment trends and projected enrollments at the district-wide and current grade configuration levels. As is apparent, the overall decrease in total enrollment is projected to be a steady, slow decline over the entire eight-year period.

FIGURE 14

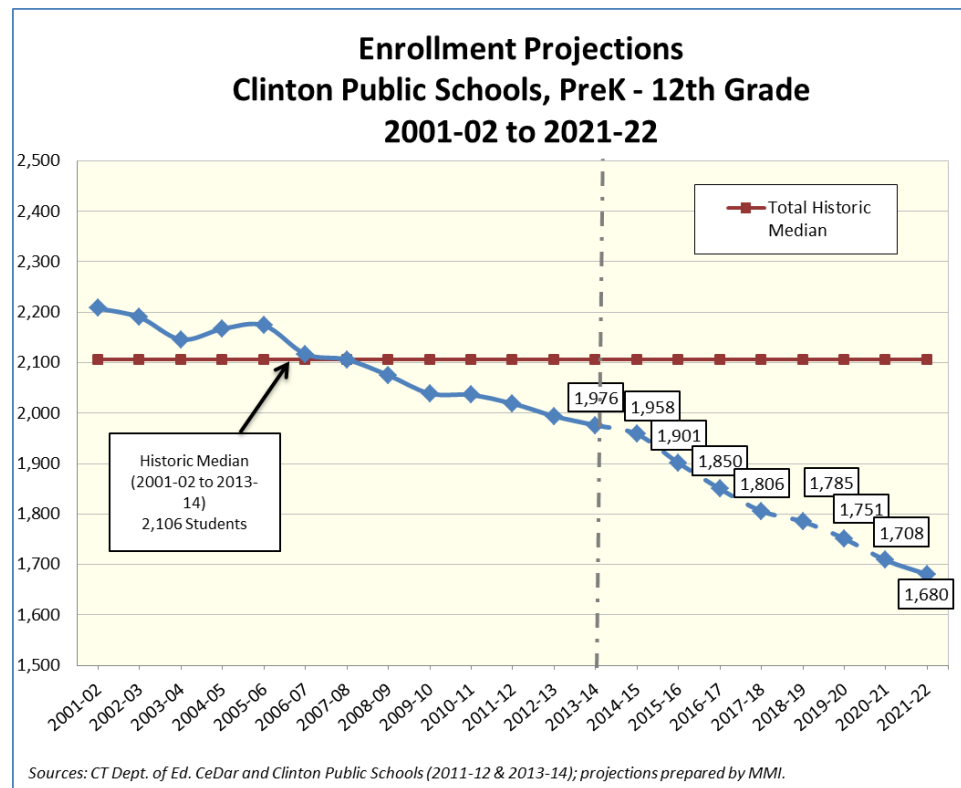


FIGURE 15

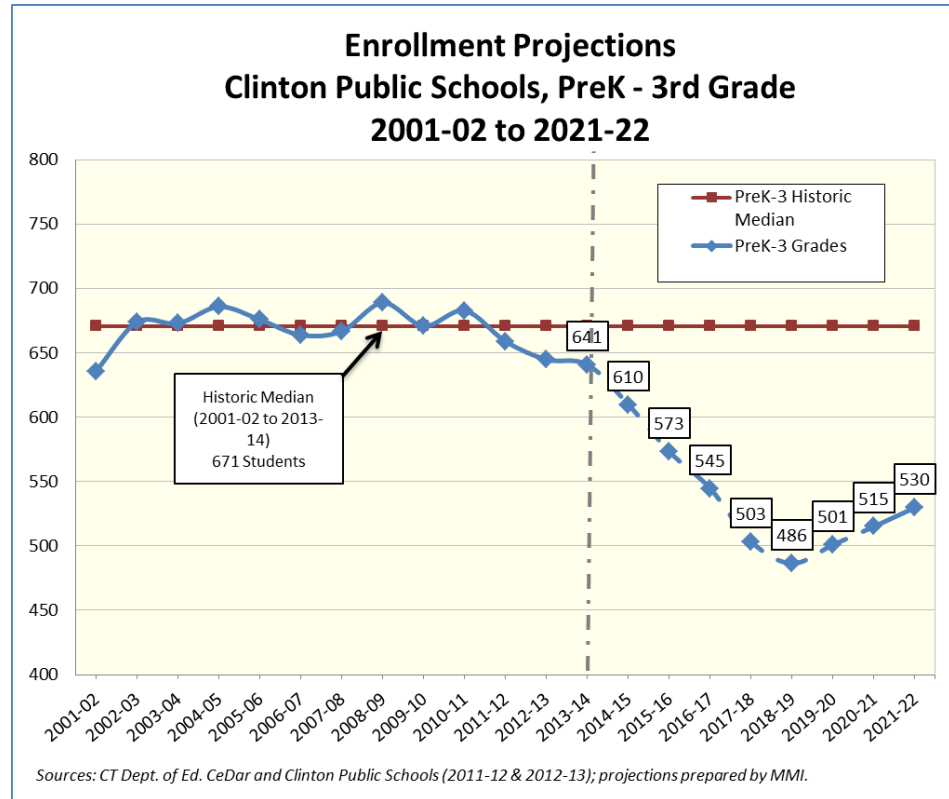


FIGURE 16

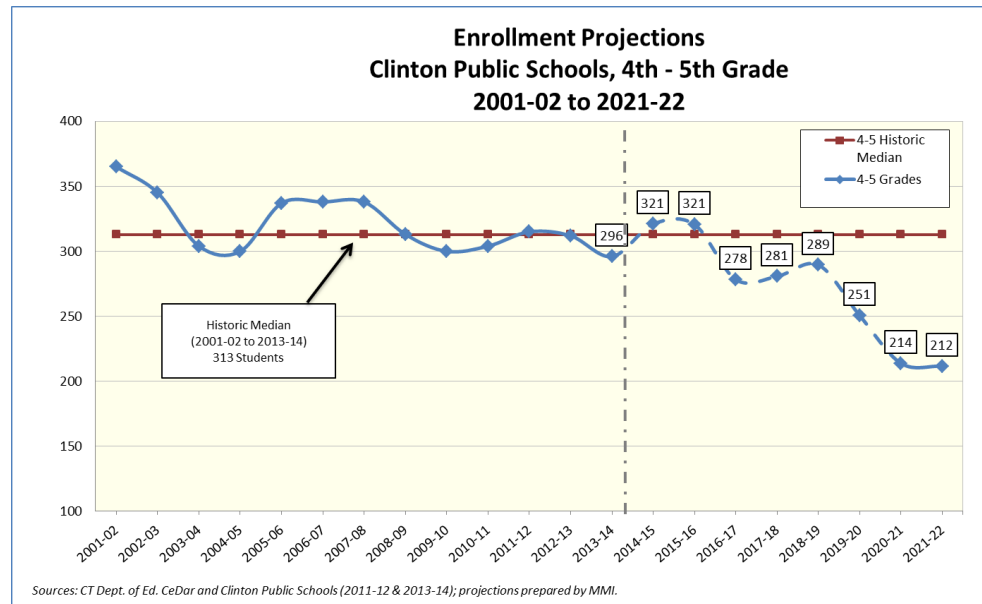


FIGURE 17

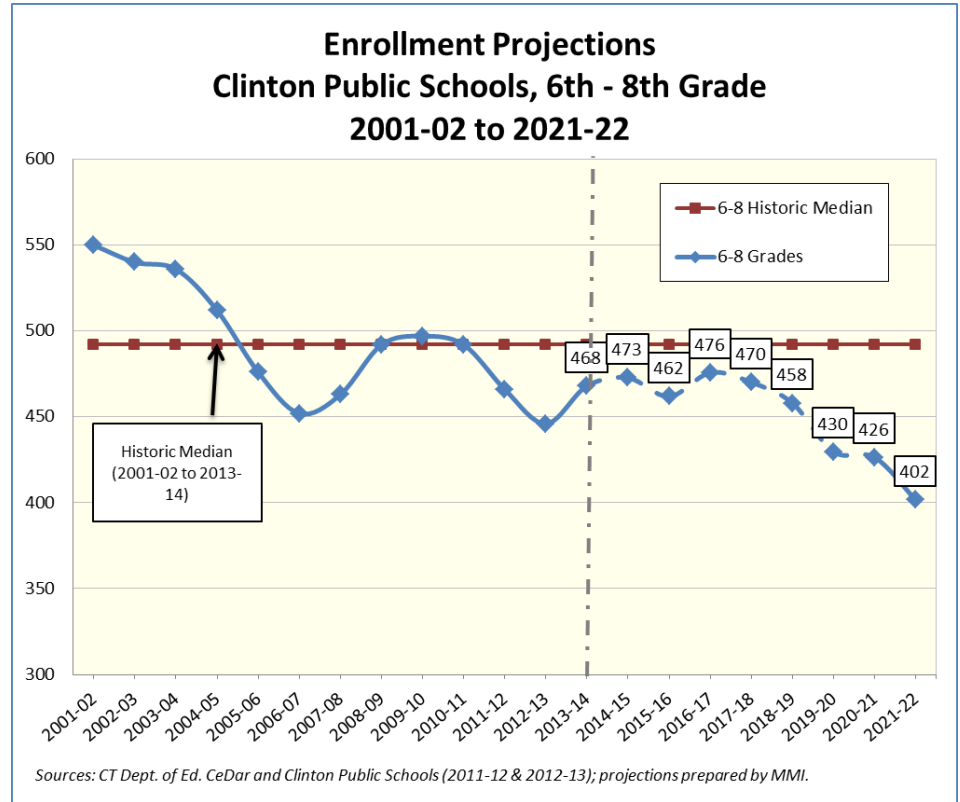
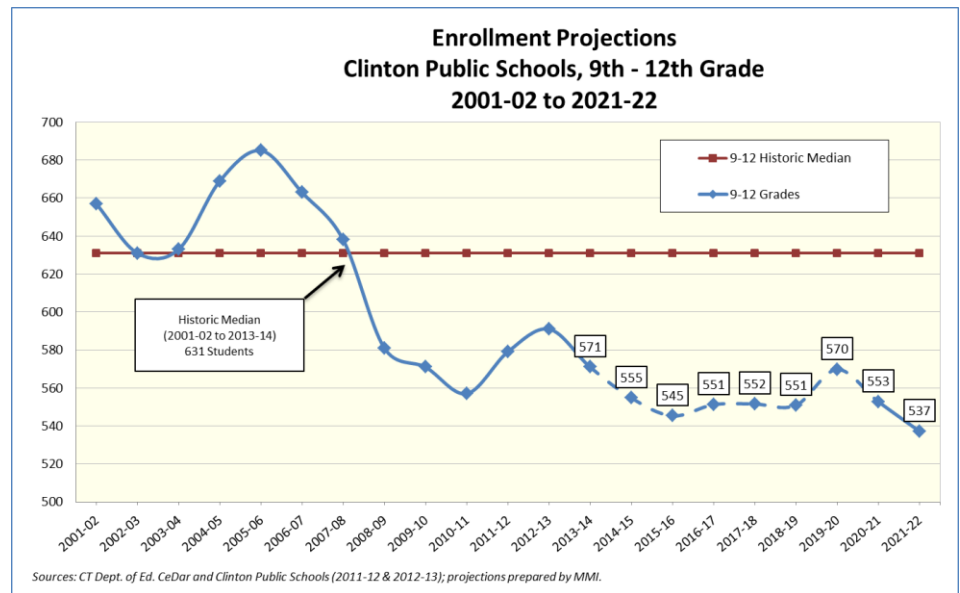


FIGURE 18



ASSUMPTIONS

The projections in this report are based on an eight-year time horizon with the following assumptions:

- Clinton's population will not change appreciably over the next decade despite the optimistic projections by the CTDOT.
- The number of births to Clinton residents from 2013-2017 will rebound to average 114 annually.
- Private and Other Public School Enrollment will closely follow the most recent trends
- Current school policies and programming regarding Pre-Kindergarten will not change
- Housing starts in Clinton will average between 10-15 annually
- Housing sales will average 120-150 annually
- Current economic conditions locally, regionally and nationally will continue

Appendix D

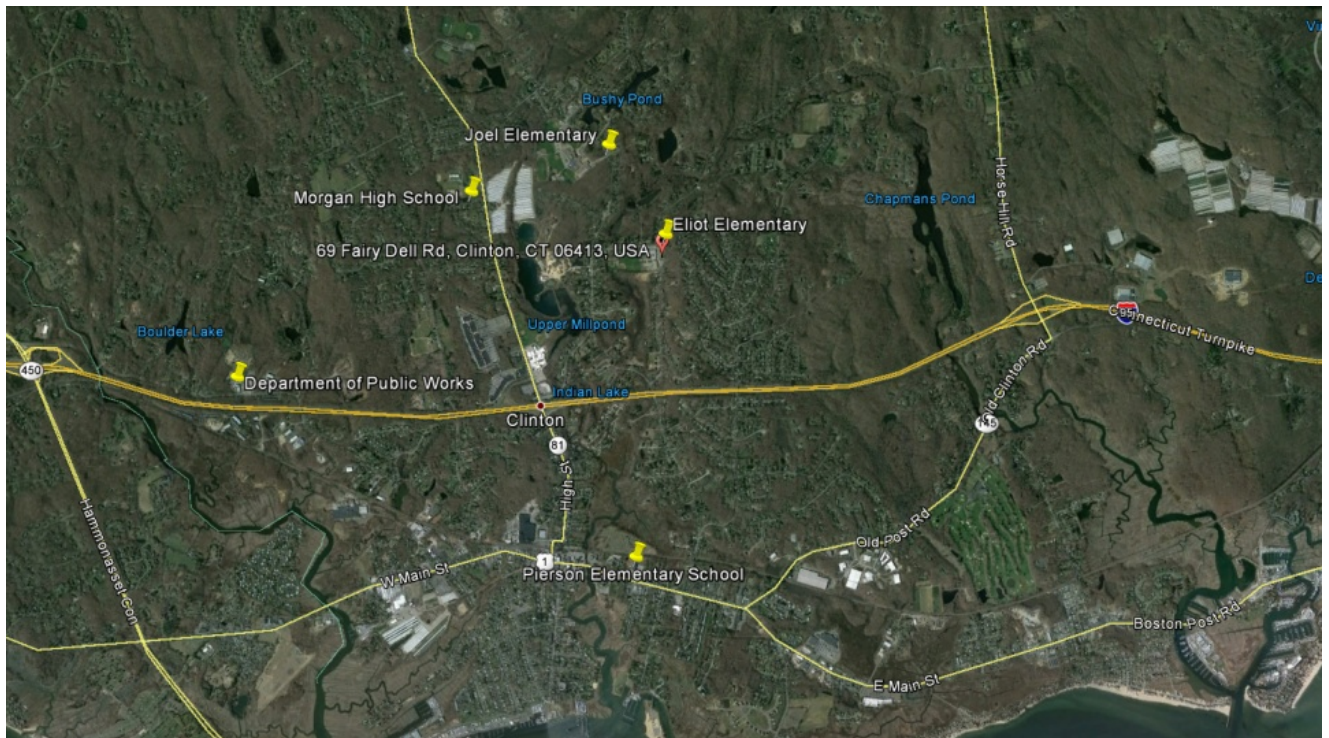
Board of Education Maintenance Facility Analysis and Test Fits

Drummey Rosane Anderson, Inc.

Summary of Sites for the Maintenance and Storage Building

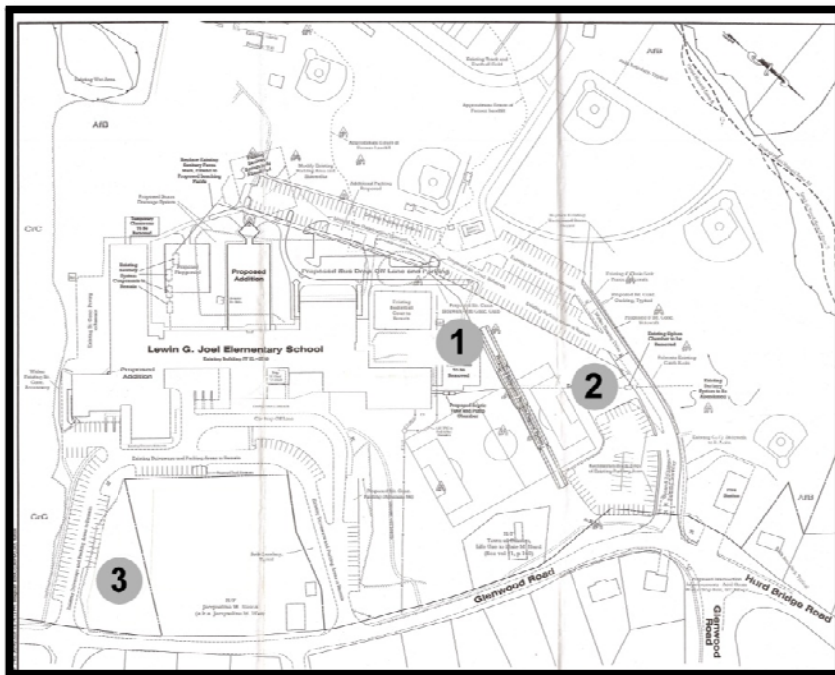
The following factors were taken into consideration when determining the most advantageous location for the new Maintenance and Storage Building location:

- Ability of the site to accommodate the new Maintenance and Storage Building.
- Location relative to other buildings that will share resources.
- Traffic related Issues.
- Ability for new Maintenance and Storage Building to access existing site utilities.
- Pros.
- Cons.



Above: Potential locations for the new maintenance and storage facility identified in yellow.

The Joel School



Above: Aerial photo and site plan showing potential locations for the new maintenance and storage facility.

- Ability of the site to accommodate the new Maintenance and Storage Building: There are 3 viable locations at this site (3 possible locations are indicated above).

Location 1: In this option the new Maintenance and Storage building would have direct access to the Joel School along with the existing utilities: Power, Gas, and Water lines. Utility trucks and vehicular traffic would access the building with minimal disruption to the existing parking configuration. The Subsurface Sewage Disposal System, located below grade at this location would need further study (possibly relocation) due to the additional weight bearing vehicular traffic. From a safety standpoint, a new Maintenance and Storage Building in close proximity to the school provides the ability for immediate response. This location appears to be best suited to accommodate the new building.

Locations 2: In this option the building would be located at the end of the field hockey field. This location, being more remote from the school may provide less visual and sound disturbance to the school. Site utilities would be easily accessed as in the first location. The existing parking configuration would need minimal modifications. This location appears to be well suited to accommodate the new building.

Location 3: In this option the new Maintenance and Storage building is located at the undeveloped parcel of land North East of the Joel School. The site is currently for sale and would need further study to determine its feasibility. Vehicles would access the building directly off Glenwood Rd. This is less desirable option due to the heavy traffic, visibility concerns, and a need to provide a curb-cut. Of the three locations on this site this appears to be least suited to accommodate the new building.

- Location relative to other buildings that will share resources: Joel Elementary School is centrally located and is within a 2 mile radius of the Eliot Middle School and the new High School.
- Traffic Issues: For optimal safety and traffic flow the most recommended way to access to the new building would be off an existing parking area.
- Pros: The site is centrally located to all schools (with the exception of Pierson Elementary). The building can fit on the site without significant modifications to the site.
- Cons: There appears to be no negative impact to the site or the Joel building if the new Maintenance Building is placed at this location.

The Eliot Middle School



Above: Aerial photo of the Eliot Middle School.

- Ability of the site to accommodate the new maintenance and storage building: The Eliot Elementary site is tight and would not be able to accommodate a new maintenance and storage building or the associated traffic/parking without compromising existing playing fields. The possibility of acquiring the parcel of land (reported to be for sale) adjacent to the school, may make this site a more viable option.
- Location relative to other buildings that will share resources: Eliot Elementary School is located within a 2 mile radius of Joel Elementary and the new High School, making this a viable location.
- Traffic Issues: Parking and traffic is currently congested on this site. The site would not be able to accommodate additional traffic and/or utility vehicles.
- Pros: The site is centrally located to all schools.
- Cons: The site's size limitation prevents this location from being a viable option.

The Pierson Elementary School



Above: Aerial photo of the Pierson Elementary School.

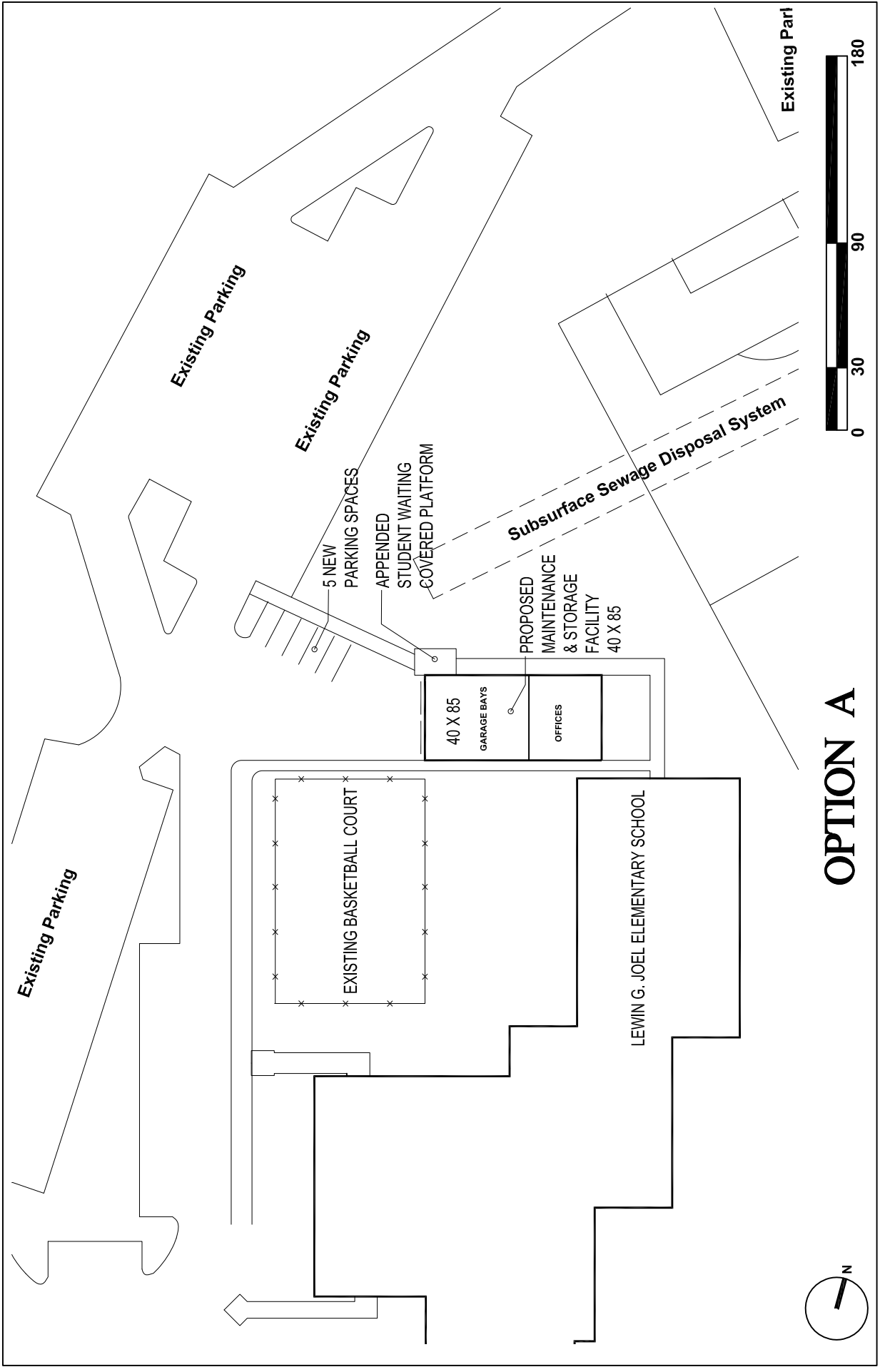
- Ability of the site to accommodate the new maintenance and storage building: The Pierson Elementary site is currently tight and would not be able to accommodate a new Maintenance and Storage Building or the associated traffic/parking without compromising existing playing fields.
- Location relative to other buildings that will share resources: The Pierson School, being on the South side of Rt. 95 is not centrally located in relation to Eliot Middle School, Joel Elementary School, and the High School.
- Traffic Issues: Parking and traffic is congested on this site. Additional traffic and/or utility vehicles could not be accommodated in this time.
- Cons: There does not appear to be a good rationale for placing the new maintenance and storage building at the Pierson Elementary School site.

The Department of Public Works



Above: Aerial photo of the Department of Public Works.

- Ability of the site to accommodate the new maintenance and storage building: The DPW site could accommodate a new Maintenance and Storage Building (possible location indicated above).
- Location relative to other buildings that will share resources: The DPW is not well situated in relation to the public schools that will mostly be served by this building.
- Traffic Issues: Parking is adequate at this location and appears to have the capacity to accommodate additional traffic and/or utility vehicles. The district's bus parking lot is located at this location. Busses deploy from this site weekday mornings and return in the afternoon. Traffic and vehicular congestion can occur at morning deployment and in the afternoon when the busses return to the parking lot. From a safety standpoint, a new Maintenance and Storage Building may not be best situated in the event of an emergency. Traffic patterns and bus congestion should be carefully considered in terms of safety.
- Pros: Consolidation of resources for the town and the possibility to share resources.
- Cons: The site location in relation to the schools is undesirable and does not best support the main function of the building.



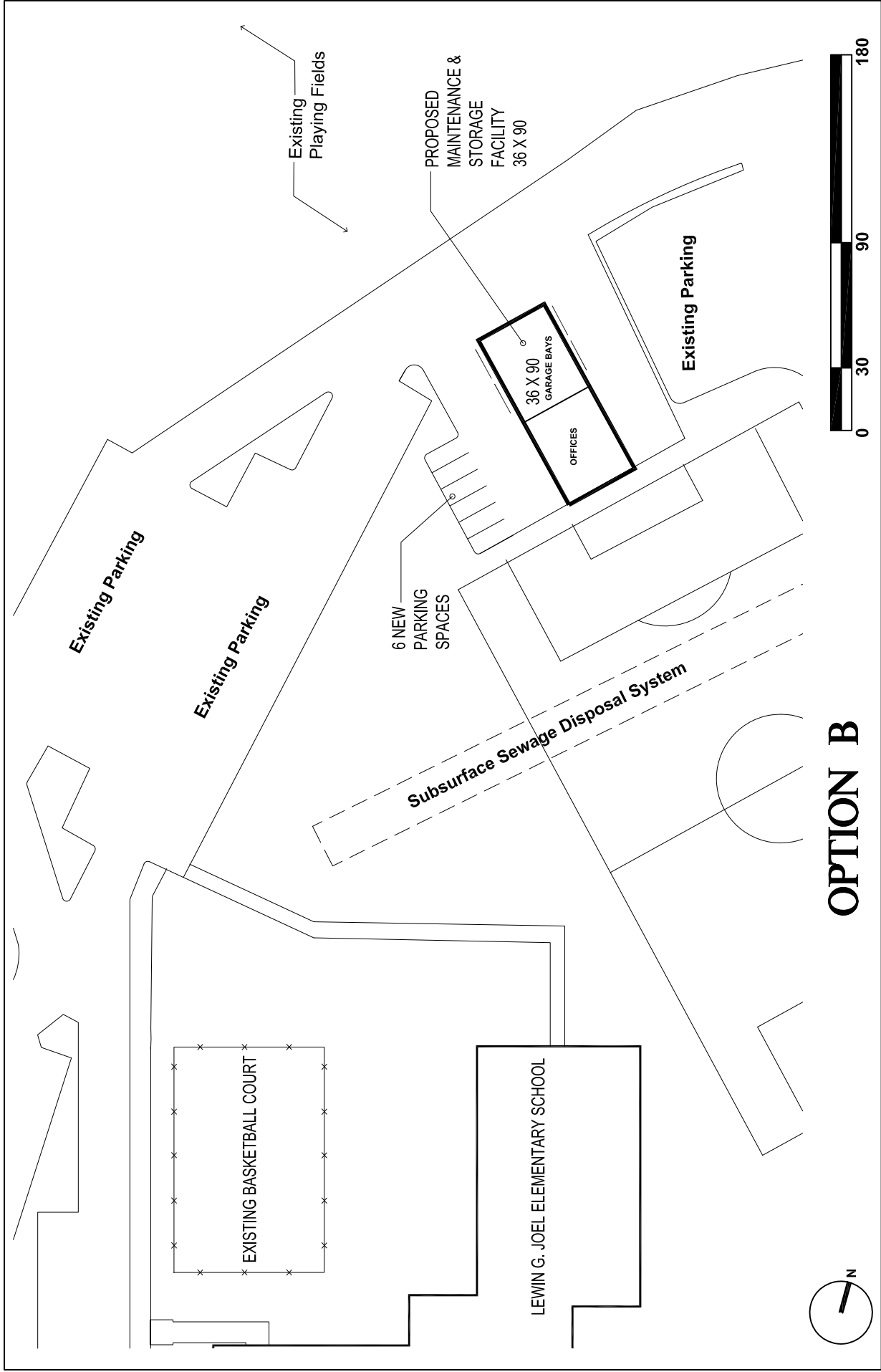
OPTION A

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S. Windsor, CT 06074
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860.644.8301 fax



Board of Education Maintenance & Storage Facility Clinton, Connecticut

Job No. 13022.00
Date: 01.10.14



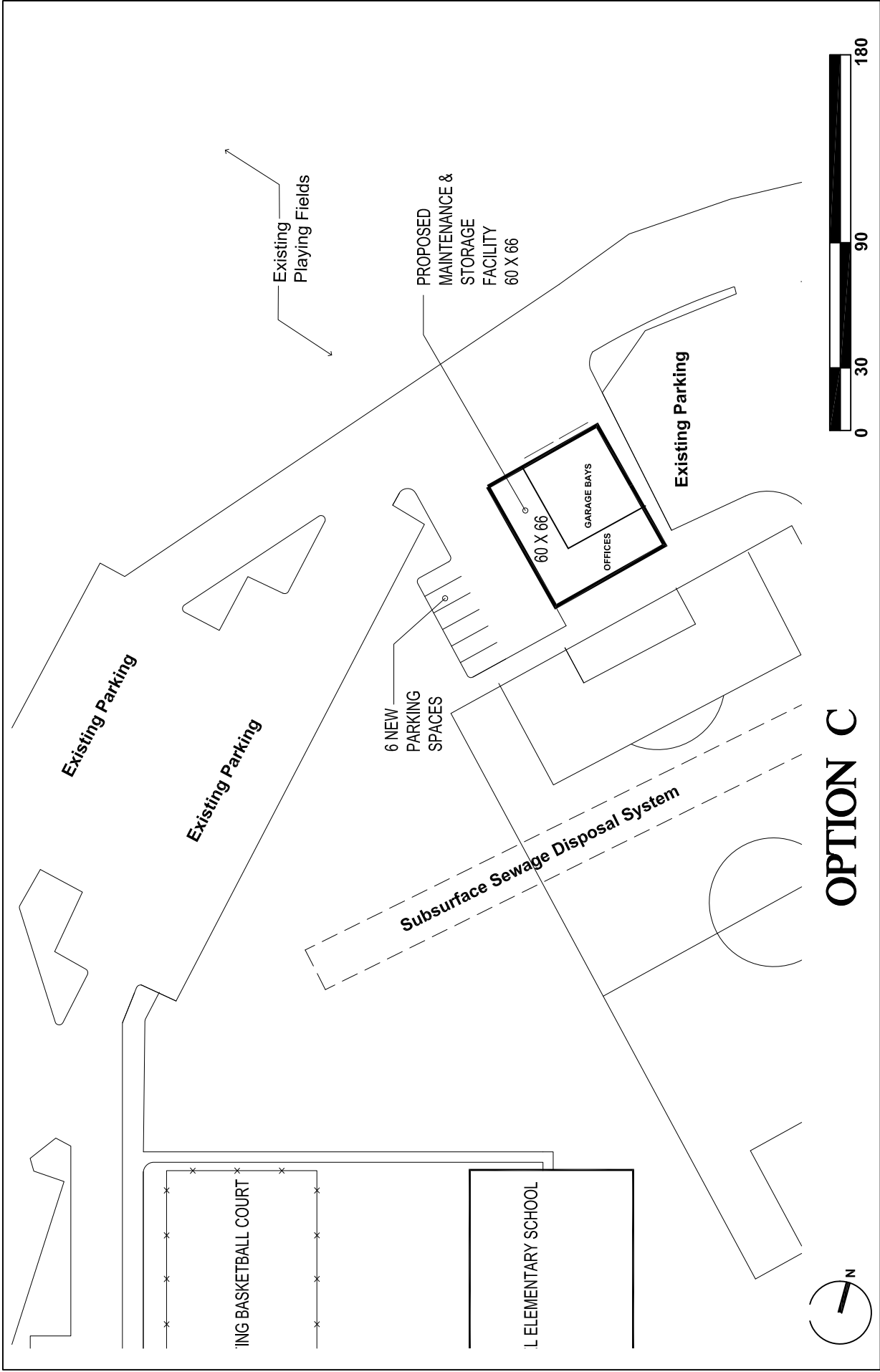
OPTION B

Drumrey Rosane Anderson, Inc.
225 Oakland Road, Suite 205
S. Windsor, CT 06074
860.644.8300
860.644.8301 fax



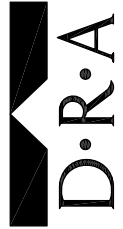
**Board of Education
Maintenance & Storage Facility
Clinton, Connecticut**

Job No. 13022.00
Date: 01.10.14



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S. Windsor, CT 06074

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**Board of Education
Maintenance & Storage Facility
Clinton, Connecticut**

Job No. 13022.00
Date: 01.10.14

Appendix E

History of Additions at Selected Clinton Schools

Clinton Public Schools

2/14/2014

Clinton Public Schools Mail - Clinton School Building Additions data needed
ADDITIONS: 1900, 1971, 1991, 2003

ACREAGE: 5.2

SQUARE FOOTAGE: 97,945 (Total)

23,000 (Original Building)

32,000 - 1968 Addition

10,000 - 1971 Addition

20,000 - 1991 Addition

13,000 - 2003 Addition *12,000*

PIERSON ELEMENTARY SCHOOL

GENERAL INFORMATION

CONSTRUCTED: 1932

ADDITIONS: 1952 and 2000

ACREAGE: 4

SQUARE FOOTAGE: 50,945 (Total)

25,000 (Original Building)

23,000 - 1952 Addition

3,000 - 2000 Library Addition

2/14/2014

Clinton Public Schools Mail - Clinton School Building Additions data needed

JARED ELIOT MIDDLE SCHOOL

GENERAL INFORMATION

CONSTRUCTED: 1960

ADDITIONS: 1965 and 1991

ACREAGE: 12.0

SQUARE FOOTAGE: 85,369 (Total)

34,000 (Original Building)

34,000 - 1965 Addition

17,369 - 1991 Addition

Gym 82

Catherine Miller

Drummey Rosane Anderson, Inc.

Architectural Designer

235 Bear Hill Road, 4th Floor

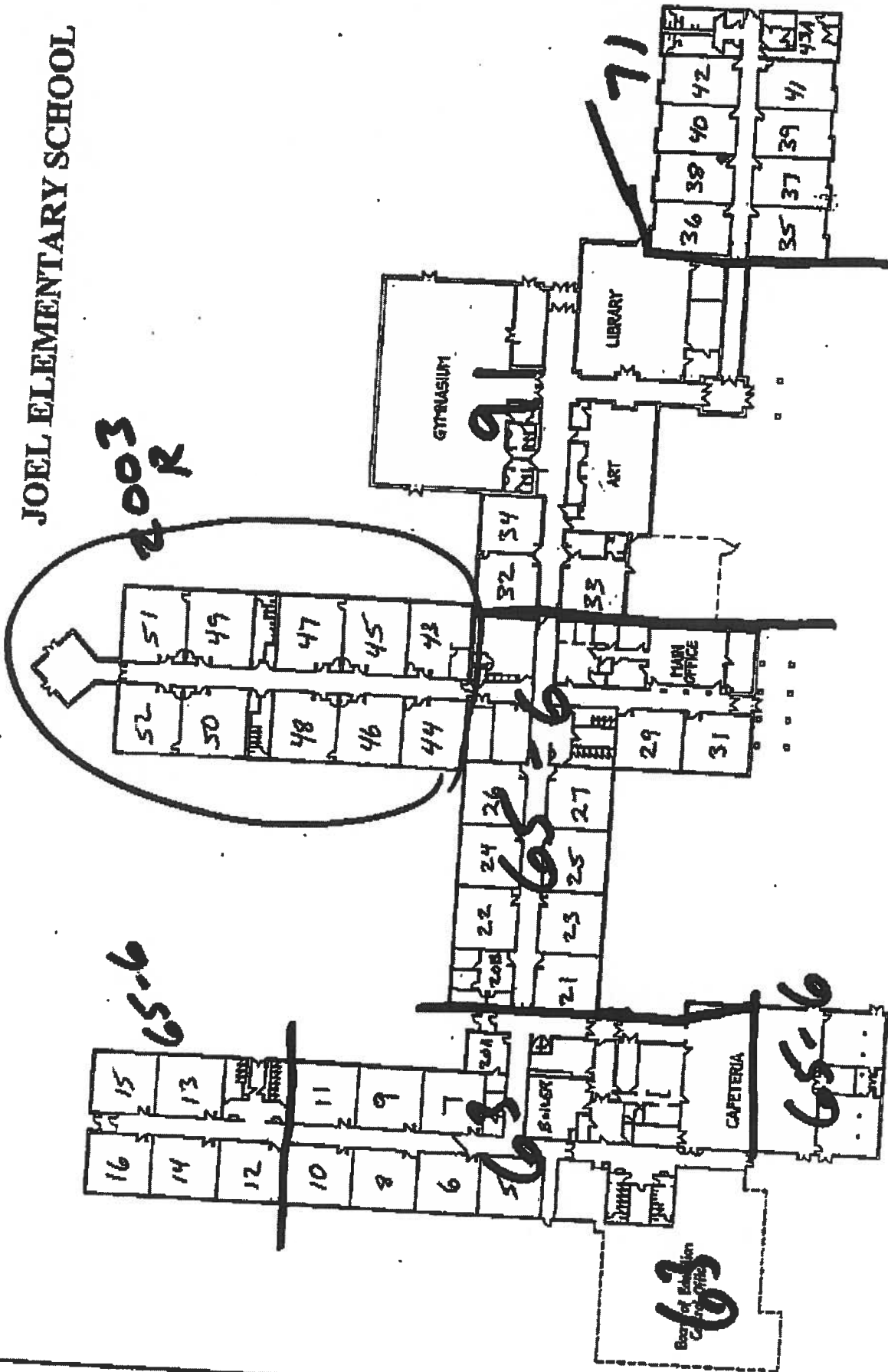
Waltham, MA 02451

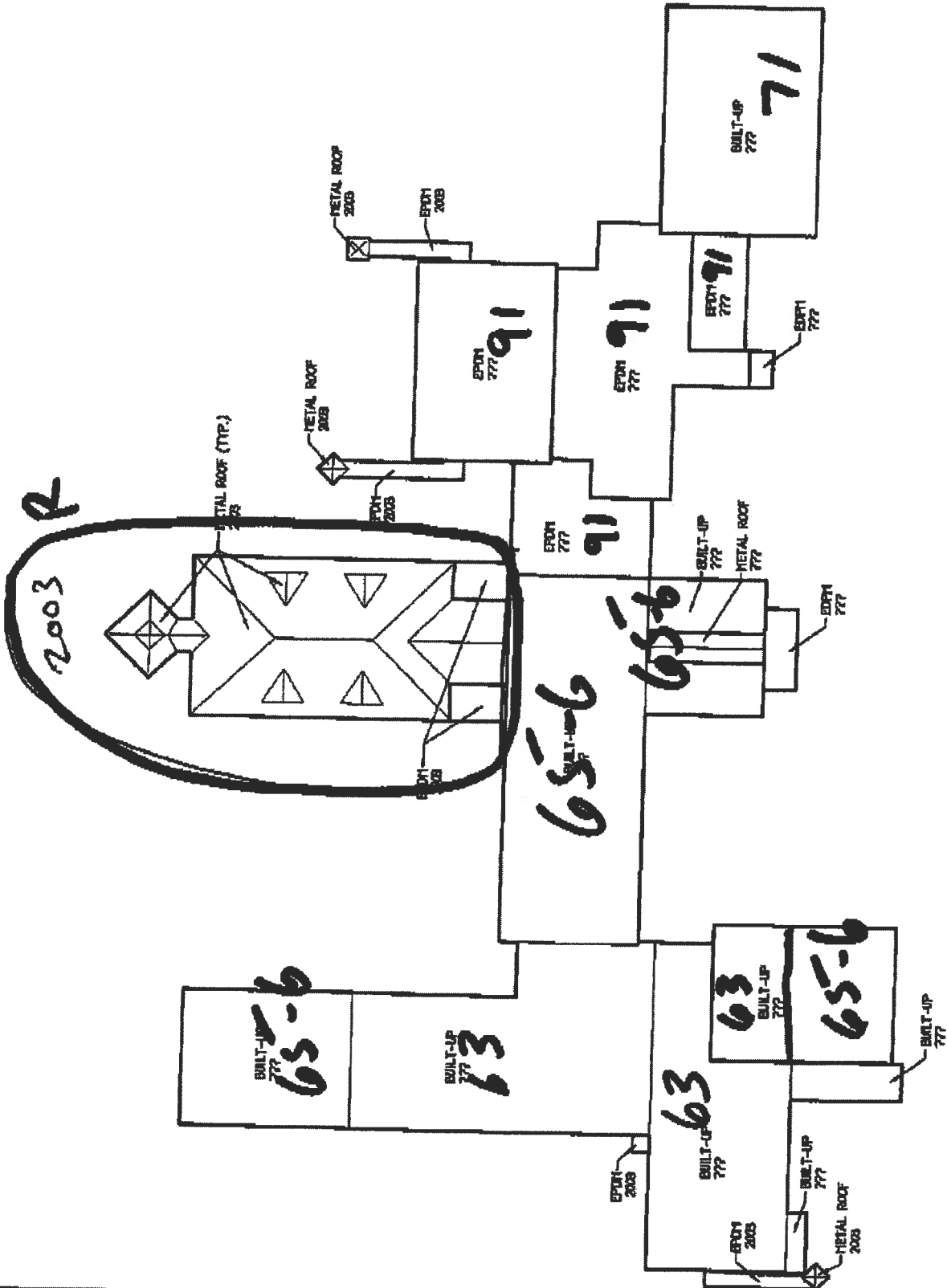
617.964.1700 x 142

617 964 1701 FAX

<https://mail.google.com/mail/u/0/?ui=2&ik=b5d00b5e21&view=pt&search=inbox&th=14431314db9b014a>

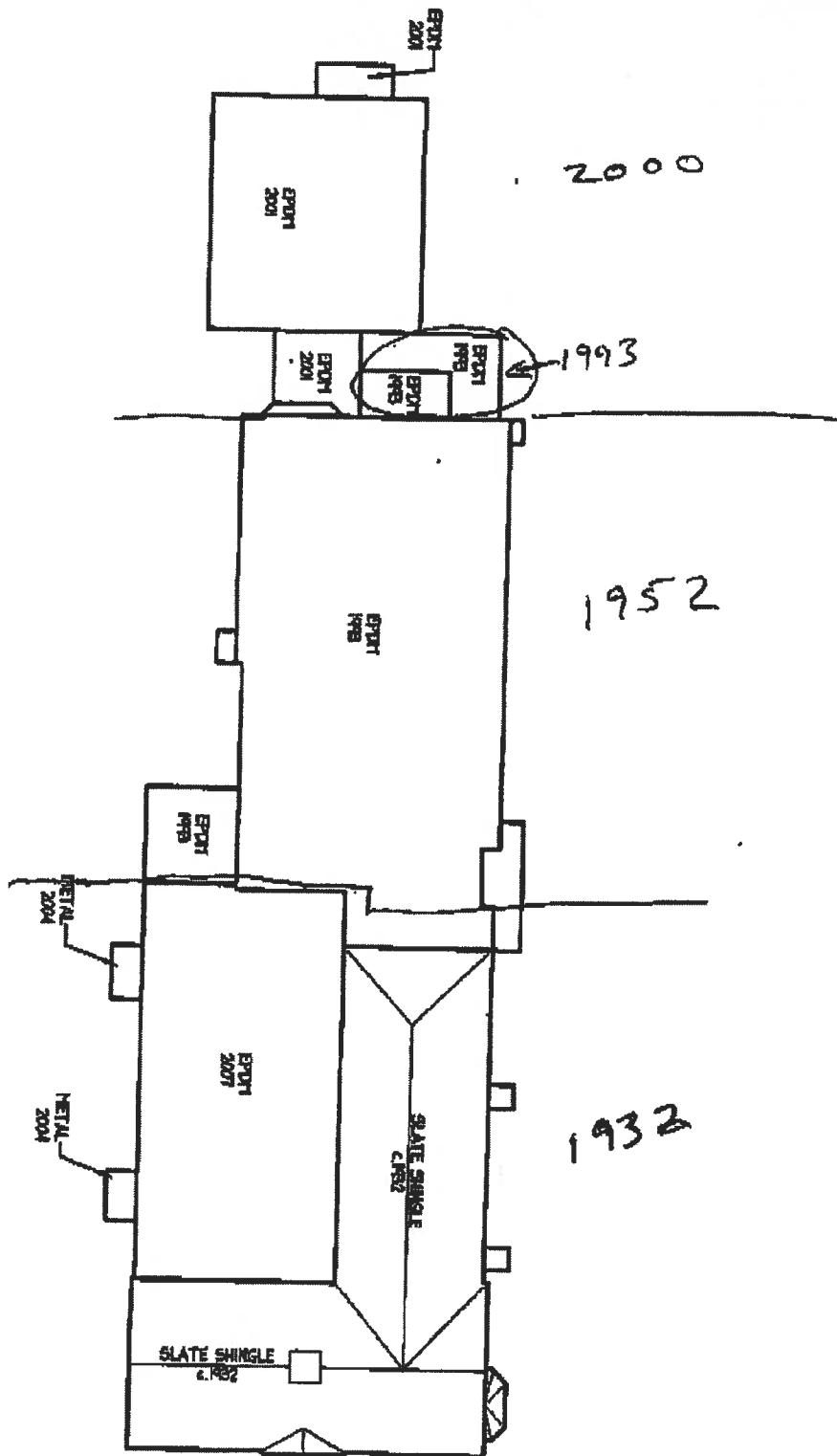
JOEL ELEMENTARY SCHOOL



[illegible]

R **ROOF PLAN**
SCALE: 1/4" = 1'-0"

ABRAHAM PIERSON ELEMENTARY SCHOOL



R ROOF PLAN
SCALE: 1/4" = 1'-0"



EXISTING ROOF PLANS
ABRAHAM POERSON
ELEMENTARY SCHOOL

CLINTON PUBLIC SCHOOLS

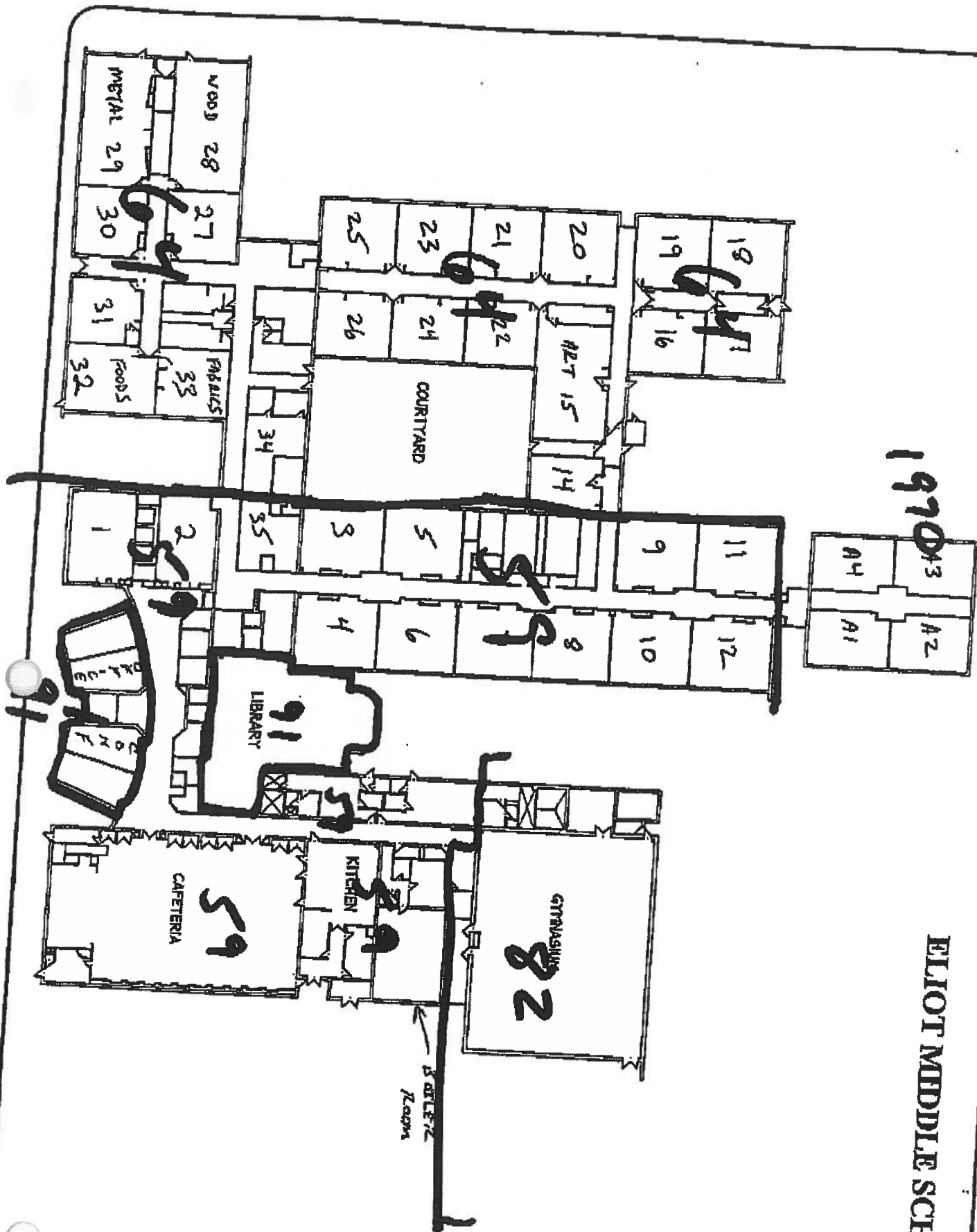
CLINTON, CONNECTICUT

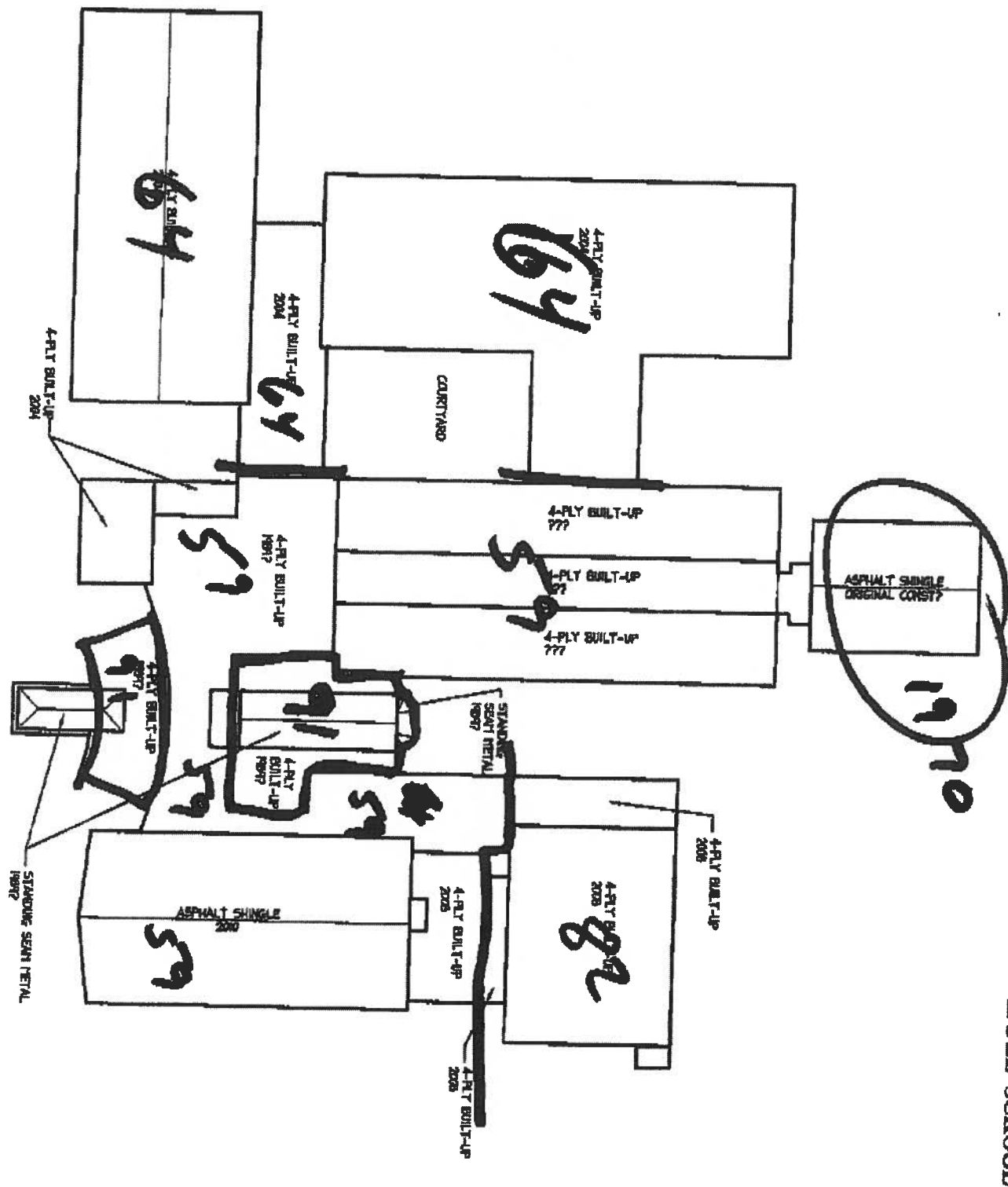
MAINTENANCE DEPARTMENT
CLINTON PUBLIC SCHOOLS
CLINTON, CT 06032
TEL: 860-664-6587
FAX: 860-664-6587

ROOF
PLAN

R-2.0

ELIOT MIDDLE SCHOOL





JARED ELIOT MIDDLE SCHOOL

**EXISTING ROOF PLANS
JARED ELIOT
MIDDLE SCHOOL**

CLINTON PUBLIC SCHOOLS

CLINTON, CONNECTICUT

JTHI
JACKSON THOMPSON
ARCHITECTS, LLC
11 HAZARD SERVICE
CLINTON, CT 06032
TEL: 860-468-0000

**ROOF
PLAN**

R-3.0

Appendix F

Workshop Notes & Faculty Interview Notes

Meeting Location: Joel Elementary School-B.O.E. Conference Room

Presentation by: DRA Architects, Milone & MacBroom

Attendees: residents; comprised of parents, teachers, and Board of Ed. Members.

Agenda: PowerPoint presentation by DRA and consultants followed by breakout sessions.

Contents -break- out session topics:

- Technologies should be integrated into the schools better (no electronic devices are allowed in the curriculum, not even readers).
- Computer testing will be coming.
- Kids are carrying very heavy backpacks (up to 40 lbs.).
- 'Flip' classroom concept should be considered.
- Teamwork needs to be implemented into the classroom design; classrooms should be designed to support project based activities, and have a flexible layout.
- From a socio-economic standpoint there are concerns about resource equality among the students. No students should be left behind due to lack of access to technology resources.
- Fiber-optics have already been installed in the schools.
- Budget cuts have resulted in cutting enrichment programs at Pierson school. At Eliot, the enrichment program is still in place. Maybe the enrichment program could be more equally distributed between Pierson and Eliot schools.
- Property tax is a significant issue in the town.
- Scheduling makes it difficult to take elective classes at the H.S.
- More specialist and professional development would be good to assist teachers to teach better.
- Students should have options/choice in terms of academic vs. vocational training.
- The district should learn from other school districts and see how they do things; Clinton could benefit from implementing a team approach.

Currents-break- out session topics:

- Can we link enrollment trends to teachers?
- What about planning changes? How are the changes going to be implemented?
- There are new educational programming models to possibly learn from e.g. Magnet schools.

Containers-break- out session topics:

Toilet stalls

- HVAC controls-Air

- Visually the favorite gym is located in the Joel school. The Pierson gym is narrow and tall.
- Storage issues
- sports fields
- traffic flow at Joel
- Pierson parent drop-off across the street at the churches parking lot; this poses safety issues and there is uncertainty that the church will be open to this arrangement indefinitely.
- Eliot-parent drop-off and parking
- Windows
- Building safety.
- Electrical issues: Smart boards, project carts, wire, fiber.
- Computers: Startup issues, lagging time, and technology.

Meeting Location: Joel Elementary School-B.O.E. Conference Room

Presentation by: DRA Architects, CES, Milone & MacBroom

Attendees: 13 residents; comprised of parents, teachers, and Board of Ed. Members.

Agenda: PowerPoint presentation by DRA and consultants followed by breakout sessions.

Currents- break-out session topics:

- Q. Can Eliot support more students? There is a concern about wastewater capabilities.
- Grouping the 4th & 5th grade is good.
- Possible grade level options to consider:
 - D3.1
 - Joel=PK-5 at Joel
 - Eliot=6-8 at Eliot
 - Pierson=ECC, SBH , & FRC, and B.O.E.
 - PK at the HS

Containers -break- out session topics:

D3-If B.O.E. is relocated can area be used for classrooms? And PK can stay at Joel.

- Possible addition of second floor
- Are buildings' up to code?
- Pierson possesses a special quality. It is in a central location, providing unique fieldtrip opportunities.

Contents -break- out session topics:

- Pierson's 2 year grade configuration (Gr.4-5) makes it hard to transition in and out. It makes it challenging for the students to feel settled and parent involvement also suffers with this grade configuration.
- The fewer transitions the better.
- Possible grade level options to consider:
 - Two K-5 schools; this would allow for 1 transition. *Turns out this was a configuration in the past. This configuration tends to create a legacy of division long after the grades join together.*
 - Having PK in the elementary school is good because it gets the students familiar and comfortable being in an elementary school environment.
 - It is good to have the grades combined. For example, If K-4 is in 1 building resources can be optimizing, e.g., teachers and specialist.

- MS-5-8th Grade option; team organization makes it a workable option. The children stay within their team structure and interaction between the teams is limited.
- One parent's perspective: K-8 is not a good option.
- Put library in Pierson; the existing library could be sold/demo and become retail space.
- Consider district offices and B.O.E in Pierson.
- Pierson could be dedicated to district offices and B.O.E. dept. The current location of B.O.E. in Joel could be repurposed for ECC program.
- There was talk that the Morgan would get the SBH program but this is false (there is not enough space to accommodate it).
- If the 5th grade moved into the Middle school they would benefit from early exposure to the UA program.
- In 8th Grade the students need to select either world language or art/music. Several parents expressed the negative aspects of this academic limitation.
- Pierson-Entry and pick-up configuration is problematic, not inviting to drivers, an unsafe configuration.
- Enthusiasm for Option C and D1 (participant perceives both options to be similar).
- Pierson maybe house the FRC and Library?
- Full day K is in place right now-the Y program has a satellite program in the Joel and Pierson schools currently.
- A three school community is a good option; this makes it possible to get to know the students.

Meeting Location: Joel Elementary School-B.O.E. Conference Room

Presentation by: DRA Architects

Attendees: 18 residents; comprised of parents, teachers, and Board of Ed. Members.

Agenda: PowerPoint presentation by DRA followed by Q + A, and Next Steps.

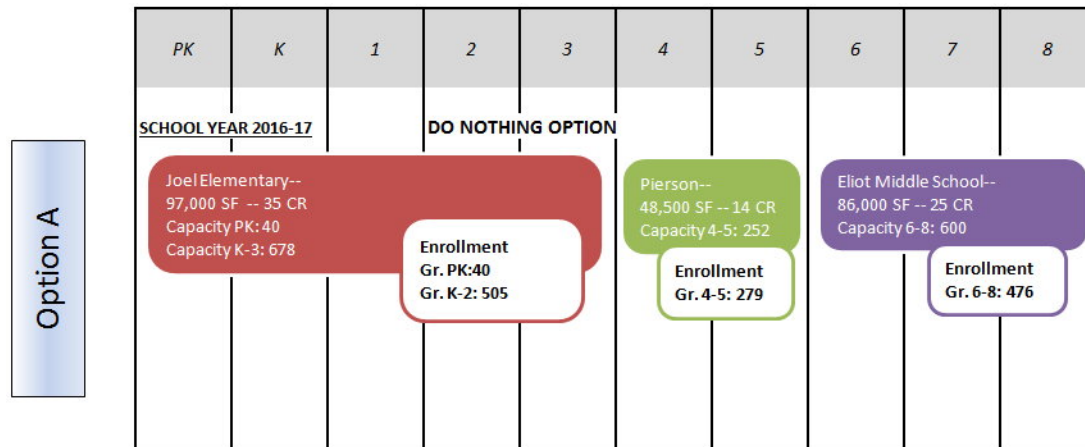
Summary of Family of options.

Option A- Do nothing; Upgrade systems on an as needed basis; reactive approach.

Option B- Facilities upgrade at all schools and demo temporary construction to fit declining population.

Option C- Pierson is repurposed to house SBH, FRC, and ECC programs. At Joel and Eliot: Facilities upgrades, grade reconfiguration. The modular classroom wings to be replaced with more permanent construction.

Option D1-Eliminate Pierson School. At Joel and Eliot: Facilities upgrades, grade reconfiguration. The modular classroom wings would be replaced with more permanent construction.



**[CLINTON PUBLIC SCHOOLS
FACILITY UTILIZATION & STUDY WORKSHOP 3]**

January 23, 2014

Option B

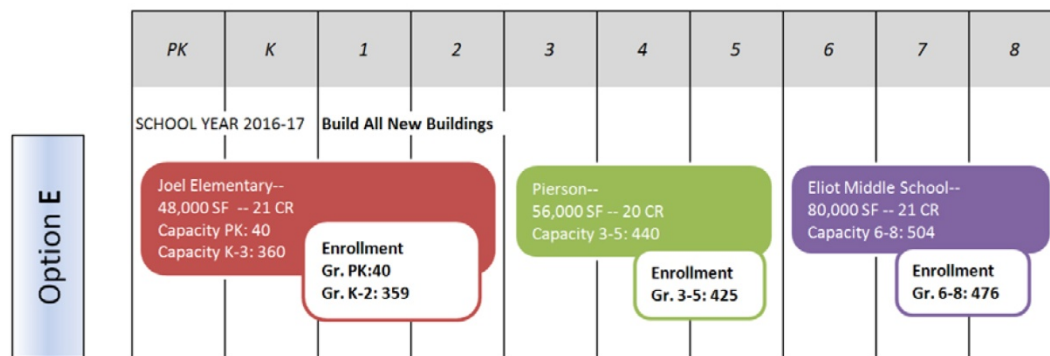
PK	K	1	2	3	4	5	6	7	8
SCHOOL YEAR 2016-17		Maintain All Schools & Demo- Demo a portion of Joel and Eliot to fit declining population							
Joel Elementary-- 90,200 SF -- 27 CR Capacity PK: 40 Capacity K-3: 514		Enrollment Gr. PK: 40 Gr. K-2: 505			Pierson-- 48,500 SF -- 14 CR Capacity 4-5: 252		Enrollment Gr. 4-5: 279		Eliot Middle School-- 83,000 SF -- 21 CR Capacity 6-8: 504
							Enrollment Gr. 6-8: 476		

Option C

PK	K	1	2	3	4	5	6	7	8
SCHOOL YEAR 2016-17									
Pierson-- 48,500 SF-- 14 CRs		Joel Elementary-- 90,200 SF -- 27 CR (build 6 CRs) Capacity 1-4: 560				Eliot Middle School-- 91,000 SF -- 28 CR (build 7 CRs) Capacity 5-8: 658			
School Based Health: 1200 sf Family Resource Center: 2200 sf Early Childhood Center: 14,000 sf Gr. PK-K: 146		Enrollment Gr. K-4: 532				Enrollment Gr. 5-8: 622			

Option D1

PK	K	1	2	3	4	5	6	7	8
SCHOOL YEAR 2016-17		Renovate/Add, and Close a building.							
Joel Elementary-- 96,000 SF -- 34 CR (build 7 CRs) Include ECC Capacity PK: 40 Capacity K-4: 668		Enrollment Gr. PK: 40 Gr. K-4: 638			Eliot Middle School-- 96,000 SF -- 28 CR (build 7 CRs+ SBH & FRC) Capacity 5-8: 658		Enrollment Gr. 5-8: 622		



Background information:

- The family of options focuses on years 2016-2017 because it is the earliest time a change could conceivably happen. Enrollment projections show the population continues to decrease 8 years out.
- The loading capacity is calculated based on a good operational level, not maximized capacity. At the Pierson School the preferred classroom size is 18 and currently operates at a typical classroom size of 21; making it feel overloaded.

Q + A

Q. A general skepticism regarding the demographic data was expressed. How certain are the projection numbers? Is the decline of enrollment a cyclical thing that we can expect to recover?

A. Demographers are able to report with certainty 5 years out. In the 5-10 year window the data gets more nebulous but remains the most reliable source to predict future trends. Declining enrollment is not only a local trend; There is a 15%-20% decline in school enrollment throughout CT and nationally. There may be a slight recovery in the future but it is not expected to get back to the high numbers seen in 2001. Declining enrollment in the suburban and more rural communities is considered to be the 'new norm'. This is not necessarily a negative thing; it is an opportunity to plan and re-use space in the most effective way. Also, Ali Church with Milone and MacBroom (Demographers) was approached about the rezoning projects on 2 large tracks of land in Clinton and asked how these developments may impact the population in the future. DRA explained that due to the time frame of these development projects they are outside the prevue of this study. If these projects did materialize a separate set of studies would need to be done.

Q. Is the K-8 school model a current trend in education?

A. Educationally, a three year middle school is considered the most advantageous. In a more urban environment a K-8 educational model *can* make sense, if planned thoughtfully. Conceptually, this is a school within a school concept. One benefit of the K-8 grade configuration is that it can help maintain parent involvement in the school system. Logistically organizing the students is an important element

of the design in a K-8 school; careful planning is necessary to keep the lower level students separate from upper grades. Only when it is educationally advantageous do the grade levels mix e.g. Reading buddy, Peer buddy programs.

Q. When will the preferred option be made and who makes the decision?

A. DRA will recommend two or three viable options that will be presented to the Buildings and Grounds Facilities Utilization Committee and then DRA will aid in bringing forward the preferred option to the Board of Education. The meetings are public and anyone is welcome to come and voice their opinion as this process moves forward. A decision is far from being made and will be a collective process.

Q. If the buildings' use is repurposed, will ADA upgrades be triggered?

A. Yes, If the use of the buildings are changed, upgrades would likely be triggered e.g. HVAC, sprinkler, ADA, ramps, elevators, doors.

Q. Could Pierson host an additional grade; is a 3-5 Grade option viable?

A. No, an additional grade could not be accommodated in the Pierson School as it is configured today.

Q. Who pays for the additional program:

-SBH- School Based Health

-ECC-Early Childhood Education

-FRC- Family Resource Center

A. -SBH- There would be no cost to the district; this program separately sponsored at no cost to the district.

-ECC-Board of Ed. Sponsored

-FRC-Board of Ed. Sponsored

Q. What are the disadvantages of the Options D2,D3,D4, & D5?

A. The amount of work that would be necessary to Joel and Eliot would be cost prohibitive.

Q. Was there financial modeling done to study the town's ability to fund these options?

A. No. In this study the options are developed using an evaluation of existing conditions, enrollment projections, demographic information, and analysis of the systems in each school along with maintenance and upgrade cost.

Q. Is it advisable to add an additional story onto either Joel or Eliot?

A. In general it is best not to add a second level onto an existing 1 story school building because the structure would not be able to support it. Typically, a more cost effective option is to expand the building on the site (if there is open space available).

Additional comments from attendees:

- A 5-8 concept at the Eliot school would be a great option but as it stand now, parking and traffic is a disaster at this location.
- This Study should provide a 20-30 year outlook. Looking at this in terms of 8-10 years is too limited. Clinton should not put significant additions onto buildings that are already 50 years old.

Clinton Public Schools – Long-Range Facilities Assessment Study

Faculty Interview Notes:

These space needs were indicated by written and oral contributions from staff. Clinton Public Schools selectively addresses these needs at the conclusion of Chapter 2 (Existing Conditions).

Joel Elementary School:

- Space is tight throughout the building.
- No sinks in the annex.
- Ventilation in music classroom(s) is not good; in the summer, classrooms can be dangerously hot
- Science lab
- More storage space
- Spanish room
- Assembly space
- Small conference room for 12 people
- Computer lab for testing
- Community swimming pool
- Office for paraprofessionals' home base
- Lactation room
- More SPED classrooms
- Private consultation rooms
- Parent parking

Pierson Elementary School:

- Classrooms are too small.
- Multi-purpose room needed.
- O.T./P.T. space needed.
- Larger Life Skills room needed.
- More storage, incl. kitchen storage.
- More adult toileting on each floor.
- More classroom casework – hooks, shelves, etc.
- Ventilation in the classrooms is not good; in the summer classrooms are often overheated.

Clinton Public Schools – Long-Range Facilities Assessment Study

- Windows in the classrooms are difficult to open/shut without assistance from the custodians.
- Pick-up/drop-off occurs across the street at the church's parking lot; safety concerns with this arrangement.

Eliot Middle School:

- Cafetorium is an outdated concept that no longer works.
- SPED classrooms are too small and too remote from the classes.
- Social Work/Guidance rooms are too small.
- Poorly regulated heating, humidity and ventilation are a problem, including in science labs and kitchen (science labs have no exhaust).
- Auditorium
- Connected “suite” configuration for Guidance/Psychologist/Nurse/Asst/Principal
- Staff toilets near the main lobby
- The school does not currently have lockers and they are needed (students store books in their homeroom desk)
- A foreign language classroom; this class is currently held in the Media Lab
- Testing space, with acoustical consideration
- Band and chorus rooms are too small
- Outdoor marching band practice area (currently in front of school, unsafe with cars)
- A private waiting area for the counseling and guidance offices
- One more conference room for 12 people
- Large “team” meeting space (approx. 100 students)
- More storage space in the gymnasium
- Resource teacher offices
- Lactation room
- Testing space
- Computer lab
- Copy room (centrally located)
- Teacher's resource room
- More storage space needed throughout the building
- Locker rooms need updating
- More learning centers in Library
- Modular classrooms are too small

Clinton Public Schools – Long-Range Facilities Assessment Study

- Modular classrooms section of the building is 10 degrees hotter in the summer and 10 degrees colder in the winter; making it difficult to teach in the spaces.
- Parking for teachers and visitors