

An aerial photograph of Bungay Elementary School, a large, modern educational facility with a complex, multi-winged design. The school is surrounded by a large green lawn, a parking lot filled with cars, and a playground area with colorful equipment. The background shows a dense forest and a residential neighborhood under a clear blue sky.

SEYMOUR PUBLIC SCHOOLS BUNGAY ELEMENTARY SCHOOL

35 Bungay Road, Seymour, Connecticut, 06483

EXISTING EDUCATIONAL FACILITY ASSESSMENT

June 15, 2025

ANTINOZZI ASSOCIATES
ARCHITECTURE + INTERIORS

271 Fairfield Avenue, Bridgeport, Connecticut 06604

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EXISTING PROPERTY DISPOSITION

Bungay Elementary School is one of two elementary schools maintained by Seymour Public Schools. Centrally located within town limits, its 19.2-acre site falls on the western side of the Naugatuck River, which bisects the Town of Seymour.

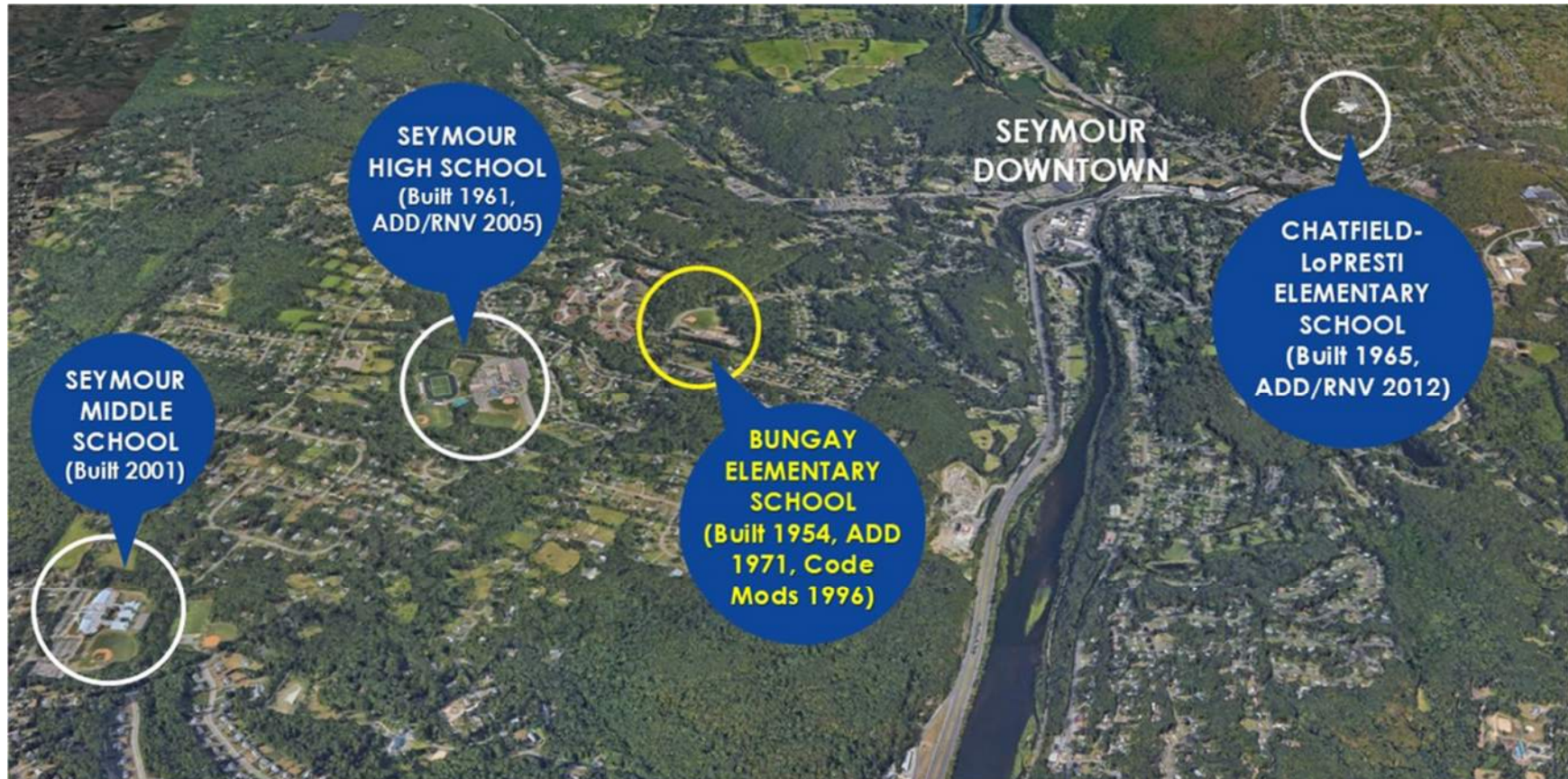
The school is configured in a linear fashion, extending roughly east-west, along the site's southern border. The property falls within Residential Zone R-18. Residential, and multi-family residential properties, surround the school site.

The improved south (building) and west (athletic field) portions of the site represent highpoints and the remainder of the site slopes steeply to the northeast. A softball field and playground are positioned north of the school structure at an elevation approximately 10 feet lower than the school's ground level. An exterior concrete stair and separate sloped drive connect the two occupied levels of the site. GIS mapping indicates the presence of wetlands at the undeveloped, low-lying portions of the site to the northeast.

A single vehicular drive, with curb cut onto Bungay Road, provides access to the school. The drive extends across the school's north side with parking distributed on either side at the drive's western side, on along the north side of the drive's eastern site. Two circles are located within the drive. One is located at the school's main, north facing entrance, and the second at the drive's eastern end. A service access drive and staff parking continue along the school's southern side.



SITE CENTRALITY



Bungay Elementary School has occupied its current location since its construction in 1952. The facility is one of two elementary schools maintained by Seymour Public Schools following the consolidation of Chatfield School and LoPresti School in 2012. Bungay Elementary services residential communities within the Town of Seymour located on the west side of the Housatonic River.

ENROLLMENT DATA

School enrollment plays a significant role in the determination of the construction grant funding available for a school construction project. As set forth by CT General Statutes Sec. 10-286 the largest projected enrollment over an eight-year period, in addition to the grade range and facility size, provide the basic information upon which a maximum eligible grant amount is based. Non-priority projects, such as projects to address code violations, roof replacement projects for systems having a minimum 20-year warranty; projects to remedy indoor air quality issues, may be subject to a determination of eligible percentages by the DAS Commissioner.

Although the scope of this report did not include a demographic analysis, Seymour Public School utilized periodic enrollment updates from New England Schools Development Council (NESDEC). The current enrollment data for Bungay Elementary School is provided at the end of this section. As a means of more equitably distributing students between the two existing elementary school, Seymour Public Schools has consolidated their Pre-K program at Bungay Elementary. The geographically central location of Bungay Elementary within Seymour's town limits supports the consolidation of Pre-K enrollment. This consolidation is more efficient by avoiding the duplication of Pre-K services and staff, were the program distributed between two schools.

According to the NESDEC enrollment study, the highest projected enrollment for a school housing Pre-K to 5th grades, will peak in year 2031-2032 at a 503-student population plus 50 students for the consolidated Pre-K program, for a total population of 553 students.

GRANT REIMBURSEMENT PERCENTAGE

Department of Administrative Services (DAS) FORM-SCG-1060, published in July 2024, indicates that Seymour's reimbursement rate for school construction grants in 2025 will be 56.79% for General Construction and 66.79% for New Construction.

SPACE STANDARDS

The statutory determination of the Space Standard utilizes the "Building Area" defined by the CT State Building Code as the inside face of exterior walls. With available record drawing information provided as part of documents collected for this study, the Building Area of the existing Bungay Elementary School is calculated as follows:

Building	Basement Level (Sq. Ft.)	Main Level (Sq. Ft.)	Building Total (Sq. Ft.)
Bungay ES	2,725	58,700	61,425
Total Existing Building Area			61,425

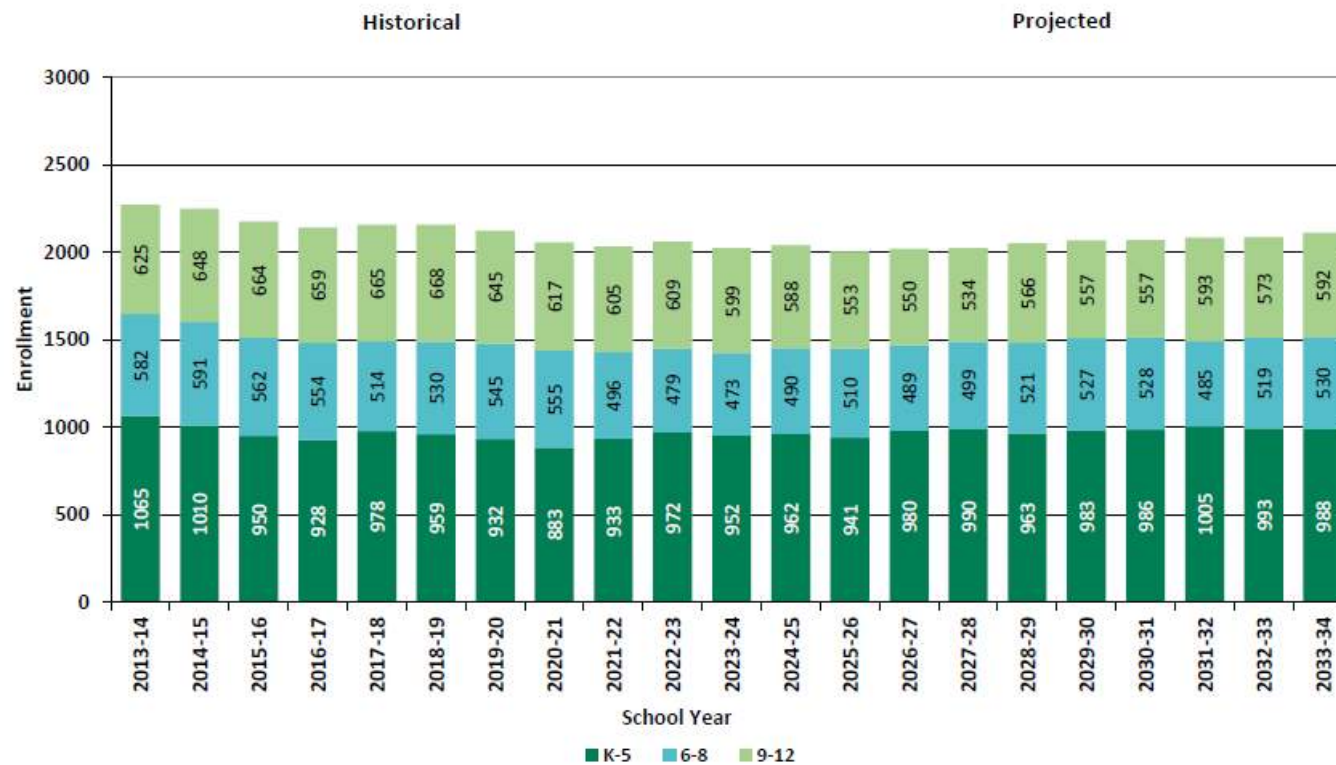
In accordance with CT General Statute Section 10-286 (10)(c)(1), the maximum square footage per pupil can be increase by 25% for schools constructed prior to 1959. Local Assessor's property records indicate that the original portions of Bungay Elementary School were originally constructed in 1952.

With the above building area data, the Space Standard for the existing Bungay Elementary School, and assuming no expansion, is calculated as follows on **Table 2.1.1**:

TABLE 2.1.1 SPACE STANDARD CALCULATION												
A. Grade Level												
Pre-K & K	1	2	3	4	5	6	7	8	9	10	11	12
B. Allowable Area Per Pupil and Total Enrollment between 351 to 750												
120	120	120	120	120	152	152	176	176	176	190	190	190
C. Basic Building Area Computation												
Total Grades						752						
Number of Grades House						6						
Average Area per Pupil						125.33						
Highest Projected Enrollment (2031-2032)						553						
Maximum Building Area						69,309 square feet						
D. Total Building Area at Completion of Project												
Existing Building Area Pre-1959						28,000 square feet						
Adjusted Existing Building Area Pre-1959						22,400 square feet						
Building Area Constructed After 1959						46,909 square feet						
Building Area for Space Standard						69,309 square feet / 74,909 square feet with pre-1959 areas						
Reduction Factor of Total Eligible Costs						NA *						

* The above computation indicates that, based upon the highest projected enrollment over an eight-year period and the school's existing Building Area, Bungay Elementary will not exceed the Space Standard. Therefore, no reduction in total eligible costs is anticipated.

NESDEC Historical & Projected Enrollments in Grade Combinations



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Existing Facility Assessment Bungay Elementary School



BUNGAY ELEMENTARY SCHOOL REPRESENTATIVES

The following individuals with Seymour Public Schools and the Town of Seymour have provided guidance and record documentation supporting the development of this assessment:

Seymour Public Schools

2 Botsford Road, Seymour, CT 06483

Dr. Susan Compton, PhD, Superintendent of Schools

Bungay Elementary School Facility Staff

Lauren Reid, Principal

Rebecca Bennett, School Nurse. Bungay Elementary School Building Committee Member

Town of Seymour

Tim Connors, Seymour Director of Facilities, Bungay Elementary School Building Committee Member

ASSESSMENT TEAM

The Assessment Team was comprised of the following professional design, education specialist, engineering and cost estimating firms who collectively reviewed the existing Bungay Elementary School to generate this assessment:

Architectural Design Services:

Antinozzi Associates, PC - Architecture & Interiors

271 Fairfield Avenue, Bridgeport, CT 06604

(203) 377-1300 | www.antinozzi.com

Michael LoSasso, AIA, LEED AP BD+C, Principal

Lisa Yates, AIA, LEED AP, Senior Associate

Educational Specifications:

Construction Solutions Group (CSG)

34 Sequassen Street, Suite 201

Hartford, CT 06106

Fran Defiore, Educational Specialist

Civil Engineering Services:

Stantec Consulting Engineers

317 Main Street, Norwich, CT 06360

(860) 886-1966 | www.claengineers.com

Robert A. DeLuca, P.E., Principal

Structural Engineering Services:

E2 Engineers

488 Montauk Avenue, New London, CT 06320

(860) 437-3259 | www.e2engineers.com

Scott Ericson, P.E., Principal

Mechanical, Plumbing, Fire Protection & Electrical Engineering Design Services:

Consulting Engineering Services (CES)

811 Middle Street, Middletown, CT 06457

(860) 632-1682 | www.cesct.com

Eric Gebrian, P.E., Associate, Project Manager

Adam Sterrer, P.E., Mechanical Engineer

Vaney Murello, P.E., Electrical Engineer

Professional Cost Estimating Services:

Pan American Consulting Services, LLC

East Haddam, CT 06423

(860) 873-1196

Thomas C. Hardin, CPE / LEED | AP

USE AND RELIANCE STATEMENT

Antinozzi Associates PC; Construction Solutions Group (CSG); Stantec Consulting Engineers, e2 Engineers, Consulting Engineering Services (CES), and Pan American Consulting Services, LLC (PACS), hereinafter referred to as the "Assessment Team," have produced the content of this document under agreements between the Town of Seymour, Seymour Public Schools and Antinozzi Associates, PC. All terms and conditions of that agreement are included within this document by reference. Other than the Town of Seymour and Seymour Public Schools, the Assessment Team disclaims any obligations to any other person or entity with respect to the material content presented in this document, and no person or entity may rely upon this document without advance and express written consent from Antinozzi Associates, PC and such person's or entity's written agreement is so bound by the limitations, qualifications, terms conditions and indemnities to Antinozzi Associates, PC set forth by that agreement.

The Assessment Team specifically states that their review of the property in question is subject to monetary and time restraints, as well as scope limitations. Given those restraints and limitations, they have made what is in their opinion a reasonable investigation and analysis. The materials presented in this document shall be considered "to the best of the Assessment Team's collective professional knowledge." This phrase means materials presented reflect the Assessment Team's actual knowledge of the subject matter after such inquiry the Preliminary Assessment Team considered reasonable given the constraints and limitations upon the contracted scope of work.

The extent of the physical observation to produce this Assessment has been limited to walk-around visual inspections of the property, and conversations with Town of Seymour and Seymour Public Schools representatives, and other support personnel. Assumptions regarding the overall condition of the property have been developed based upon observation of representative areas of the subject site and review of previous studies and drawings. As such, the development of the assessment and improvements, along with associated costs, is based upon the team's prior knowledge of the facility from the extension and alternation of the original school the overview observation and is also limited with respect to completeness.

2.1 Educational Specification Objectives

- Project Overview
- Rationale for the Project
- Long Range Educational Plan
- Learning / Educational Activities
- Instructional Design
- Enrollment Data and Proposed Project Capacity

2.2 Building Systems

2.3 Interior Building Environment

- Interior Building Environment
- Site Development
- Sustainability
- Common Uses

2.4 Program Matrix

PROJECT OVERVIEW

In May of 2023, the Seymour Board of Selectpersons appointed the Bungay School Facility Needs Study Committee. The Committee was charged with the task of assessing the facility needs of Bungay School and providing a report and recommendations to the Board of Selectpersons on or before December 2023. The purpose of the study was to develop an assessment of the condition of the school to determine the impact of the existing conditions on the educational program currently in place with consideration for future enrollment and program needs. The summary was comprehensive, uncovering several serious issues in need of attention. These conditions are outlined in the project rationale section of the document.

These Educational Specifications were developed in collaboration with the Superintendent, Dr. Susan E. Compton, Director of Curriculum and Instruction, Mary Sue Feige, Director of Facilities, Timothy Connors, Principal, Lauren Reid, Assistant Principal, Stacey Long, and Bungay School staff. The following individuals participated in specific program meetings to provide input for these educational specifications:

Mark Krauchick – Custodial/Facilities
Karen Leeper – Administrative Assistant
Rebecca Bennett - Nurse
Cliff Taylor – Art
Halliegh Perugini – Library-Media
Joanna Dunne – Music, Chorus, Band
Jenna Gentile – Physical Education
Gina Kindt – Kindergarten
Jen Florin – Kindergarten
Jaci Freddino – Grade 2
Katie Furino – Grade 2
Suzanne O'Hara – Instructional Para
Kelli Wrogg – Monitor Para
Mike Milia – Grade 5
Kristine Yoxall – Grade 5
Kim Barton –SRBIs
Maureen Hein – Grade 4
Stef Newman – Grade 4
Kristen DeLorenzo – Preschool
Michelle Cirella – Preschool

Alex Giannelli – REACH Program
Ron Barnard – Security
Chloe Germain – School Psychologist
Dana Mitchell – School Counselor
Jen Karpovich – SLP
Cindy Brooks – Food Service
Nancy Sarlo – Food Service
Noelle Oberdick – Grade 1
Michelle Strumello – Grade 1
Jeannine Weaver – Special Education
Rachel Ferrugia-Stanek – Special Education
Mallory Knutson – Grade 3
Kim Freeman – Grade 3

RATIONALE FOR THE PROJECT

Bungay Elementary School was originally constructed in 1952 and underwent renovations in 1971 and 1996. The renovations included the addition of single-story classroom spaces and various facility updates. The current building encompasses a total of 59,600 square feet. The student population of Bungay School is currently 465 and the school serves Pre-K-5.

It is important to note that Bungay School is the last of the four present schools of the Seymour Public Schools which need upgrading. Seymour Middle School was built and dedicated in September 2001. Seymour High School was expanded and renovated in part with a dedication in 2005 and Chatfield LoPresti School was expanded and renovated with a dedication in 2012.

Given this information, in May 2023, the Board of Selectpersons appointed a Bungay School Facility Needs Study Committee. The Committee was tasked with assessing the facility needs of Bungay school a report and recommendations to the Board of Selectpersons on or before December 31, 2023.

The Committee toured Bungay School with staff members to view the school. Tim Connors, member of the Committee and Facilities Director for the Seymour Public Schools, provided a summary of the infrastructure needs of the school from a strictly facilities perspective. The Administration, staff, and members of the public discussed extensively the shortcomings of the school and limitations that affect students and staff daily to articulate the facility needs of the school from the perspective of students and staff and the curriculum and instructional needs of the students.

The Committee identified several deficiencies and areas in need of improvement which are summarized below. A full copy of their report is attached as an appendix to this report.

- Safety and security, including traffic flow
- Replacement of doors and windows
- Upgrades of bathrooms for accessibility
- Need for increased space for storage and staff
- Updating and upgrading electrical systems, plumbing and HVAC
- Improvements in air quality
- Upgrades to technology and wi-fi throughout the building
- Incorporation of 21st century learning environment including STEAM, Maker Space, improved media center etc.
- Improvements to the nurse area for patient privacy

The Committee accordingly found that the facility needs of the school are many and the school is in need of a renovation and expansion project to provide and enhance the educational needs of the students and to adequately provide for the safety, physical needs and comfort of the students and staff, including, but not limited to, the social and emotional needs of the student population.

As a result of the Bungay School Facility Needs Study Committee's findings, the Board of Selectpersons recognized the need for Bungay and appointed a School Building Committee to be charged with the development of a plan for the renovation, expansion and/or new construction of Bungay School.

These education specifications have been developed with the intent of transforming Bungay Elementary School into a 21st Century Learning Environment and addressing the needs identified by the stakeholders including students, staff, administrators, and committee members.

LONG RANGE EDUCATIONAL PLAN

Mission and Vision

The mission of Seymour Public Schools is to fully know our students as learners, to educate and inspire them through a range of experiences that reflect high expectations for learning and prepare them to meet the challenges of an ever-changing world.

Seymour Public School works diligently to promote individual student learning. We strive to have all students succeed in all social and academic areas so they can become well-rounded individuals who show compassion toward others and who can confidently confront and solve any problem with which they are faced.

Core Beliefs of Seymour Public Schools

- ✓ All students can learn
- ✓ Everyone in our school community will be learners
- ✓ Accountability leads to growth
- ✓ All learners have individual interests, needs, and talents
- ✓ All learners will be physically and emotionally safe in the learning environment
- ✓ Home, school, and community will act as team members in the educational process
- ✓ By working together collaboratively toward common goals with cooperation and
- ✓ teamwork all learners will succeed.

Vision of a Graduate

Together, we will continue to work through our Vision of a Graduate initiative, which will guide us in developing our strategic plan. Our mission is to prepare all students with the knowledge, skills, and attributes required for success in a rapidly changing world.

Strategic Priorities

The Strategic Plan is designed to provide a foundation for academic excellence, social-emotional growth, and a vision of a graduate. These efforts are organized into the following strategic priorities:

1. Climate and Culture: Social Emotional
2. Student Engagement with Curriculum
3. Support Innovative and Exemplary Research-Based Professional Practices
4. Community Involvement
5. Infrastructure and Operational Sustainability

District Goals and Objectives

District goals and evidence of student learning inform the development of school, department, and individual annual growth plans that are finalized at the beginning of each school year. Annual objectives highlight priorities for the upcoming school year although the ongoing, complex work of the district across all departments and domains continues even if not specifically noted below. In addition, annual objectives guide resource allocation and decision-making.

LEARNING / EDUCATIONAL ACTIVITIES

Academic Goals

At Bungay Elementary School, the updated designs for the Preschool through fifth grade classrooms will reflect the latest developments in educational practices, ensuring that the space supports the current curriculum and extending learning opportunities for students. The goal is to create environments that not only foster active, hands-on learning but also promote creativity, collaboration, and critical thinking across all grade levels. Classrooms will be designed to adapt to a variety of instructional methods, including project-based learning, inquiry-based activities, and differentiated instruction, which are key components of the school's curriculum.

Incorporating spaces that support current teaching practices will be essential for enhancing student engagement and extending their educational experiences. These spaces will allow for flexible groupings and the integration of technology, enabling students to work both independently and in collaboration with peers on a range of academic and creative projects. Teachers will need areas that can accommodate whole-class instruction, small-group discussions, and one-on-one interactions, providing opportunities for personalized learning and extending classroom learning beyond traditional boundaries. Renovations will be necessary to create more innovative, future-focused spaces that align with these needs. This will involve updating classroom layouts to include multifunctional areas where students can engage in different activities at once—whether it's a quiet corner for individual reading or a collaborative space for group discussions and projects. Flexible furniture and interactive learning stations will allow for quick reconfigurations based on the specific needs of the lesson or project.

To further support diverse student needs, additional spaces

will be required to accommodate small group instruction, support services, special education programs, and intervention efforts such as MTSS (SRBI). These dedicated areas will ensure that all students receive targeted and individualized support, fostering an inclusive learning environment where academic and social-emotional growth can thrive.

Additionally, incorporating areas that encourage STEAM exploration, creative arts, outdoor learning, and critical thinking will support a well-rounded, 21st-century education. This may include spaces for hands-on learning, such as a STEAM classroom, where students can experiment and extend their understanding of the curriculum. Overall, the renovations at Bungay Elementary will enhance the instructional space to better accommodate current educational strategies, encouraging deeper learning experiences and providing the flexibility necessary to prepare students for future success. The academic goals outlined below provide information about how current learning and educational activities can be further enhanced and developed through a renovation, expansion and/or new construction of Bungay School to meet the long-range educational needs of the preschool through fifth grade student body.

Mathematics: Aligned with state standards, students will develop strong foundational skills in key areas like geometry, statistics, and algebra, preparing them for high school and beyond. The Seymour School Mathematics Program is aligned with the Connecticut Core Standards for Mathematics and is committed to providing all students with a high-quality, comprehensive, and challenging program. The program provides consistent opportunities for students to develop the knowledge, skills, and capacities necessary to be college and career ready. The guiding principle that drives the mathematics program is that every student should have

foundational skills in number sense, expressions and equations, functions, geometry, and statistics and probability, which prepare them for a successful mathematics experience in high school and beyond.

Literacy: The literacy program emphasizes reading, writing, speaking, and critical thinking skills. Students will explore diverse perspectives through texts that foster empathy and global awareness. Our mission is to instill a capacity for communication, empathy, and citizenship through critical thinking, reflection, and appreciation of diverse viewpoints. We aim to foster life-long learners, thinkers, collaborators, and communicators. Through the program, all students will successfully master literacy, reading, writing, listening, speaking, and Social Studies learning standards and will be able to effectively study and critically think about how people process and document the human experience. Students study other writers and thinkers, contemporary and historical, to develop their own abilities to read, write, speak, listen, and think critically and globally.

Social Studies: Students will master standards in civics, geography, and history, focusing on citizenship and civic responsibility through Connecticut's frameworks. Our mission is to instill a capacity for communication, empathy, and citizenship through critical thinking, reflection, and appreciation of diverse viewpoints. We aim to foster life-long learners, thinkers, collaborators, and communicators who participate as citizens of their communities. The Social Studies Curriculum is aligned with the Connecticut Elementary and Secondary Social Studies Frameworks and College, Career, and Civic Life (C3) Framework. Through the program, all Seymour School students will successfully master Social Studies learning standards and will be able to effectively study and critically think about how

people process and document the human experience through civics, economics, geography, and history.

STEAM (Science, Technology, Engineering, Arts, and Mathematics): Incorporating Next Generation Science Standards, the STEAM program will encourage inquiry-based learning and problem-solving. The Seymour School STEAM Program is grounded in the Next Generation Science Standards (NGSS) and ISTE Standards for Students. In order to extend this program into the elementary schools, a STEAM program must be developed at the PreK-5 grade level. This program would utilize a student-centered inquiry model of instruction, students are tasked with exploring real-world issues presented through the lens of science and engineering while also incorporating literacy, mathematics, and social studies topics. Through application of the design thinking process, students explore a problem through research, propose a solution, prototype, test, and revise based on data. Students practice iterative creative problem-solving while honing skills in research, collaboration, technology, and communication. STEAM innovation labs should encourage creativity and flexibility in student thinking, providing flexible spaces for collaboration, research, and communication.

Spanish: Beginning in middle school, the Spanish program will promote language proficiency and cultural appreciation, preparing students for global citizenship. The goal of the Spanish program at Seymour Public Schools is to develop students who appreciate language and culture. Currently, instruction begins in grade 6 to prepare students for continued study at the high school level. Looking forward as a district, increasing opportunities for world language enrichment in the elementary grades would further

enhance the district's initiative to provide students with global perspectives and world language acquisition.

Health, Physical Education, and Wellness: The wellness program aims to develop physically and mentally healthy individuals, promoting lifelong fitness and emotional well-being through comprehensive health and physical education programs. The goal of the Health, Physical Education, and Wellness Program at Seymour Public Schools is to develop physically literate individuals who have the knowledge, skills, and confidence to enjoy a lifetime of mental, physical, and social health.

Music: Students will engage in creating, performing, and appreciating music, fostering a deep connection to the arts. Modern technologies, such as recording equipment, will enhance learning. The purpose of music education is to prepare students for a lifetime of active, satisfying involvement with music in a variety of forms. Contemporary life is filled with musical encounters. Music education should empower students to create, refine, and notate their own original music; read, interpret, and perform music literature created by themselves and others; and respond with understanding to others' musical works and performances (CSDE- Learning Targets). In order to continue to grow in the area of performing arts, classroom spaces should provide large group spaces for band and chorus while also supporting small spaces for practice. Incorporating recording and presentation technology to enhance instruction is a critical component of the space.

Art: Arts education encourages creativity and expression, helping students become culturally responsive and compassionate community members. The Arts continue to drive our identity during current times. It allows people to connect more deeply and open their eyes to new sights around them. Through Arts education, students are exposed to various forms of expression and strategies to communicate through a variety of culturally influenced mediums. Participation in the Arts, especially during the early years of life, has proven to support developing culturally responsive, compassionate, and creative contributing members of society. The Arts challenge us to rethink perspectives and demand a newer, better world.

Social and Emotional Learning (SEL): SEL will be woven into daily experiences, with dedicated spaces designed to help students manage stress, develop emotional intelligence, and foster resilience. The social and emotional wellness of the students is important to consider in the design of the building. Areas of respite where students can go to be stress-free should be established. Students should have the opportunity to be able to meet in small groups with staff and interact in breakout spaces. Locations that allow students to release anxieties and express emotions in a worry-free environment are critical, allowing them to move on to interacting with other students in a controlled environment conducive to learning. Placing support services in an easily accessible proximity to classroom space supports the goal of promoting self-advocacy for our students.

INSTRUCTIONAL DESIGN

Seymour Public Schools aims to redesign the school experience by adopting a thematic and flexible learning model. Grouping content areas like STEAM and

Humanities will create an interdisciplinary approach to learning, encouraging collaboration and critical thinking. A future learning Commons, as a hub for learning, will serve as a gathering space for students and teachers to explore creative projects and integrate technology. It is the belief of The Seymour Public School that parents, teachers, and children are partners in the learning process and serve as the foundation of the educational journey. Adequate space for the instructional program as well as community gathering space is integral to its success.

ENROLLMENT DATA AND PROPOSED PROJECT CAPACITY

A 10-year enrollment projection was conducted by NESDEC, an independent consultant hired by Seymour Public Schools. For purposes of grant applications, the State of Connecticut reviews the enrollment data for the 8 years starting with the year of the application submittal. According to the study the school will enroll students in grades Pre-K – 5th grade and enrollment per the updated enrollment projections will be the highest in the year 2031-32. The projected enrollment for the 2031-32 year for Bungay is 503 plus the additional 50 Pre-K students that will be added brings the total enrollment to 553 students.

BUILDING SYSTEMS

Security	An electronic security system will be installed in the school, including cameras and state of the art entry security. The school will be designed to prevent access to most school instructional areas when community events take place during non-school hours. The project will be coordinated with District and Town leadership security goals in keeping with the All-Hazards School Security and Safety Plan for Bungay Elementary. The school must also comply with school safety infrastructure criteria as determined by the Connecticut School Building Projects Advisory Council. Per Connecticut General Statutes: § 10-292r. <i>School safety infrastructure criteria. (a) The School Building Projects Advisory Council, established pursuant to section 10-292q, shall periodically review and update, as necessary, school safety infrastructure criteria for school building projects awarded grants pursuant to this chapter and the school security infrastructure competitive grant program, pursuant to section 84 of public act 13-3*. Such school safety infrastructure criteria shall conform to industry standards for school building safety infrastructure and shall address areas including, but not be limited to, (1) entryways to school buildings and classrooms, such as, reinforcement of entryways, ballistic glass, solid core doors, double door access, computer-controlled electronic locks, remote locks on all entrance and exits and buzzer systems, (2) the use of cameras throughout the school building and at all entrances and exits, including the use of closed-circuit television monitoring, (3) penetration resistant vestibules, and (4) other security infrastructure improvements and devices as they become industry standards.</i>
Technology	Since technology systems evolve rapidly, systems installed as part of the technology component will be released after the main building to ensure access to the latest products. A wide-area network (WAN) will be installed, and the building will be networked to the network policy server (NPS). Wireless Access Points (WAPs) will be installed throughout the entire school. The new School may serve as a WAP for the community. Ethernet shall be CAT6 or better, providing 1 GB to desktop and 10GB trunks to all interconnections to all the data closets. Drops in the ceiling for wireless APs should be installed for support of the wireless infrastructure. All assembly areas such as the Gym, MPR, and LMC shall have a minimum of three ceiling/wall mounted drops for wireless APs.
Public Address	The building's public address system will be comprehensive, and the infrastructure installed with the building. It will be completed as part of the technology component of the project and will incorporate internal building communications as well as external communications. Concurrently, the systems for the phones, clocks, and data/voice/video will be developed. The public address system is run through the network.

Phone System	A comprehensive phone system will be integrated with the technology component of the project, and phones will be installed throughout the facility. All support and instructional spaces will be included.
Clocks	Clocks, like the phone system, will be integrated into the technology component of the project. All support and instructional spaces will be included. The clocks run on the Wi-Fi system. The managed vendor is CT-TSG, they also manage the phones and annunciator.
Building Envelope	New portions of the building will be insulated in conformance with current Codes and Connecticut High-Performance Building Standards and shall be protected by a continuous layer of air and vapor barriers tied into the roof membrane and associated flashings. Any existing portions of the building envelope will be upgraded as feasible. All windows will be replaced.
HVAC	Connecticut High-Performance Building Standards, similar to LEED, will be followed. A new heating, air conditioning, and ventilation system will be installed throughout the building. Heating design shall be 70 degrees, and cooling design shall be 75 degrees. A Building Management System (BMS) shall be installed to control the mechanical and selected electrical systems. BMS shall be by the Temperature Control vendor approved by the Owner. The system shall provide temperature control and monitoring for all HVAC systems in the building, shall be programmable for occupied and unoccupied periods, and shall use carbon dioxide sensing to control outside air volume. The BMS shall communicate directly to the district's central system, with off-site alarming capability.
Automatic Fire Suppression & Fire Alarm	The building will be equipped throughout with a sprinkler system in conformance with NFPA 13, 20 & 24. A fire pump with generator backup will be provided if existing water pressure is insufficient. A new addressable, speaker-type fire alarm system will be provided in compliance with Code and ADA requirements, tied into the sprinkler system.
Plumbing	Plumbing fixtures shall be low flow, energy efficient, and ADA compliant. Each drinking fountain location will include at least one bottle filler. Grease waste from the kitchen shall be piped to a direct-buried grease interceptor outside the building. Waste leaving the grease interceptor shall be tied back into the sanitary pipe leaving the building. All floor drains shall be self-priming.

Electrical	The building electrical service shall be capable of meeting the needs of the building and site. Provide a backup generator if a fire pump is required. If a backup generator is not required nor provided, battery backup will be provided for emergency systems via inverters. If a generator is not provided, include an automatic transfer switch to allow key systems, such as heating for freeze protection, to function during an extended power outage with the use of a temporary generator. The building's electrical and structural systems will be designed to accommodate rooftop photovoltaic solar panels. Roof load designs will allow for a ballasted panel system to reduce rooftop penetrations. Lighting shall be high-efficiency LED, designed to promote an optimal learning environment, with ample low-glare illumination. Lighting shall use motion sensors and automatic dimming for daylight harvesting.
Acoustics	Per Connecticut State Building Code, for new construction the building must comply with ANSI A117.1 Section 808, "Enhanced Acoustics for Classrooms." Reverberation time will be limited in accordance with this standard, and wall partitions shall have STC ratings as needed to keep classroom ambient sound levels from sources outside the classroom to 35 dBA and 55 dBC. All wall partitions separating spaces shall extend to the deck above. All spaces are considered to have acoustic separation. Acoustical finishes and treatments will be used as needed throughout the school's interior.
Renovated Spaces	All discontinued and abandoned systems, including but not limited to HVAC, plumbing, and all types of high- and low-voltage wiring, shall be completely removed from renovated areas. All holes and previous penetrations shall be sealed. Wall partitions shall be extended to deck if needed for room separation. All areas of staining or indication of previous water damage shall be investigated and repaired.
Renewable On-site Energy Generation	In alignment with Governor Lamont's mandate to mitigating the impacts of the climate crisis by decarbonizing our electric sector (Public Act 22-5) and expanding existing renewable energy programs (Public Act 22-14), the proposed improvements to Bungay Elementary school will introduce a photovoltaic array for the generation of onsite renewable energy to aid in supporting this legislation. The project anticipates salvaging the existing roof mounted photovoltaic system and installing it on or adjacent to the new school. Anticipating a reduced roof area by the introduction of a two-story school, consideration will be given to providing a ground-mounted array for the relocated system installation.

INTERIOR BUILDING ENVIRONMENT

The school design shall incorporate a secure, obvious and inviting main entrance to function as the primary entry for all visitors. This entrance shall incorporate a vestibule with locking at the inner and outer doors, adjacent to the secure lobby of the administrative wing. The entry sequence shall include checkpoints at the outer vestibule door, at the connection between the vestibule and the secure lobby, and then from the lobby into the building. Civic spaces, such as the Gymnasium and Cafeteria, will be close to the main entrance. Doorways in corridors shall be positioned to maximize lock-off capability of academic areas for after-hours events in the building's more public areas.

All spaces will be optimized for 21st-century learning, with ample power and technology receptacles, and interactive displays on teaching walls, in conference rooms and in larger office spaces. Permanent casework, including upper and lower cabinets with solid surfacing countertops, will be incorporated into classroom spaces to provide active storage. Furniture will be selected for flexibility and mobility. Furniture systems shall be easy to configure into multiple arrangements to accommodate group learning, traditional rows for testing, seminar style, or a hybrid.

Classroom placement will prioritize access to natural light, as well as regular, consistent shape and size to allow for future flexibility. All windows below head-height will receive roller shades, with sun-filtering fabric of sufficient thickness to obscure views or black-out shades. Door locking and hardware will conform to District standards. All classrooms must lock easily and quickly, and shall be equipped with vision panels with shades or security shutters. Building exits not required to function as entrances will receive exit-only hardware; entrances will receive card readers. Larger areas will be designed for lockdown, either with magnetic hold-opens releasing doors on lockdown or

through other electronic means. The building will be fully accessible, with ADA compliance throughout.

Finishes will be selected for ease of maintenance, durability, and aesthetics. No-wax flooring will be used; all finishes will be reviewed with maintenance staff. Concrete masonry construction is favored for corridors; if this is not feasible, durable wainscoting must be provided. All drywall in areas used by students shall be impact-resistant high abuse type. Toilet rooms shall have tile on floors and wet walls and epoxy paint on non-tiled walls.

The development of this educational specification points to a new four-section classroom model with three Pre-K sections. Spaces beyond the classrooms are also diagrammed and summarized in the attached matrix for all educational spaces. The following is a general description of each space:

Academic Core Programs approximately 26,700 sq. ft.

3 – Three Pre-K classrooms, each approximately 1100 sq. ft.

Common to all Pre-K classrooms:

- 1 teaching station per classroom: Teacher's desk, chair, 4 drawer file cabinet, lockable storage/wardrobe cabinet, lockable
- Student bathroom facilities
- Space for 20 students in each classroom
- Countertop cabinets with a sink
- Flexible seating
- Carrels
- Dividers
- Carpeted area for small group instruction
- Sensory materials in small area of classroom
- Bookcases on wheels

- Activity tables
- Changing table
- Cabinets for secured storage and project display/storage for learning materials
- Integrated modern technology with one-to-one devices, Wireless Access Point (WAP) in each classroom
- Touchscreen, Smartboard, or Overhead projection racks with screen, most current school technology on the teaching wall
- Magnetic whiteboards and tack boards
- 24 2'X2' cubbies along one wall for student belongings
- Luxury vinyl tile/rubber high-density flooring and base and scrubbable painted walls with acoustic ceilings
- One (1) teacher computer, 22-inch display
- Wireless keyboard/mouse with auxiliary HDMI input

4 – Four Kindergarten classrooms, each approximately 1100 sq. ft.

Common to all Kindergarten classrooms:

- 1 teaching station per classroom: Teacher's desk, chair, 4 drawer file cabinet, lockable storage/wardrobe cabinet, lockable
- Student bathroom facilities
- Space for 24 students in each classroom
- Countertop cabinets with a sink
- Flexible seating
- Worktable for small group instruction
- Bookcases on wheels
- Cabinets for secured storage and project display/storage for learning materials
- Integrated modern technology with one-to-one devices, Wireless Access Point (WAP) in each classroom
- Touchscreen, Smartboard, or Overhead projection

racks with screen, most current school technology on the teaching wall

- Magnetic whiteboards and tack boards
- 24 2'X2' cubbies along one wall for student belongings
- Luxury vinyl tile/rubber high-density flooring and base and scrubbable painted walls with acoustic ceilings
- One (1) teacher computer, 22-inch display
- Wireless keyboard/mouse with auxiliary HDMI input

20 – Twenty Academic Core Classrooms, each approximately 850 sq. ft.:

Common to all 1st – 5th Grade Classrooms:

- 1 teaching station per classroom: Teacher's desk, chair, 4 drawer file cabinet, lockable storage/wardrobe cabinet, lockable
- Space for 24 students in each classroom
- Countertop cabinets with a sink
- Bookcases on wheels
- Worktable for small group instruction
- Storage cubbies for student coats and materials
- Cabinets for secured storage and project display/storage for learning materials
- Integrated modern technology with one-to-one devices, Wireless Access Point (WAP) in each classroom
- Touchscreen, Smartboard, or Overhead projection racks with screen, most current school technology on the teaching wall
- Magnetic whiteboards and tack boards
- Luxury vinyl tile/rubber high-density flooring and base and scrubbable painted walls with acoustic ceilings
- One (1) teacher computer, 22-inch display
- Wireless keyboard/mouse with auxiliary HDMI input

3 – (SRBI) Intervention Classrooms, approximately 500 sq. ft.

- 1 teaching station, Teacher's desk, chair, 4 drawer file cabinet, lockable storage/wardrobe cabinet, lockable
- Space for 20 students
- Cabinets for secured storage and project display/storage for learning materials
- Integrated modern technology with one-to-one devices, Wireless Access Point (WAP) in each classroom
- Touchscreen, Smartboard, or Overhead projection racks with screen, most current school technology on the teaching wall
- Whiteboards and tack boards
- Luxury vinyl tile/rubber high-density flooring and base and scrubbable painted walls with acoustic ceilings
- One (1) teacher computer, 22-inch display
- Wireless keyboard/mouse
- Aux HDMI input

1 – TSOL Classroom, approximately 500 sq. ft.

- Teacher's desk, chair, 4-drawer file cabinet, lockable storage/wardrobe cabinet, lockable
- Space for 15-20 students
- Cabinets for secured storage and project display/storage for learning materials
- Integrated modern technology with one-to-one devices, Wireless Access Point (WAP)
- Touchscreen, Smartboard, or Overhead projection racks with screen, most current school technology on the teaching wall
- Magnetic whiteboards and tack boards
- Luxury vinyl tile/rubber high-density flooring and base and scrubbable painted walls with acoustic ceilings
- Parabolic LED lighting with variable light level switching or addressable.

Special Education 4,750 sq. ft.

- 3 – Three Special Education Resource Rooms, each approx. 500 sq. ft
- Comfortable chairs/desks/tables to accommodate (15) fifteen to (20) twenty students (flexible/adaptable/easily movable workstations)
- Teacher desk/chair
- Bookshelves
- Open shelving & storage cabinets
- Secured storage for materials
- Interactive LED Panel (at least 75")
- Wall/ceiling-mounted speakers
- Luxury vinyl-enhanced tile or flooring that allows for easy movement of furniture
- Magnetic whiteboards (wall-to-wall) on the front or side walls
- Bulletin boards lining the back wall
- One (1) teacher computer, 22-inch display
- Wireless keyboard/mouse

1- REACH Program approximately 1,200 sq. ft.

- Teacher's desk, chair, 4-drawer file cabinet, lockable storage/wardrobe cabinet, lockable
- Space for 10-12 students
- Cabinets for secured storage and project display/storage for learning materials
- Integrated modern technology with one-to-one devices, Wireless Access Point (WAP) in each classroom
- Touchscreen, Smartboard, or Overhead projection racks with screen, most current school technology on the teaching wall
- Magnetic whiteboards and tack boards
- Luxury vinyl tile/rubber high-density flooring and base and scrubbable painted walls with acoustic ceilings

- Parabolic LED lighting with variable light level switching or addressable.
- One (1) teacher computer, 22-inch display
- 3 Study Carrels

1 - OT/PT Room – 1,200 sq. ft.

This room is significantly different than most of the other educational spaces due to the specialized activities that take place here. A list of the items and corresponding activities are listed below.

- parabolic LED lighting with variable light level switching
- Luxury vinyl-enhanced tile flooring
- Shelving for materials and supplies
- platform swing
- crash pads
- Multiple weight-bearing ceiling attachments for equipment

1 – Sensory Room - 850 sq. ft.

- Soft seating
- Crash pads
- Flooring -padded or carpeted
- Bean bag chairs
- Bulletin board
- Lockable storage wardrobe
- Mobile sensory cart
- One (1) computer
- Table and counter space
- Bubble Tubes
- Tactile Wall Murals/Panels
- Multiple weight-bearing ceiling attachments for equipment

Student Support 1,950 sq. ft.

1 - Psychologist Office - 250 sq. ft.

- Desk and chair
- 1 – 4-drawer lockable file cabinets
- Fire-rated student records file storage
- Base and wall cabinet storage
- Bulletin board
- Lockable storage wardrobe
- Network copier and fax machine
- One (1) computer
- Table and counter space
- Luxury vinyl-enhanced tile or flooring

2 – Two Speech Rooms - 250 sq. ft. each

- Teacher's desk, chair, 4-drawer file cabinet, lockable storage/wardrobe cabinet, lockable
- Space for 5-10 students
- Cabinets for secured storage and project display/storage for learning materials
- Integrated modern technology with one-to-one devices, Wireless Access Point (WAP)
- Touchscreen, Smartboard, or Overhead projection racks with screen, most current school technology on the teaching wall
- Magnetic whiteboards and tack boards
- Luxury vinyl tile/rubber high-density flooring and base and scrubbable painted walls with acoustic ceilings
- Parabolic LED lighting with variable light level switching or addressable.

1– Counselor's Office - 250 sq. ft.

- Teacher's desk, chair, 4-drawer file cabinet, lockable storage/wardrobe cabinet, lockable
- Space for 5-10 students

- Cabinets for secured storage and project display/storage for learning materials
- Integrated modern technology with one-to-one devices, Wireless Access Point (WAP)
- Touchscreen, Smartboard, or Overhead projection racks with screen, most current school technology on the teaching wall
- Magnetic whiteboards and tack boards
- Luxury vinyl tile/rubber high-density flooring and base and scrubbable painted walls with acoustic ceilings
- Parabolic LED lighting with variable light level switching or addressable.

1 – BCBA Office - 250 sq. ft.

- Teacher's desk, chair, 4-drawer file cabinet, lockable storage/wardrobe cabinet, lockable
- Space for 5-10 students
- Cabinets for secured storage and project display/storage for learning materials
- Integrated modern technology with one-to-one devices, Wireless Access Point (WAP)
- Touchscreen, Smartboard, or Overhead projection racks with screen, most current school technology on the teaching wall
- Magnetic whiteboards and tack boards
- Luxury vinyl tile/rubber high-density flooring and base and scrubbable painted walls with acoustic ceilings
- Parabolic LED lighting with variable light level switching or addressable.

2 – Breakout Rooms - 350 sq. ft.

- Soft seating
- Flooring -padded or carpeted
- Bean bag chairs

- Bulletin board
- Small table
- 6 chairs

Physical Education Approximately – 7,050 sq. ft.

1 – Gymnasium - 5,500 sq. ft.

- All-purpose wood floor system with essential markings
- Removable protective matting
- One main basketball court (45'x74') Two cross-courts as well
- Basketball backboards to be adjustable and swing out/up for non-use.
- Set up for Volleyball with necessary inserts and markings
- Bleacher seating- limited
- Ceiling-mounted air destratification fans
- Sound system
- Ropes, nets and basketball hoops
- Padding on walls and floor for physical education programs
- Suspension equipment and/or storage rooms for pads
- Room dividing curtain/mesh to bisect the space for dual activities
- High output LED lighting for efficiency and color correction for multipurpose activities.
- Acoustic wall panels
- 1 Electronic scoreboard
- 1 Digital messaging board

1- P.E Office, approximately 150 sq. ft.

- Teacher's desk, chair, 4-drawer file cabinet, lockable storage/wardrobe cabinet,
- Luxury vinyl-enhanced tile or flooring

- One (1) teacher computer with a 22-inch display
- Wireless keyboard/mouse
- Aux HDMI input

Stage (including wing space) – 600 sq. ft.

- Stage should be accessible to all
 - Stage to accommodate 50 performers in chairs with music stands
 - Ceiling cloud structures adjustable for acoustics control
 - Fire-rated proscenium curtain, and all applicable safety standards
 - Moveable side curtains
 - Stage lighting and sound systems appropriate for the size of the stage
 - Ceiling mounted projector and screen
- 1 – PE Equipment Storage Room of approximately 800 sq. ft.
- Sealed concrete floor
 - Minimum 10-foot ceiling to maximize storage

Food Services – 4,500 sq. ft.

1 – Student Cafeteria approximately – 2,500 sq. ft.

Typical acoustical treatments for the walls to dampen sound are needed. The cafeteria should be constructed adjacent to the kitchen. Multiple student traffic flows should be considered in the placement of the food serving line. The placement of student restrooms in the vicinity of the cafeteria should be considered in the design to provide student convenience.

- The room should accommodate risers with handicapped accessibility
- Space to seat approximately 180 students per lunch wave in 3 waves
- Lighting and sound systems to support the instructional use of the space

- State-of-the-art public technology including a Smart TV
- Acoustical treatment of wall and ceiling to support the use of the space
- Resilient tile flooring durable and washable, with a slip-resistant finish
- Provide windows with abundant natural light and create relationships to exterior
- Provide exterior dining
- Scrubbable painted or masonry walls for durability and high lay-in ceilings, durable and washable
- High out-put LED lighting for efficiency and color correction for dining and multipurpose activities
- Portable (fold in half on wheels) cafeteria round tables
- Convenience power for cleaning equipment and staff/visitor laptops
- Numerous WAP for LAN and internet use by staff, students, and visitors
- Several Monitors throughout space
- 4 Hand washing stations
- 2 microwave ovens for student use

1 - Staff Dining Area, approximately – 500 sq. ft.

- Tables and chairs for up to fifteen (15) staff members
- Cabinets and countertop with sink
- Microwave oven
- Refrigerator
- Dedicated electrical circuits for refrigerator and microwave
- Interactive LED Panel (at least 75")
- Wall/ceiling-mounted speakers
- Vinyl-enhanced tile or flooring that allows for easy cleanup
- Magnetic whiteboards
- Bulletin boards

1 – Kitchen Serving/Cold Storage - 1,500sq. ft

- Two (2) - Double sink preparation tables each with one (1) standard faucet and one (1) pre-rinse faucet
- Two (2) – Warmers
- Two (2) - Double Deck Convection Ovens
- One (1) - Combi-Oven
- One (1) - Convection Steamer
- One (1) - Pasta Kettle – 30 gallons
- One (1) - 12- Burner Range
- Walk-in freezer
- Three (3) compartment sink assembly with drain boards for pot and pan washing; each compartment shall measure 27" x 27" x 16" deep; a pre-rinse spray assembly required at one (1) sink compartment
- Dishwasher/Tray station
- Recycling center for paper, liquids etc.
- Hot & Cold Food Station
- Deli Station
- Express Stations for self-serve foods and dry display snacks
- Cashier stations strategically located at the exit from the Served
- Mobile condiment stations to be located at the exit of the Served
- Grease-trap to be located outside of the building for ease of maintenance
- Utility Distribution System with quick disconnect devices for all services
- Walk-in refrigerators and freezers will require backup generator power; audio/visual temperature alarm; refrigeration control alarm; temperature alarms to be wired to the "Building Monitoring System
- Water conservation methods
- Provide High-Efficiency Energy Star Label Equipment &

Lighting

- Exhaust hoods: Demand Control Ventilation Package
- Temperature maintenance, water filtration and sanitation to promote food safety
- Exterior in-line grease trap to conform to FOG Program
- Linked to the building management system for notification of temperature failure
- Connected to the emergency generator in case of power failure
- Office space (Approx. 100 sq. ft) for manager
- Desk and chair
- One (1) lockable teacher storage wardrobe
- One (1) lockable four-drawer filing cabinet
- Magnetic whiteboard
- One (1) computer

Arts and Humanities Programs approximately 3,100 sq. ft.

All the following spaces need to be designed for maximum sound attenuation

1 – Music Room – 1,200 sq. ft.

- Sixty (60) performer chairs
- Sixty (60) music stands
- Wenger flip forms for thirty (30) students
- Three (3) Chair Move and Store Carts
- Built-in counters/cabinets with storage above and below
- Teacher's desk, chair, 4-drawer file cabinet, lockable, storage/wardrobe cabinet
- Incorporate new music technologies, WAP
- Electrical convenience power
- Touchscreen, Smartboard, or Overhead projection racks with screen, most current school technology on the teaching wall
- Magnetic whiteboards and tack boards

- One (1) teacher computer
- One (1) teacher desk
- Electronic piano
- Sink
- Instrument closed storage for ukuleles and xylophones
- Appropriate sound management materials on walls and floor
- Resilient tile floor,
- Acoustic ceilings and parabolic LED lighting with variable light level switching

1 – Music Storage Closet, 500 sq. ft.

- Built-in shelving to accommodate instruments

1 - Art Room/Kiln approximately 1,200 sq. ft.

- Must have ample natural light
- Eight tables; Thirty-two (32) chairs
- Teacher desk/chair
- 4-drawer file cabinet, lockable, storage/wardrobe cabinet
- Vertical storage with shelves and doors
- Built-in counter space with storage above and below
- Document Camera
- Wall/ceiling-mounted speakers
- Vinyl-enhanced tile or flooring that allows for easy cleanup
- Walls should be functional workspaces and for showcasing student work Multiple magnetic whiteboards (wall-to-wall) on front and side walls
- Bulletin boards lining the back wall
- One (1) teacher computer, 22-inch display
- Wireless keyboard/mouse
- Aux HDMI input
- Include ample storage space within the room

- 2- free standing deep utility sinks with sediment traps dispersed throughout the classroom
- Electrical convenience power throughout the perimeter.
- Uninterrupted flat countertop space with bottom storage cabinets and open shelving including deep and wide drawer shelving with suspension hardware
- Touchscreen, Smartboard, or Overhead projection racks with screen, most current school technology on the teaching wall
- Integrated modern technology, WAP
- Large Kiln
- Sturdy Rack style shelving for student projects
- Dedicated ventilation
- Electrical disconnect for Kiln
- Luxury vinyl-enhanced tile or flooring
- Shelving should be wide and sturdy to support various art supplies

1 – Art Storage Closet, 200 sq. ft.

- Built-in shelving to accommodate materials

Library/Media Center of approximately 2,850 sq. ft.

The Library/Media Center will be designed to become the learning hub of the school. It will continue to be where teachers encourage students to develop a passion for reading. This will also serve as a place where student-centered activities happen with the integration of technology. This area will include a Makerspace that will be welcoming and encourage students to be creative problem-solvers, take risks and think critically. Students will have the opportunity to engage in hands-on activities using various materials as well as the latest technology. The Library/Media Specialist will collaborate with the classroom teachers on various projects and use this space to show students how to locate and evaluate important information.

1 – Media center – 2,000 sq. ft.

- The Circulation Center will be located in the center of the Media Center and adjacent to the workroom and media specialist office
- Minimum of three WAP and some supplemental data jacks located throughout for student access to LAN and internet
- Flexible book shelving that can be reconfigured for a collection of 10,000 -15,000 volumes with open sight lines possible for optimum adult supervision
- Monitors throughout space.
- Rolling bookshelves for a limited collection of books
- Areas with comfortable seating
- Printer
- Bulletin Boards to display student work and promotional materials
- Two (2) staff computers for the circulation desk area
- Desk and chair
- 1 – 4-drawer lockable file cabinets
- Base and wall cabinet storage
- Bulletin board
- Lockable storage wardrobe
- Network copier and fax machine
- Luxury vinyl-enhanced tile or flooring
- Cabinets with various shelving

1 – Maker Space (STEAM) – 850 sq. ft.

- Movable furniture
- Cabinets for secured storage and project display/storage for learning materials
- Touchscreen, Smartboard, or Overhead projection racks with screen, most current school technology on the teaching wall
- Whiteboards and tack boards

- Lab tables
- 3D Printer
- One (1) teacher computer
- 22-inch display
- Wireless keyboard/mouse
- Aux HDMI input
- Parabolic LED lighting with variable light level switching or addressable

Administration and Office Support 3,250 sq. ft.

Main administrative offices will be located at the front, adjacent to the main entry and connected by a security vestibule, allowing visually controlled access to the building through the administration reception waiting area. A dedicated 911 phone shall be located in the main office for the purpose of informing office staff if 911 is called from any facility phone. All exit/entry doors have electronic hardware that will activate on notification from striking of a panic button. Glazing will be minimal and secure.

1 – Main Office: Secretarial area approximately 1,000 sq. ft.

- Two (2) Secretarial work stations behind the main counter
- One (1) station for Head Monitor
- Lockable storage wardrobes
- Two (2) lockable four-drawer filing cabinets
- Fire-rated student file storage
- Base and wall cabinet storage
- Network copier and fax machine
- kitchenette
- Bulletin boards
- Luxury vinyl-enhanced tile or flooring
- One (1) computer per secretary/clerk
- Electronic security system

1 - Reception area (included)

- Reception area to have 6 comfortable chairs for visitors
- Bulletin boards
- Luxury vinyl-enhanced tile or flooring
- Electronic security system

1 – Principal's Office– 200 sq. ft.

- Desk and chair
- Table
- Seating for six (6)
- Lockable storage/wardrobe
- Lockable lateral files
- One (1) large wall unit bookcase
- Interactive LED Panel (32-50" display)
- Security "panic" button with a dedicated phone line
- Luxury vinyl-enhanced tile
- Magnetic whiteboard
- Bulletin board
- One (1) computer
- Aux ports for plugging into a display

1 – Small Conference room – 150 sq. ft.

- Conference table
- Seating for six (6)
- Credenza
- Magnetic whiteboard
- Luxury vinyl-enhanced tile or flooring
- Bulletin board

1 – Assistant Principal's Office - 150 sq. ft.

- Table
- Desk and Chair
- Seating for six (6)
- Lockable storage/wardrobe
- Lockable lateral files

- One (1) large wall unit bookcase
- Interactive LED Panel (32-50" display)
- Security "panic" button with a dedicated phone line
- Luxury vinyl-enhanced tile or flooring
- Magnetic whiteboard
- Bulletin board
- One (1) computer
- Aux ports for plugging into display

1 – Large Conference room – 300 sq. ft.

- Conference table
- Seating for fifteen (15)
- Credenza
- Interactive LED Panel (32-50" display)
- Aux ports for plugging into the display
- Magnetic whiteboard
- Luxury vinyl-enhanced tile or flooring
- Bulletin board

1 – Health Suite with Nurse's Office, approximately 800 sq. ft.

- One (1) desk with chair
- One (1) computer
- Built-in counters with shelving below around the perimeter of the room
- Multiple file cabinets (two (2) four-drawer; two (2) two-drawer
- two (2) double cabinets (full size)
- One (1) double cabinet (half-size)
- One (1) Double-locked medicine cabinet
- One (1) locking wall cabinet
- Large closet with shelving and doors
- Refrigerator
- Sink with hot and cold water, soap, and towel

- dispenser
- Microwave
- Scale
- 3 chairs
- Exam room
- Bathroom
- Two (2) cots
- Privacy curtains
- One (1) wheelchair
- Eye-wash station
- Vinyl-enhanced tile
- One (1) large bulletin board
- Centrally located adjacent to the main office and counseling

1 - Security Office - 150 sq. ft.

- Desk and chair
- 1 – 4-drawer lockable file cabinets
- Fire-rated student records file storage
- Base and wall cabinet storage
- Bulletin board
- Lockable storage wardrobe
- Network copier and fax machine
- One (1) computer
- Table and counter space
- Luxury vinyl-enhanced tile or flooring

1 – Staff Workroom – 500 sq. ft.

- Conference table and chairs
- Credenza
- Interactive LED Panel (32-50" display)
- Aux ports for plugging into the display
- Magnetic whiteboard
- Luxury vinyl-enhanced tile or flooring
- Bulletin board

- Network Copier
- Table and counter space

Building Services and Core Area – 5,245 sq. ft.

1 – Facilities Office – 100 sq. ft.

- Desk and chair
- Lockable storage/wardrobe
- Lockable lateral files
- One (1) large wall unit bookcase
- Interactive LED Panel (32-50" display)
- Luxury vinyl-enhanced tile
- Magnetic whiteboard
- Bulletin board
- One (1) computer
- Aux ports for plugging into the display

1 – General Building Storage – approximately 800 sq. ft.

- Steel storage shelves
- Lockable tool cabinets
- Wall-mounted tool hanging system

1 – Men's Public Toilet – 150 sq. ft.

1 – Women's Public Toilet – 150 sq. ft.

3 – Boy's Toilet Rooms – 200 sq. ft.

3 – Girl's Toilet Rooms – 200 sq. ft.

4- Staff Toilet Rooms – 75 sq. ft.

1 – All-inclusive Toilet Room – 75 sq. ft.

1 – Custodial Office – 100 sq. ft.

- Two (2) desk/chair
- Workstation table
- Luxury vinyl-enhanced tile
- Magnetic whiteboard
- Bulletin board

- One (1) computer
- Aux ports for plugging into the display

3 – Custodial Closets – 40 sq. ft.

1 – Mechanical and Water Service Room – 600 sq. ft.

1 – Fire Sprinkler Room – 300 sq. ft.

1 – Main Electrical Room – 300 sq. ft.

2 – Electrical Closets – 150 sq. ft.

1 – MDF Rooms – 300 sq. ft.

1 – IDF Rooms – 150 sq. ft.

1 – Delivery and receiving 300 sq. ft.

SITE DEVELOPMENT

The existing site layout combines bus traffic and parent drop-off traffic with parking, using a driveway with intermediate and terminal cul-de-sacs. This layout is not optimal; users report vehicular congestion at drop-off and pick-up times, and extra care must be taken to mitigate potential dangers associated with mixing of bus and vehicular traffic.

The project's site design shall incorporate separation of bus traffic from parent drop-off and pick-up. Additionally, new driveway arrangements shall accommodate a flush loading area for deliveries near the kitchen and back-of-house area.

The Town of Seymour has recently acquired an L-shaped strip of land on the adjacent parcel to the south of the school, providing potential access to Poplar Drive. This access can be used to separate traffic and ameliorate congestion. The school is served by a limited number of buses, so using this access for a bus lane minimizes increased traffic along Poplar Drive.

The design of the school should include concrete sidewalks be constructed around the perimeter of the building. Concrete curbs should be used adjacent to those sidewalks. An entry plaza will be constructed at the main entrance consisting of scored concrete or pavers, trees, benches, a flagpole and an electronic marquee for school notifications. Full-cutoff site lighting will be provided throughout the parking lots and along pedestrian ways around and into the building.

The existing site features a natural grass ball field. In the event the field area is used as a new building site (enabling the existing school to remain operational during construction) the field would be reconstructed in the area of the existing school.

Two outdoor play areas will be incorporated into the site: one for students aged 5-12, and another, fully fenced, for students aged 2-5. These areas shall be furnished with age-appropriate play equipment in keeping with all applicable safety standards. Adequate fall zones and safety surfacing shall be provided.

SUSTAINABILITY

All State-funded schools with renovation budgets in excess of \$2 million dollars or new construction budgets in excess of \$5 million dollars must comply with Connecticut High Performance School Standards, a checklist-based system with mandatory and optional requirements, similar to LEED Silver. This process ensures that an integrated design process is followed from design through construction, including building commissioning of HVAC and key envelope components of the building. Many other sustainable practices are included and tracked, including minimum energy performance, energy modeling, air quality, ventilation, acoustics, recycled materials, limiting volatile organic compounds, green cleaning, onsite renewable power generation through the introduction of a photovoltaic system, and more. Long term sustainable energy, such as solar panels,

will be considered in the design to lower annual operating costs and contribute to a cleaner environment.

Sustainability and human-centered building design is an important area of concern, and one expressed by many members of the community. Planetree, a framework for person-centered healthcare used at nearby Griffin Hospital, has been cited as an exemplary approach. WELL Building Standard is a similar performance-based system more applicable to schools, "monitoring features of the built environment that impact human health and well-being, through air, water, nourishment, light, fitness, comfort and mind." Both systems take a holistic approach to health in the built environment. While WELL Building Certification may or may not be pursued, the new design will incorporate concepts from this Standard.

COMMUNITY USES

The school facility will be utilized by the community for a variety of purposes. There will be community use of the gymnasium and classrooms for Parks & Recreation programs during the school year and during the summer months. Also, additional community groups will continue to use the building for various community events. Notably, the entire building and site is used for an extensive summer program. Additionally, the building is a hub for local groups, such as the nearby Balance Rock Condominium Association.

SPACE PROGRAM MATRIX

Summary: Proposed Building Program

Projected Enrollment: 553

Bungay Elementary School

Academic Core Programs

Spaces	Qty.	Ideal Room Area (SF)	Ideal Area Subtotal (SF)	Existing Quantity	Existing Area (SF)	Notes:
Pre-K Classrooms	3	1,100	3,300	3	3,075	Includes toilet room
Kindergarten Classroom	4	1,100	4,400	4	4,299	Includes toilet room
1st Grade Classrooms	4	850	3,400	3	2,474	All grades requested Toilet Rooms
2nd Grade Classrooms	4	850	3,400	4	3,448	
3rd Grade Classrooms	4	850	3,400	4	3,560	
4th Grade Classrooms	4	850	3,400	4	3,577	
5th Grade Classrooms	4	850	3,400	4	3,484	
SRBI (Intervention) Classrooms	3	500	1,500	1	770	6 teachers in one space now , not including TSOL teacher
TESOL Room	1	500	500	-		
Subtotal	31		26,700	27	24,687	

Special Education Programs						
Spaces	Qty.	Ideal Room Area (SF)	Ideal Area Subtotal (SF)	Existing Quantity	Existing Area (SF)	Notes:
			-			
Special Education Resource Rooms	3	500	1,500	w SRBI		3 teachers - pull-out, push-in now
Reach Program Room	1	1,200	1,200	1	689	K-5 together - behavior issues. Multiple partitions needed.
OT/PT Room	1	1,200	1,200	1	233	Large space for lots of PK
Sensory Room	1	850	850	w/OT/PT		Currently shared with OT/PT
Subtotal	6		4,750	2	922	

Student Support						
Spaces	Qty.	Ideal Room Area (SF)	Ideal Area Subtotal (SF)	Existing Quantity	Existing Area (SF)	Notes:
School Psychologist Office	1	250	250	1	181	
Speech & Language Office	2	250	500	2	346	
Counselor's Office	1	250	250	1	129	
BCBA Office	1	250	250	1	142	Behavior Specialist
Breakout Rooms	2	350	700	-		
Subtotal	7		1,950	5	798	

Physical Education Programs						
Spaces	Qty.	Ideal Room Area (SF)	Ideal Area Subtotal (SF)	Existing Quantity	Existing Area (SF)	Notes:
Gymnasium	1	5,500	5,500	1	4,742	Climbing wall, divider, storage. PE envisioned large MPR
Physical Education Office	1	150	150	1	141	
Stage	1	600	600	1	653	
PE Equipment Storage Room	1	800	800	1	278	May also include chair/table storage not allowed under stage.
						Proximity to public toilets and Family Toilet
Subtotal	4		7,050	4	5,814	

Food Services						
Spaces	Qty.	Ideal Room Area (SF)	Ideal Area Subtotal (SF)	Existing Quantity	Existing Area (SF)	Notes:
Student Dining Area	1	2,500	2,500	1	3,736	Assumes 4 waves
Staff Dining Lounge	1	500	500	1	569	Not requested at interviews. Lockers for 4 paras, mailboxes
Kitchen	1	1,500	1,500	1	971	Adjacent to deliveries / receiving - see core areas
Servery	1	Included		Included		
Preparation Area	1	Included		Included		
Cold Storage	1	Included		Included		
Dry Storage	1	Included		1	143	
Dishwashing Room	1	Included		Included		
Food Services Office	1	Included		-		
Staff Toilet Room	1	Included		1	123	
Subtotal	10		4,500	5	5,542	

Arts and Humanities Programs						
Spaces	Qty.	Ideal Room Area (SF)	Ideal Area Subtotal (SF)	Existing Quantity	Existing Area (SF)	Notes:
Music Room	1	1,200	1,200	1	745	Start instruments in 4th grade - need storage
Music Storage Closet	1	500	500	-		Stage is currently used for band. Need band room? Good potential swing space for first or second grade.
Art Room	1	1,200	1,200	1	994	
Kiln Room	-		-	-		Confirm
Art Storage	1	200	200	-		In addition to in-room storage
Subtotal	4		3,100	2	1,739	

Library / Media Center						
Spaces	Qty.	Ideal Room Area (SF)	Ideal Area Subtotal (SF)	Existing Quantity	Existing Area (SF)	Notes:
Media center	1	2,000	2,000	1	1,475	
Reading Area	1	Included		Included		
Book Stacks	1	Included		Included		
Library Circulation	1	Included		Included		
Library/Media Specialist Office	1	Included		-		
Workroom / Storage	1	Included		-		
Maker Space (STEAM)	1	850	850	-		
Subtotal	7		2,850	1	1,475	

Administrative & Support Spaces						
Spaces	Qty.	Ideal Room Area (SF)	Ideal Area Subtotal (SF)	Existing Quantity	Existing Area (SF)	Notes:
Main Office	1	1,000	1,000	1	617	
Reception Area	1	Included		Included		Seating for (6)
Administrative Work Stations		Included		Included		
Reception Counter with Station for Head Monitor	1	Included		Included		(3) Staff workstations
Principal's Office	1	200	200	1	192	Includes toilet room
Small Conference Room	1	150	150			
Assistant Principal's Office	1	150	150	1	208	
Large Conference Room	1	300	300	1	277	
Health Suite	1	800	800	1	427	Toilet, Exam Room & Office
Security Office	1	150	150	w/PE Off.		
Staff Work Room	1	500	500			
Subtotal	10		3,250	5	1,721	

Building Services and Core Area						
Spaces	Qty.	Ideal Room Area (SF)	Ideal Area Subtotal (SF)	Existing Quantity	Existing Area (SF)	Notes:
Facilities Office	1	100	100	-		
General Building Storage	1	500	500	3	229	
Men's Public Toilet Room	1	150	150	-		
Women's Public Toilet Room	1	150	150	-		
Boy's Toilet Rooms	3	200	600	3	671	
Girl's Toilet Rooms	3	200	600	3	701	
Staff Toilet Rooms	4	75	300	4	225	
All Inclusive Toilet Room	1	75	75			Near Assembly Spaces
Custodial Office	1	100	100	1	224	
Custodial Closets	3	40	120	3	140	
Mechanical & Water Service Room	1	600	600	1	2,725	
Fire Sprinkler Room	1	300	300	-		
Main Electrical Room	1	300	300	w/Mech		
Electrical Closets	2	150	300			Existing electrical closets not surveyed
MDF Room	1	300	300	1	155	
IDF Room	1	150	150	-		
Deliveries and Receiving	1	300	300	1	314	Adjacent to Kitchen - include lockers for FS and Custodial
Subtotal	27		4,945	20	5,384	

Circulation (Corridors, Stairs, Elevator) & Interior Walls						
Spaces	Qty.	Ideal Room Area (SF)	Ideal Area Subtotal (SF)	Existing Quantity	Existing Area (SF)	Notes:
Circulation (Corridors, Stairs, Elevator)		0.12	7,257		10,140	
Interior Partitions & Chases		0.05	2,955		3,203	
Subtotal			10,212	-	13,343	

Total Building Area	Ideal Area (SF)		Existing Area (SF)	
Total Program Areas	54,150		42,698	
Total Building Services and Core Area	4,945		5,384	
Total Circulation (Corridors, Stairs, Elevator) & Interior Walls	10,212		13,343	
Grand Total	69,307		61,425	
Maximum State-Eligible Area for 553 PK-5th Grade Students		69,309		
...with Increase if all Pre-1959 Areas are kept		74,909		

3.1 Site Analysis

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- Accessible Routes & Parking
- Paved Surfaces and Walks
- Athletic Fields and Playground
- Site Perimeter and Security

3.2 Building Envelope & Interior Finishes Analysis

- Overview
- Building Envelope
- Roof System
- Fenestration and Entrances
- Interior Finishes

3.3 Mechanical Systems Analysis

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- Mechanical System Narrative
- Perimeter Heating System
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3.4 Plumbing & Fire Protection

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- Kitchen
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EXISTING SITE CONDITIONS



Existing Facility Assessment
Bungay Elementary School

Site Overview

Bungay Elementary School is located on Bungay Road, east of Balance Rock Road. The site slopes steeply from south to northeast with a baseball field and multi-use grass field located at the northern end of the parcel at the lower elevation (approximately 10 feet below the building/parking). Site stairs provide access to the sports field from the building/parking lot.

The school has existing sanitary and storm sewer systems, natural gas and electrical service utilities provided from Bungay Road



Existing exterior concrete stairs leading from the school level to the lower fields.

Accessible Routes and Parking

A bituminous path currently provides access from the upper parking area to an existing playground and fields. It is not clear if the path is ADA accessible. A sidewalk is present at the east side of Bungay Road along the entire frontage of the school. The road is two lanes except to the south of the main driveway entrance where a right turn lane for the school traffic exists. The school has one vehicular entry point from Bungay Road. The site has approximately 84 marked parking spaces located to the north and south of the building. The site currently drains via sheet flow and a catch basin and pipe system generally from south to north. A large culvert drains water from the site and other off-site areas and discharges to the east of the baseball field into a wetland area downslope of the site. No formal stormwater quality measures were found on the site.



Partially marked accessible parking spaces and aisles (above).

It does not appear that accessible parking spaces, signs, ramps and accessible routes to the building fully meet ADA requirements. Bituminous pavement at parking areas is in poor condition showing cracks and deterioration. There is no formal separation for buses and cars at the site which may pose traffic/pedestrian circulation safety concerns. The crossing of the driveway at the main curb cut is not marked by a crosswalk and the crossing length is approximately 100 feet making this an unsafe crossing condition.

Paved Surfaces and Walks

The condition of the paved drives and parking located on the site reflect areas of patching and periodic maintenance. Some of the older sections of pavement located along the south-west side of the school exhibit excessive cracking, surface erosion and an exposed aggregate base. If left unaddressed, the cracks will permit water infiltration subjecting the bituminous paved surfaces to further deterioration during freeze-thaw cycles.



Visible surface deterioration of the existing south access drive and parking

The perimeter of Bungay Elementary School is served by large expanses of perimeter concrete walks. The majority of concrete flagging appears uniform but the surfaces are worn and have begun to expose its stone aggregate. There is evidence of replaced sections of concrete pavement. The joints between sidewalk flags shows deterioration of prior sealants through the presence of vegetative growth.



A representative view of the existing exterior walk conditions (above and below)





The main entry drive (left) accessed from a curb cut on Bungay Road.

The site is not within a 100-year FEMA floodplain. The school is located within an area mapped for occurrences of state-listed threatened or endangered species by the Natural Diversity Database Program (NDDDB). Based on a preliminary site assessment from the NDDDB website, the species of concern is the bald eagle.

Athletic Fields and Playground

The northern section of the developed site is occupied by a softball field and a single playground. Both features are located at an elevation approximately ten feet lower than that of the main school. A bituminous walk extends northward, aligned with the school's main entrance, to a concrete stair that provides access to the playground. A sloping bituminous drive extends from the southeast corner of the playground upward to

the parking spaces across from the school's northeast corner. There is no crosswalk connecting this ramped walk to the softball field. The softball field appears well maintained with a clay infield and grass outfield. The softball field is oriented with the batter facing due east toward the tree line of the wooded area that lines the school's eastern boundary. A single section of fixed aluminum bleachers, six tiers high, provides spectator seating. Though the field has no formal dugouts, a pair of fixed benches flank each side of home plate for the opposing teams. A multi-level fence with angled top shields Bungay Road from foul balls.

Site Perimeter and Security

A four-foot high galvanized chain link fence extends along the site perimeter along Bungay Road. A similar barrier partially separates the student playground from the wooded portion of the property to the east. Site security was a topic of concern expressed by several members of the community during public outreach sessions conducted as part of the facility assessment. Of specific concern was the proximity of the wooded area at the east side of the site with the playground.

The playground utilizes engineered wood chips for fall protection but lacks perimeter fencing often used to aid in managing younger children that utilize the facility.

The play structures appear to be in good condition and offer a variety of activities. It is recommended that an evaluation of the play structures be performed to ensure that a sufficient quantity of the structures meet age appropriate and accessibility criteria.



A view of the existing outdoor athletic field located at the bottom of berm. The level of the field is approximately 10 feet below the existing school's ground floor.

Overview

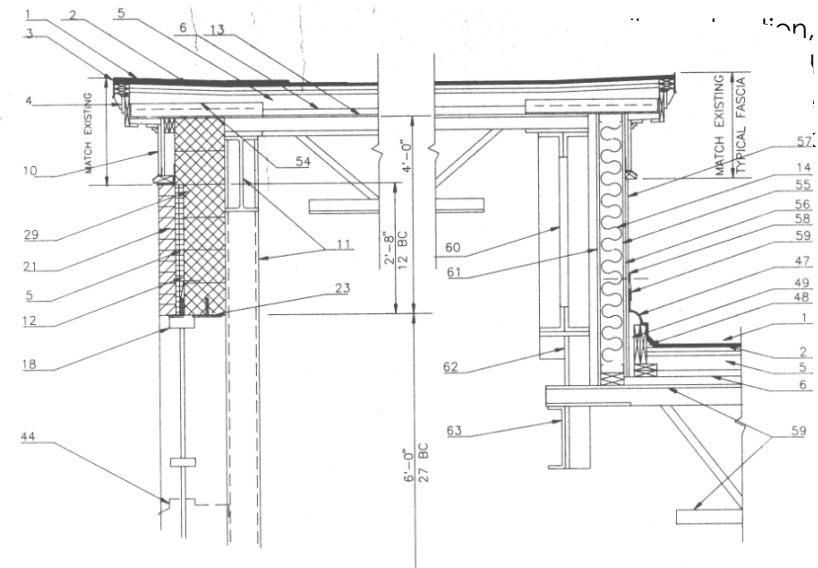
The existing Bungay Elementary School is a single-story masonry structure, approximately 61,425 square feet in size. The school is composed of twenty-six standard classrooms. Common spaces include a Media Center, Gymnasium with a stage, a Cafeteria, Art and Music Classrooms. Only two spaces are currently identified for special learners. A sensory OT/PT space access from the Gymnasium and Classroom for the school's REACH program. Beyond the Administrative office which includes Reception, the Principal's office, Assistant Principal's office, and School Nurse, former storage spaces have been converted to partially address a deficiency in supporting spaces such as SLP offices and conference spaces.



Bungay Elementary School, 2nd Grade Class, 1958 – 1959 School Year.

Building Envelope

Exterior walls of the Bungay Elementary School were constructed in a buff brick veneer with concrete masonry back-up supported on a partially exposed concrete foundation. The structural steel frame occurs within the building envelope and includes open-web steel joists that support the roof structure. Portions of the building exterior constructed in the 1950's do not appear to have exterior masonry weeps suggesting that the original exterior was constructed as a mass wall. Record drawings from the 1996-era addition include exterior wall sections that indicate an insulated masonry cavity wall construction that incorporates through-wall flashing.





Bungay Elementary School's east elevation leading to its main entrance

The perimeter roof eaves are finished in painted wood trim. Narrow strip vents along soffits of projecting eaves have been installed to provide passive ventilation. The effectiveness of this assembly for a low-sloped roof system is difficult to determine. The soffit vents also are prone to infestation by insects. There is also observed evidence of deteriorated wood fascia at the roof perimeter. The deterioration is presumed to be the result of prolonged water exposure without adequate drying.

The light exterior brick veneer shows evidence of staining at locations where roofs intersect the exterior wall plane and along the ground plane. The staining is particularly evident in the mortar joints of the masonry wall.

Though the observed presence of movement joints is limited in the exterior wall assembly, those joints that were observed appear to have been maintained, are continuous, uniform, and are intact.



Roof System

Low-sloped roof configurations are used exclusively at Bungay Elementary School. The entire roof was replaced as part of an improvements project undertaken as part of a 2018 improvements project that included a boiler system replacement and the addition of a roof mounted photovoltaic system.



The roof material is an EPDM membrane. In the absence of visible fasteners, the roof is assumed to be a fully adhered system over rigid insulation. No record documents of the roof construction project were retrieved as part of the study process. As a State grant funded project, the roof system is required to have a minimum, non-prorated, no dollar limit, warranty of 20-years.

Although there appears to be some pitch to the low-sloped roof, there is observed ponding in numerous locations along the roof's surface. Though not an immediate concern, prolonged

ponding could accelerate the deterioration of the roof material.

Building additions have been separated from previously completed structures through the use of construction joints. These separations are visible in the roof assembly. The majority of roof drains are protected by stainers, though a few were missing in or not fully seated within the drain assembly. This could result in the accumulation of debris leading to clogging.



There is also evidence of the membrane moving across the roof's surface. If not addressed, this could also reduce the membrane's service life.



Fenestration and Entrances

Window assemblies at the existing Bungay Elementary School are characterized by large expanses of glazed surfaces, particularly at classrooms, installed above limestone sills. The window sills are approximately 42-inches above grade with heads at or above the interior finished ceiling. The clear anodized aluminum storefront framing system is composed of 2-1/2-inch-wide vertical mullions supporting two fixed horizontal lites and two operable vents at the older classrooms. In some instances, the window frames have been modified to receive individual air conditioning units. These window systems, typically installed at existing classrooms, appear to have been present when the 1996-era building improvements were performed for the facility. The construction drawing from that building program indicate that these windows were existing to remain.

The more contemporary classroom additions, the library and cafeteria constructed as part of the 1996-era building improvements, utilized a clear anodized aluminum storefront with similar with vertical mullion spacing similar to that of the older storefront glazing system. However, the 1996-era storefronts utilized paired casement windows with two fixed lites above which alternated with square fixed lite below a single rectangular window lite. These windows are referenced as "rescue / ventilation" windows reflecting code requirements for emergency egress in educational facilities that lack protection by a full fire sprinkler system. In instances where room specific air conditioning was required, the large central glass light was removed and replaced with a metal faced panel through which an air conditioning unit was placed.

Horizontal louver blinds, in varying states of deterioration, are used to control light in the classrooms.



Storefront window assemblies used at pre-1996 classrooms (above)



Storefront glazing utilized during the 1996 improvements project at the right of the image with the older pattern storefront windows used in classrooms on the left (above).

Building Envelope & Interior Finishes Analysis 3.2

Interior Finishes

The excellent upkeep of Bungay Elementary's interior spaces belies its underlying aging infrastructure, the condition of which, is concealed by the school's interior finishes. The majority of finishes are contemporary and in serviceable condition.

Suspended ceilings are finished in a suspended acoustic panel and metal grid. Interior corridors comprise painted concrete masonry, presumed to provide a rated separation given the absence of full fire sprinkler system. And interior floor surfaced are finish in resilient tile and perimeter resilient base. Carpet is present in the Media Center to aid with acoustic attenuation of the space.



Storefront glazing utilized during the 1996 improvements project at the right of the image with the older pattern storefront windows used in classrooms on the left (above). Note the addition of individual window units providing classroom air conditioning and the presence of rescue windows for emergency egress due to the absence of a full fire sprinkler system.



Building Envelope & Interior Finishes Analysis 3.2

Upon closer inspection, there is evidence of underlying issues that are reflected in the interior finishes. The raking light of perimeter room lighting illustrates the deformation of ceiling panels, like the Media Center in the image, below.



This type of distortion, particularly for ceiling panels installed in 2 feet by 2 feet metal grid, suggests exposure to prolonged high humidity levels. This condition would not be expected in a Media Center and suggests that the ventilation system serving the space is not capable of effectively moderating humidity levels.

A similar condition was observed with exposure to raking exterior light across ceiling panels within a corridor located in proximity with one of the school's south exits. This exit lacks a vestibule and the ceiling panels in the foreground of the photograph which are further into the school's interior and are not highlight by raking light.

Existing Facility Assessment
Bungay Elementary School

This particular example may be influenced by the school's ventilation system and aspects of its exterior envelope likely lacks the benefit of thermal insulation and controlled air infiltration afforded by contemporary wall systems.



A similar distortion of ceiling panels is observed in the Cafeteria that was expanded in the school's 1996 building project.



Building Envelope & Interior Finishes Analysis 3.2

Interior doors are primarily a transparent finished white oak flush door with lites that vary in size and configuration. The Construction Drawings from the 1996 building project indicate the replacement of many interior doors, which appear to have been fitted with accessible, lever trim that return to the face of the door.



The door in the example above illustrates a typical classroom door. Though permitted under prior Building Codes, the use of wired glass (assumed to achieve a rated assembly) has been discontinued due to the hazard the wire poses to personal injury in an emergency egress situation. The size of the lite offers little

security for room occupants in a lockdown scenario both from the aspect of view into the classroom and potential access to interior facing locking hardware should the glass be broken. Regarding aspects of fire safety, this door is located in a corridor wall that should provide a rated separation in a school that lacks fire sprinklers. The open door does not appear to be equipped with an automatic closing device necessary to maintain the continuity of the fire rated separation.

Fire compartmentalization of the school appears to have been achieved through the use of rated door assemblies on magnetic-opens. The doors in this image permit egress travel in both directions and are fitted with emergency exit devices, automatic closers, surface mounted positive latching hardware and metal kick-plates.



Utility service doors, such as the example in the following photograph are metal flush doors. Though the door appears to have been fitted with accessible lever trim hardware and an automatic closer, the closer appears to have been defeated to leave the door in an open position.



An oversized door for a single use toilet room is servicable but shows wear of its hardware and fittings.



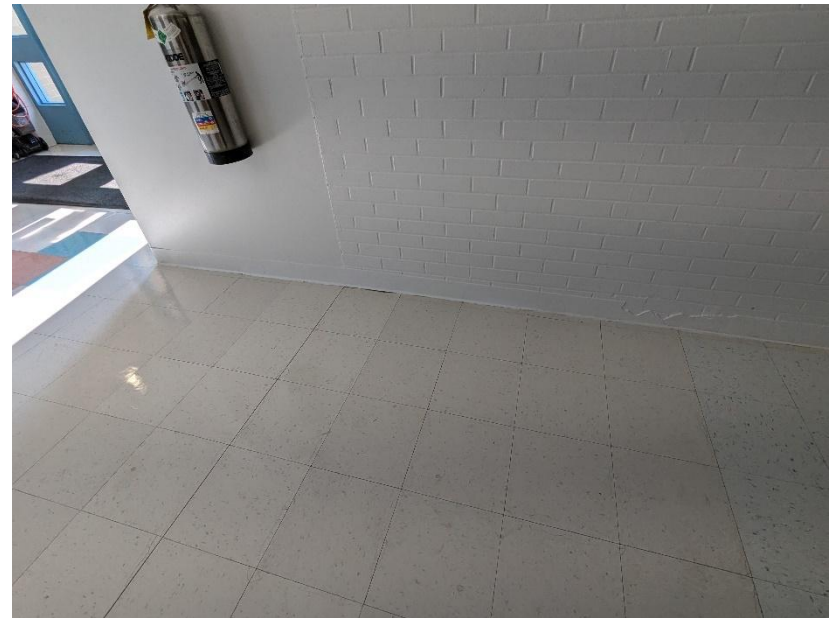
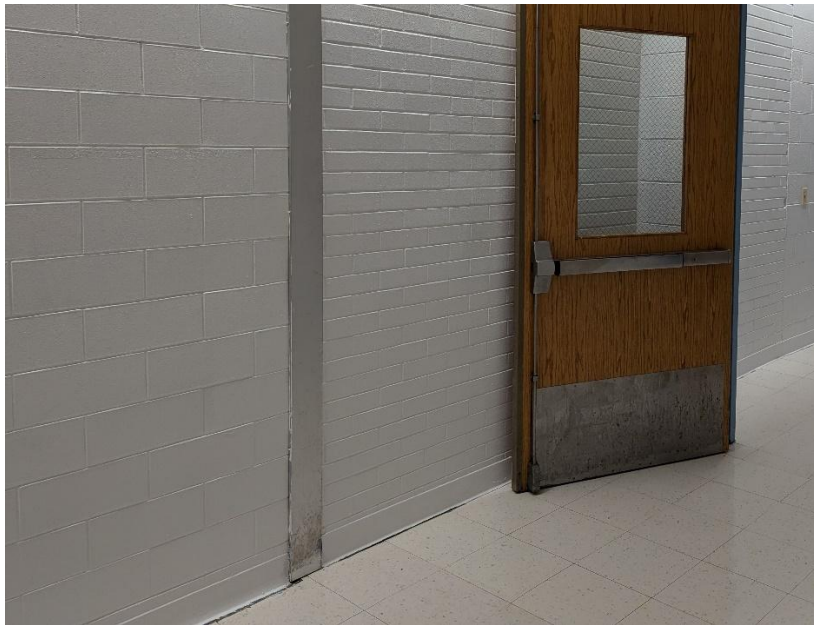
Existing Facility Assessment
Bungay Elementary School



A partial height door providing access to a mechanical system crawl space that serves a portion of the original school.

The consistent level of maintenance of resilient flooring is in keeping with other interior finishes within Bungay Elementary. Area finished in resilient floor tiles do reveal open seams between tiles which accumulate dirt making the seams more apparent in light colored floor tiles. The open seams may have resulted from changes in temperature and uncontrolled humidity within the school.

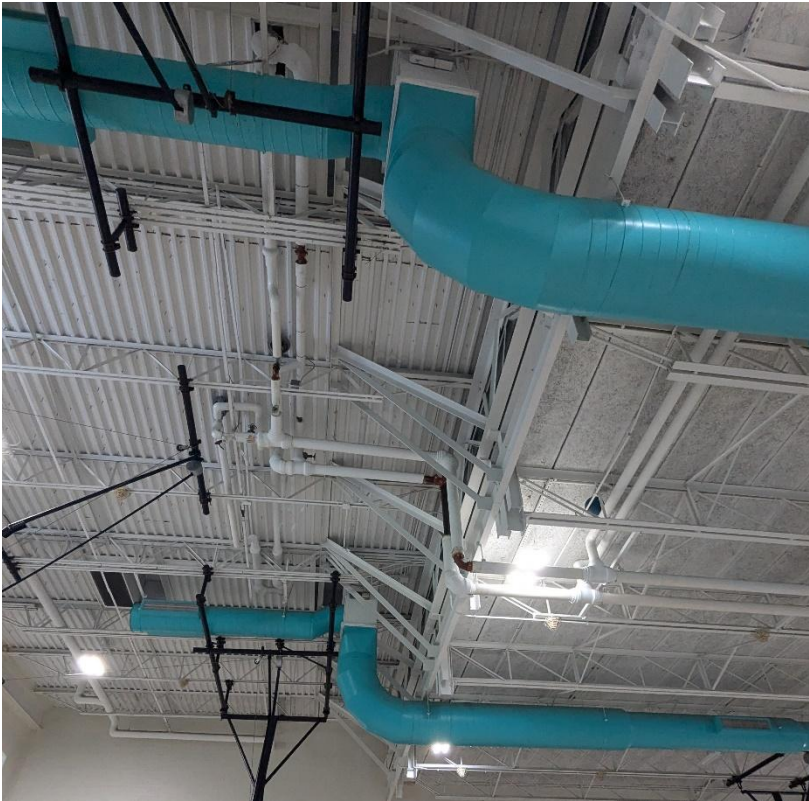
A more significant deterioration of the floor system is apparent along the perimeter of corridors where the tile appears to have separated leaving a pronounced gap along the wall perimeter along the resilient base. This condition is not isolated to a single location, but rather, results in proximity to expansion joints, pilasters and transitions between wall materials, as can be viewed in the following images.



Building Envelope & Interior Finishes Analysis 3.2



The gymnasium is the school's primary assembly space. It was expanded as part of the 1996 building project to provide a full basketball court. The original gymnasium had an exposed Tectum while the addition is an exposed steel roof deck over steel joists. There is no bleacher seating provided in the gymnasium. A monolithic athletic floor has been installed for the gymnasium floor surface. The Superintendent of Schools has expressed concern regarding this flooring product associated with reported connective tissue injuries. The gymnasium's perimeter wall surfaces are protected by wall pads. There are six retracting basketball goals, two for the main court and four for half-court play.



Access to the accessible chair lift from the gymnasium level is provided by the door opening in the image below.



EXISTING MECHANICAL CONDITIONS

The mechanical survey results are presented within this section. Included are a chart of existing components and their conditions, summary descriptions, photographs, plans, and recommendations.

MECHANICAL SYSTEMS NARRATIVE

Perimeter Heating System

Two (2) Dual Fuel boilers manufactured and installed in 2019. Boilers are capable of operating on fuel oil and natural gas. Boilers manufactured by Weil McLain, Model 88. Two (2) Burners by Power Flame, Model CR3-GO-25. Both boilers equipped with circulating pumps.



A view of the hot water heater (left) and circulating pumps (right).

Two (2) base mounted secondary pumps distribute heating hot water throughout the building. Each pump includes a Variable Frequency Drive (VFD).

Heating at classrooms is provide by perimeter unit ventilators.

Office areas are heating by perimeter fin tube radiation.



Typical perimeter unit ventilator used in classrooms.

Cooling Systems

Classrooms are provided with window air conditioning units. These units are in varying condition. There is an office area and computer lab that is provided with cooling. The cooling for these areas are provide by three (3) small rooftop units. These units are manufactured by Trane. Two of the units are from the year 2000, the other one is from the 1996 renovation. The three units are approximately 5 Tons each and equipped with R-22 refrigerant. All three of these units are past their useful life.

Heating and Ventilation

The gym is provided with heating and ventilation (no cooling) via two Rooftop units (RTU-1 and RTU-2). The units were installed in 1996. These units are past their useful life.

The cafeteria is provided with heating and ventilation (no cooling) via two Rooftop units (RTU-3 and RTU-4). The units were installed in 1996. These units are past their useful life.



A view of a typical rooftop unit serving the gymnasium.



Rooftop units serving the cafeteria.

Kitchen

The kitchen is equipped with a grease exhaust hood system. The hood is connected to a rooftop exhaust fan.

Controls

The building systems are controlled by a Building Management System (BMS or BAS). The existing system is a Tridium based system by Environmental Systems Corporation (ESC). The BMS is a direct digital control system (DDC). The BMS controls the RTU's and the unit heaters.



Typical BMS thermostat.

Existing Mechanical Systems Evaluation

The following is a data summary of the Mechanical system's existing conditions that were observed and noted during the survey. This information was gathered by a field survey, reviewing the existing drawings and discussions with various building personnel

Condition Codes	
Excellent	16-20 years useful life
Good	11-15 years useful life
Fair	6-10 years useful life (minor / cosmetic repairs needed to maintain condition)
Poor	0-5 years useful life (immediate repairs needed to prevent deterioration)

System	Condition	Comments
Infrastructure (pipes, ducts, etc.)	Good	Mostly original to the building (1996 renovation).
Heating Systems	Excellent	Boilers were manufactured and installed in
Cooling Systems	Fair	Cooling is limited to only a few areas. Window AC units serving classrooms.
Fixtures & Equipment (Interior)	Fair	Perimeter heating only unit ventilators.
Fixtures & Equipment (Exterior/Rooftop)	Fair	Rooftop Equipment provides Heating and Ventilation.
Overall Efficiency	Fair	Boilers are fairly new, window air conditioning units not efficient.

EXISTING PLUMBING CONDITIONS

Infrastructure

Sanitary piping is cast iron throughout the building and is in good working order. Storm piping is PVC and is in good condition as it leaves the hub drain. Domestic piping is copper throughout the building with visible rust in some locations. Braided pipes, providing flexible connections for water closets and sinks, also appear to be in good working order.

Kitchen

The existing Kitchen has floor drains with visible oxidation and build-up around openings. Existing hand wash sinks, the pot wash sink, and kitchen sink all appear to be in good working order.

Kitchen fixtures were observed to have the air-gapped connections required by current health codes. These air-gapped configurations are comprised of PVC sanitary piping that then air gaps into the cast iron floor sinks.



Plastic piping serves many of the existing fixtures in the kitchen. Access to the grease-waste interceptor is achieved through a floor hatch in the kitchen located below kitchen equipment. Current CT Plumbing code requires that grease-waster interceptors be installed outside of the main building envelope.



Plumbing & Fire Protection Systems Analysis 3.4



Storm Drains

The existing storm drains were observed to in vary levels of disrepair. Drains are missing or observed to be damaged and sunken into the roof likely to cause leaks.



Existing Facility Assessment
Bungay Elementary School

The secondary drainage system for the roof is served by scuppers around the perimeter of the roof. Roof scuppers appear to be in good working order.

Equipment

Domestic hot water is provided by a Bock fuel oil fired water heater with an 83-gallon storage capacity and 648 gph recovery at 90°F rise. The water heater was observed to be in good working order but dated.



Plumbing & Fire Protection Systems Analysis 3.4

Two Emqlo air compressors were present in the mechanical room but were not observed to be in use.

Interior Plumbing Fixtures

Water closets are flush tank type in good working condition. Lavatories are generally wall hung vitreous china in good working order but dated.



Existing Facility Assessment
Bungay Elementary School

3.4.3

Water fountains are dated and well beyond their useful service life. One water fountain was observed to be over 20 years old. An existing water fountain was observed to have a broken dispense button that had been pushed into the fixture's housing.



Exterior Plumbing Fixtures

The exterior of the building has wall hydrants or hose bibs in visible states of disrepair. One example observed has its valve key filled with insulation.

Gas System

The school's existing gas service located outside building was observed to be in good working order. Its gas regulator was labeled with an installation date of 06/2016. Outbound system pressure was set at 2 PSIG.

A Roots Meter, Model SK175, was also observed to be in good working order, though its installation date was not indicated.

The system includes a Honeywell Mercury Instrument controller which appears to be in good working order.

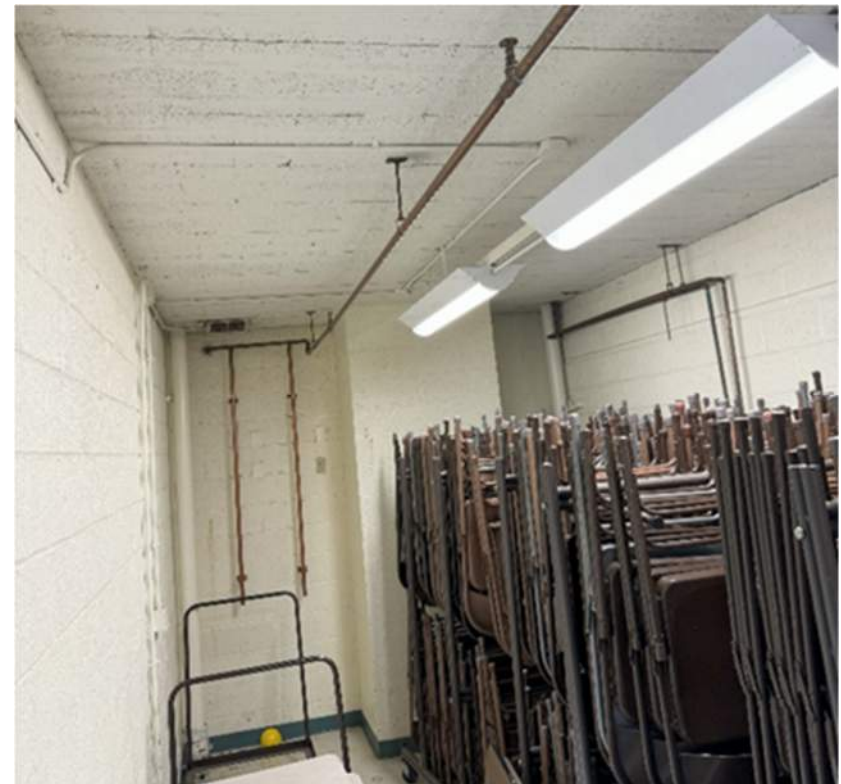
EXISTING FIRE PROTECTION CONDITIONS

Fire Suppression

The facility is only partially protected by a fire sprinkler system and lacks a designated fire service. There is fire sprinklers located in janitors' closets, storage rooms, a conference room, and kitchen storage only. These sprinklers are piped from the school's domestic water mains.

Field observations did not locate back flow preventors or shutoff valves for the limited fire sprinkler system. It is assumed that back flow preventors and shutoff valves are located above ceilings for the area that are provided coverage.

The individual condition of existing sprinkler-heads varies, but the general condition of this system is poor.



Plumbing and Fire Protection System Evaluations

Condition Codes	
Excellent	16-20 years useful life
Good	11-15 years useful life
Fair	6-10 years useful life (minor / cosmetic repairs needed to maintain condition)
Poor	0-5 years useful life (immediate repairs needed to prevent deterioration)

Plumbing Conditions

System	Condition	Comments
Infrastructure (pipes, etc.)	Fair	No observed issues but dated.
Kitchen	Poor	Partial sprinkler system in locations that required fire suppression do not meet current code.
Storm Drains	Fair	Drains in poor condition or missing.
Equipment	Good	No issues observed.
Fixtures	Fair-Poor	No issues observed but dated. Some fixture well beyond useful life.
Exterior Fixtures	Poor	Fixtures are in visible disrepair.
Gas System	Fair	No issues observed but dated.
Overall Efficiency	Fair	No issues observed but dated.

Fire Protection Conditions

System	Condition	Comments
Alarms & Devices	Poor	
Fire Suppression (infrastructure/ equipment)	Poor	Partial sprinkler system in locations that required fire suppression do not meet current code.

EXISTING ELECTRICAL CONDITIONS

The electrical survey results are presented within this section. Included are a chart of existing components and their conditions, summary descriptions, photographs, plans, and recommendations.

ELECTRICAL SYSTEMS NARRATIVE

The building is fed with a 1600A, 208/120V, 3-Phase electrical service supplied from a 300KVA pad mounted utility transformer. The service runs underground from the transformer to the main switchboard located in the main electric/boiler room located in the building basement. The service equipment, manufactured by Siemens and installed in 1996, consists of a service entrance switchboard that includes a main circuit breaker disconnect switch and a single distribution section. The previous service entrance panelboard has been abandoned in place behind the current switchboard and used as a pullbox for feeder migration. The Eversource utility meter is mounted on a backboard adjacent to the switchboard.

A 700A, 208V, 3 phase circuit breaker is installed in the main switchboard for the building's solar PV system. This feeder supplies a building mounted disconnect switch and step up transformer located on grade which feeds through the building mounted solar utility meter to a 400A, 480V solar disconnect located at the roof level. The solar disconnect panel feeds six grid-tied inverters. The roof

mounted solar panels are supplied by UV rated cable. The solar system is generally in good condition, having been installed as part of a CT State construction grant funded project. Reports of functionality issues with the PV system equipment were received during the generation of this report but the circumstances resulting in these issues was not been determined and no testing was performed.

The building is not equipped with a standby generator for backup power.

Distribution

The electrical distribution consists of conduit and feeders from the main distribution switchboard to branch circuit panelboards located throughout the building. The electrical distribution, equipment and wiring were installed in 1996. Although in operating condition, the electrical distribution and wiring are nearing the end of its useful life.

Lighting and Controls

The lighting throughout the building consists of 2x2, 2x4, and surface/recessed linear that have been retrofitted with LED bulbs. Lighting is functional and lighting levels were observed to be appropriate throughout. Lighting level could be improved with a complete upgrade to better performing LED volumetric style lighting replacements.

Emergency egress lighting for the building is furnished from self-contained battery backed emergency lighting units with twin heads. The fixtures with such provisions do not appear to be properly located along all paths of egress and many fixtures were observed to be in poor condition.

Lighting control consists of wall-mounted toggle switches; key operated toggle switches and ceiling mounted occupancy sensors for local control.

Fire Alarm

The fire alarm system consists of a Honeywell Notifier system inspected and serviced by FireTech Engineered Systems. The control panel appears to be from a more recent upgrade and is located in the Admin Suite. A Notifier fire alarm annunciator and control panel that is inoperable and appears to be abandoned in place was observed in the entry vestibule. Throughout the building, there are speaker/strobe units, strobe only units, smoke detectors and pull stations located in most areas. The building is partially sprinklered and there is area smoke detector coverage in all areas. Although there are no signs of failure and the system appears to be in fair working condition, initiation and notification devices are nearing the end of their useful life.

Technology and Data Systems

A MDF main network room is provisioned in the building and located for proper coverage to conform with network cabling distance limitations. Building horizontal cabling is Category 6 for work area outlets at desks, wireless access points and IP based cameras. Fiber Services interconnect with the Seymour High School. Service demarc is located in the basement boiler room.

Security System

Security is provided through card readers at entrances and cameras located in the entry vestibule, main lobby, and exterior entrances. The S2 security system headend is located in the MDF main network room. Equipment is functioning and appears to have years of useful life.

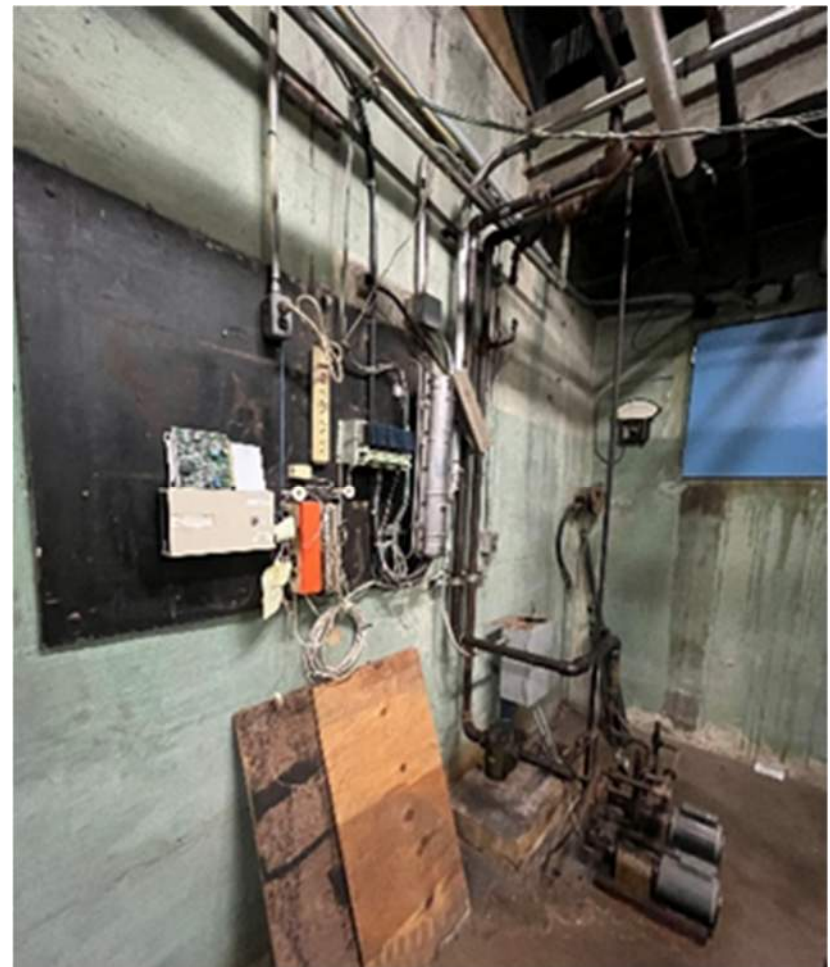
Public Address System

The building is equipped with a Multicom PA system. Ceiling and wall mounted speakers are provided throughout and on the building exterior for general paging and the system is in serviceable condition. The clock system is manufactured by Notifier with the master clock being located in the administration suite. The system appears to be in operable condition but may be nearing the end of its useful life.

EXISTING ELECTRICAL SYSTEM PHOTOGRAPHS



Main switchboard in basement boiler room.



Service Demarc in basement boiler room



Electrical Distribution in MDF Room



Typical Classroom Lighting



Typical self-contained battery backed emergency lighting units with twin heads in a storage space.



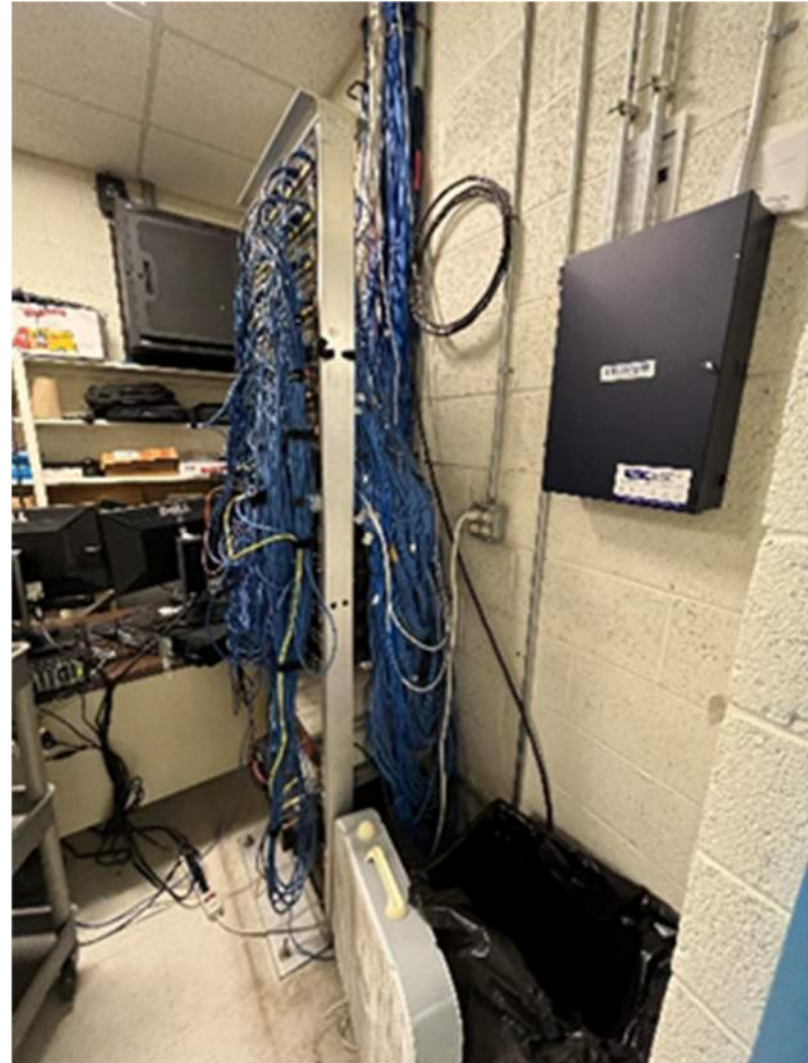
Notifier Fire Alarm Control Panel in the Administration Suite.



Inoperable (abandoned) fire alarm annunciator panel in the entry vestibule.



Fire Alarm manual pull station and strobe in a corridor



Rack equipment and cabling in the MDF Room



S2 Security Headend MDF Room



Multicom PA System in the Administration Suite



Notifier clock system in the Administration Suite.



Security camera at the Building Main Entrance



Roof top photovoltaic system.



Roof top 480V Solar Equipment.



Solar PV system equipment on grade.

Electrical System Conditions

The following is a data summary of the Electrical system's existing conditions that were observed and noted during the survey. This information was gathered by a field survey, reviewing the existing drawings and discussions with various building personnel

Condition Codes	
Excellent	16-20 years useful life
Good	11-15 years useful life
Fair	6-10 years useful life (minor / cosmetic repairs needed to maintain condition)
Poor	0-5 years useful life (immediate repairs needed to prevent deterioration)

Electrical Distribution Conditions

System	Condition	Comments
Main Service	Fair	
Power Distribution	Fair	Good operating condition
Emergency Power	Fair	Self-contained battery backed emergency lighting units with twin heads; integral batteries
Transformers	Good	

Lighting Conditions

System	Condition	Comments
General Lighting	Fair	LED retrofit
Emergency Lighting	Poor	Integral batteries. Several fixtures not operational
Exit Signs	Fair	Integral batteries; fair operating condition
Exterior Lighting	Fair	Operable but nearing the end of its useful life
Lighting Control	Fair	Primarily toggle switches and ceiling mounted occupancy sensors. No need for immediate upgrade but should be upgraded with general lighting LED replacement.

Fire Alarm System Conditions

System	Condition	Comments
Fire Alarm Control Panel	Fair	Nearing the end of its useful service life
Initiating Devices	Poor	Nearing the end of its useful service life
Indicating Devices	Poor	Nearing the end of its useful service life

Low Voltage System Conditions

System	Condition	Comments
Clock System	Fair	No issues observed but dated
Public Address System	Fair	No issues observed but dated
Stand-Alone Sound System(s)	Fair	No issues observed but dated
Assisted Listening	N/A	None Observed

Security System Conditions

System	Condition	Comments
Intrusion Alarm System	Fair	No issues observed but dated
Video Monitoring	Good	No issues observed
Access Control	Good	No issues observed
Intercom System for Entrance	Fair	No issues observed but dated

Telecommunications System Condition

System	Condition	Comments
Backbone Cabling	Fair	No issues observed
Rack System	Fair	No issues observed
Telephone Service Entrance	Fair	No issues observed but dated
Data Horizontal Cabling	Good	No issues observed
MDFs / IDFs	Fair	Good operating condition but IDF installation does not meet proper clearances.
Pathways	Good	No issues observed

Conceptual Design Options 4.0

4.1 Existing Bungay Elementary

- Existing Site Plan
- Existing Floor Plan

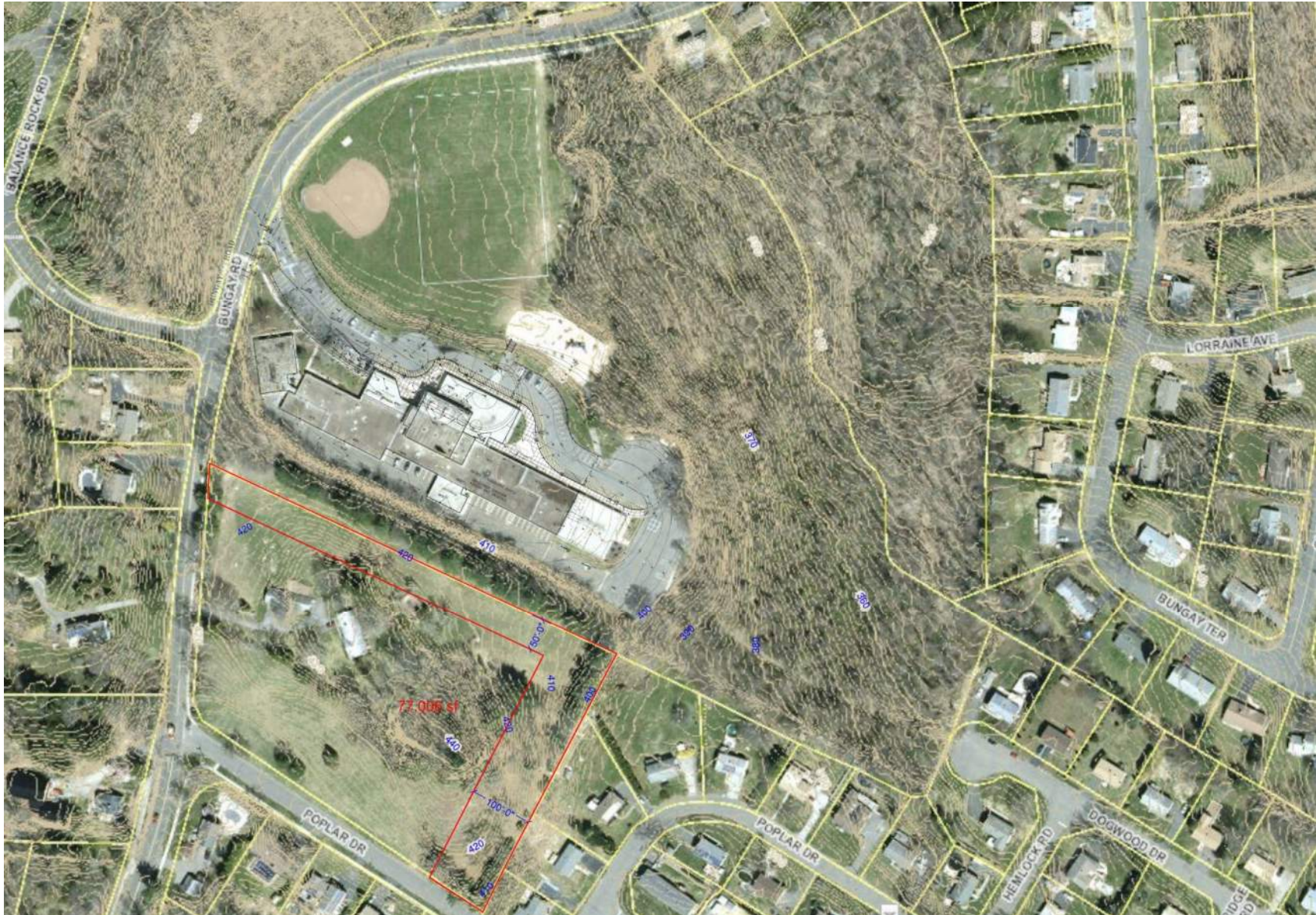
4.2 Renovation Option

- Bungay Elementary School – Site Plan
- Bungay Elementary School – Floor Plan

4.3 New Construction Option

- Bungay Elementary School – Site Plan Option A
- Bungay Elementary School – Site Plan Option B (Expanded Parking)
- Bungay Elementary School – Lower Level
- Bungay Elementary School – Upper Plan

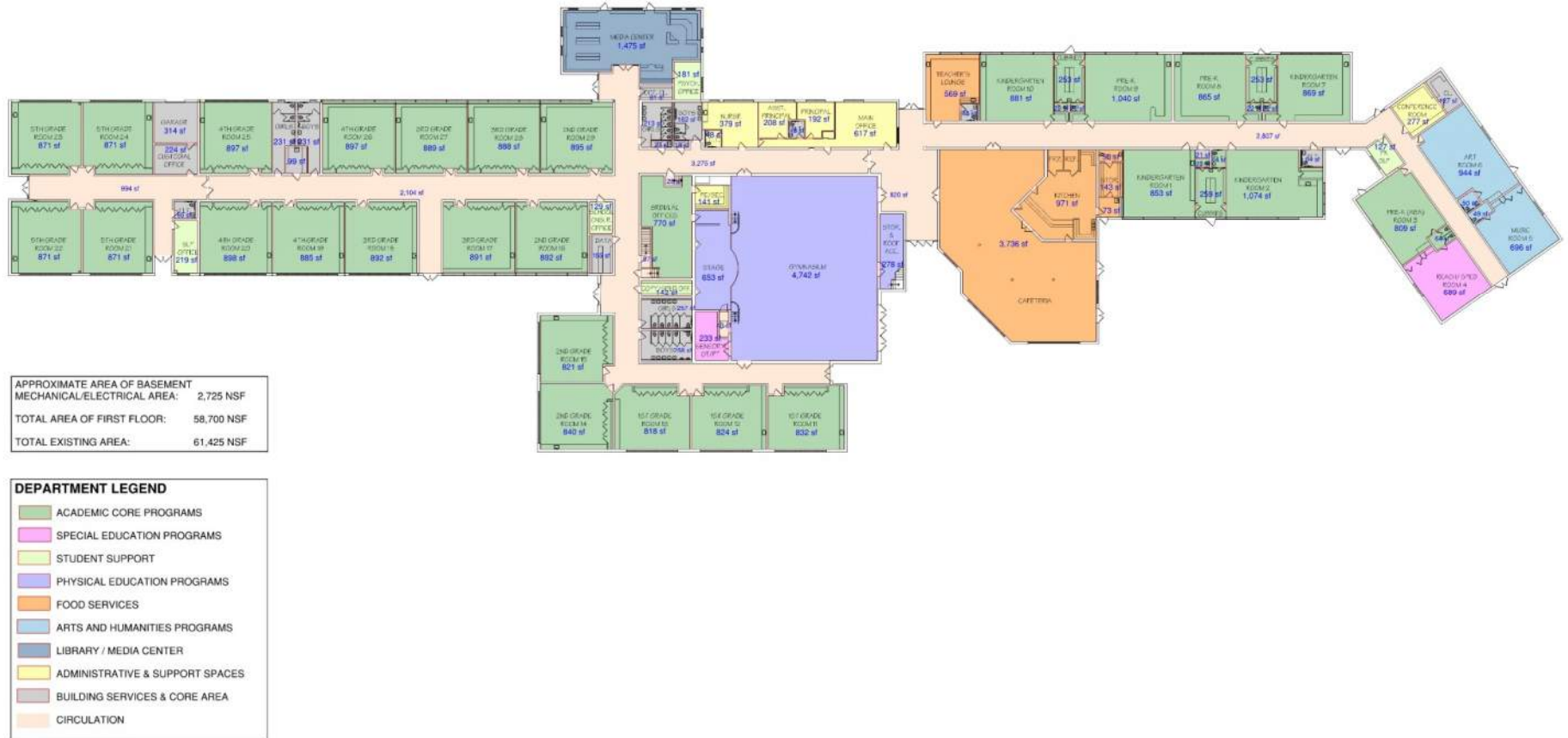
EXISTING SITE PLAN



Existing Facility Assessment
Bungay Elementary School

4.1.1

EXISTING FLOOR PLAN



BUNGAY ELEMENTARY SCHOOL – SITE PLAN



Existing Facility Assessment Bungay Elementary School



BUNGAY ELEMENTARY SCHOOL – SITE PLAN OPTION A



Existing Facility Assessment
Bungay Elementary School

4.3.1

ANTINOZZI ASSOCIATES
ARCHITECTURE + INTERIORS

BUNGAY ELEMENTARY SCHOOL – SITE PLAN OPTION B (EXPANDED PARKING)



Existing Facility Assessment Bungay Elementary School

4.3.2

ANTINOZZI ASSOCIATES
ARCHITECTURE + INTERIORS

BUNGAY ELEMENTARY SCHOOL – LOWER LEVEL

DEPARTMENT LEGEND	
	ACADEMIC CORE PROGRAMS
	SPECIAL EDUCATION PROGRAMS
	STUDENT SUPPORT
	PHYSICAL EDUCATION PROGRAMS
	FOOD SERVICES
	ARTS AND HUMANITIES PROGRAMS
	LIBRARY / MEDIA CENTER
	ADMINISTRATIVE & SUPPORT SPACES
	BUILDING SERVICES & CORE AREA
	CIRCULATION

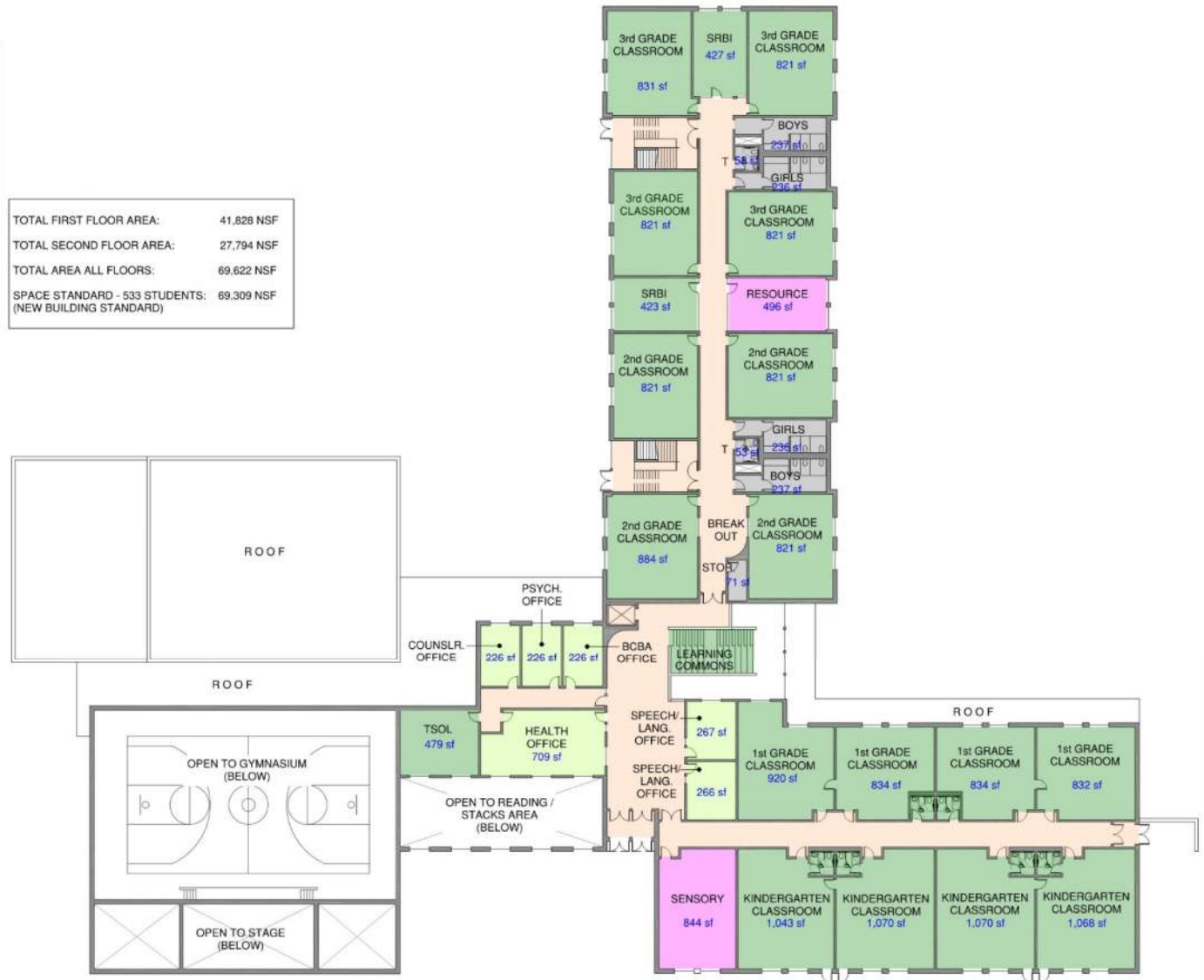
TOTAL FIRST FLOOR AREA:	41,828 NSF
TOTAL SECOND FLOOR AREA:	27,794 NSF
TOTAL AREA ALL FLOORS:	69,622 NSF
SPACE STANDARD - 533 STUDENTS:	69,309 NSF (NEW BUILDING STANDARD)



BUNGAY ELEMENTARY SCHOOL – UPPER LEVEL

DEPARTMENT LEGEND	
	ACADEMIC CORE PROGRAMS
	SPECIAL EDUCATION PROGRAMS
	STUDENT SUPPORT
	PHYSICAL EDUCATION PROGRAMS
	FOOD SERVICES
	ARTS AND HUMANITIES PROGRAMS
	LIBRARY / MEDIA CENTER
	ADMINISTRATIVE & SUPPORT SPACES
	BUILDING SERVICES & CORE AREA
	CIRCULATION

TOTAL FIRST FLOOR AREA:	41,828 NSF
TOTAL SECOND FLOOR AREA:	27,794 NSF
TOTAL AREA ALL FLOORS:	69,622 NSF
SPACE STANDARD - 533 STUDENTS:	69,309 NSF (NEW BUILDING STANDARD)



Conceptual Cost Estimates 5.0

5.1 Conceptual Cost Estimates Scope

- Introduction
- Quantitates and Methodology
- Basis of Pricing
- Design and Estimating Contingency
- Escalation
- Construction Contingency
- Probable Cost
- Estimate Exclusions

5.2 Bungay Elementary School Renovation &. New Construction Conceptual Estimates Summaries

INTRODUCTION

Pan American Consulting (PACS) has been engaged by Antinozzi Associates, PC to prepare a Cost estimate for the Existing Facility Assessment of Bungay Elementary School.

This Estimate is based on the following design information:

- The Bungay Elementary School RAN Conceptual Floor Plan issued November 7th 2024 by Antinozzi Associates
- The Bungay Elementary School RAN Existing Floor Plan issued October 8th 2024 by Antinozzi Associates
- The Bungay Elementary School RAN Conceptual Site Plan, undated, by Antinozzi Associates
- The Bungay Elementary School New Conceptual Floor Plan issued November 22nd 2024 by Antinozzi Associates
- The Bungay Elementary School New Building Conceptual Site Plan, undated, by Antinozzi Associates
- Updated to include Alternate for Overflow parking and PV System in Construction costs

QUANTITIES AND METHODOLOGY

The cost estimate is based on the measurement of quantities wherever possible. Where actual measurements are not used, parametric measurements are used in conjunction with previous but similar project benchmarks. PACS uses a wide range of standard measurement and quantifying methods that are common practice in the construction industry today.

BASIS OF PRICING

The construction costs shown in this estimate represent the fair market value and are not intended to be a prediction of the lowest bid.

The costs include: labor, material, equipment, and the subcontractors overhead and profit, also referred to as the Subcontractor's Mark Up.

The cost of labor is based on local Prevailing wage rates for all trades. The construction rates used are based in "today's dollar" and an escalation allowance is included in the Estimate summary.

Our pricing assumes competitive bidding on all elements of the construction work, assuming a minimum of three competitive bidders for all general contractors, subcontractors, materials, and vendors. In our experience, when fewer bids are received or solicited, prices can be expected to be higher due to lack of competition.

The subcontractor's mark-ups include their own overhead, including the cost in the field as well as profit. Our estimate considers current market conditions, competition between trades and the cost fluctuations in the construction industry.

This estimate has been prepared assuming a Phased New Construction, Demolition of Existing Building and Site relocation, and is based on construction being performed during regular business hours, except what is required for noisy work and Building system tie-ins.

DESIGN AND ESTIMATING CONTINGENCY

A Design and Pricing Contingency is used as a budgetary tool that allows for scope and detail not defined during the design stage. As the design becomes more defined as the project passes through the design stages, the Design and Pricing Contingency decreases as more scope and detail is now being shown in the documents and is therefore reflected in the cost estimate as actual trade cost. The Design and Pricing Contingency is reduced to zero at 100% Bid Documents.

ESCALATION

As outlined above the estimate is calculated using rates that are "today's dollar" and reflect the cost of the project as if it was to bid on the date of issue. Due to construction projects having long design phases and long construction schedules, it is imperative to project the construction cost further ahead into the future to the point at which it is bid – a practice referred to as cost escalation, or *escalation*. It is common practice to escalate the cost estimate to the midpoint of construction to accommodate for economic inflation. This percentage accounts for this increase.

CONSTRUCTION CONTINGENCY

PACS advises that a Construction Contingency be carried for unforeseen project conditions and field changes. Typically, we see this in the range of 3% to 7.5% of the direct (trade) costs depending upon the project scope and complexity.

PROBABLE COST

It is important for the Owner and Design team to carefully review this cost estimate including all line-item descriptions, clarifications, exclusions, unit prices, assumptions, allowances, mark ups and contingencies to ensure the estimate reflects the scope of the project.

In instances where the cost estimate is not in line with the Owner's budgetary objectives, PACS can suggest and evaluate alternate methods to assist bringing the project back in line with the desired budget.

PACS has produced the cost estimate based on the widely practiced methods of cost estimating and aims to reflect the fair market value of the construction project. Our aim is to be not the highest or the lowest in the range of bids but to use our

experience and expertise in the construction industry to provide the client with a degree of confidence that the project will be close to our calculated estimate.

ESTIMATE EXCLUSIONS

This cost estimate excludes the following:

- Premiums for working in inaccessible or partially accessible spaces during construction.
- Surplus Stock and Spare Product, Materials.
- Unforeseen Conditions (Covered in Construction Contingency).
- Premiums for restrictive and uncompetitive bidding.
- Premiums for non-standard work times.
- Work beyond the project limits.
- CT Sales Tax - Assumes Tax Exempt.
- Wellpoints - Assumes open trench pumping only
- Unsuitable Soil Remediation
- Hazardous, Contaminated or Polluted soils
- Underground Storage Tank (UST) removals
- Temporary Water, Power and Fuel - Assumed to be paid for by Owner.
- AV Equipment in Classrooms - Assumes part of Owner's FF&E / Technology Budget
- Student furniture (including tables) in Classrooms and Science Labs.
- Utility Costs - Electric, Gas, Water.

RISKS TO THE COST ESTIMATE

Items that may affect the cost estimate, the list as follows but not limited:

- Changes to the design subsequent to the issue of the documents stated above which this estimate is based on
- Unforeseen and Unknown Structural conditions
- Noncompetitive Bid restrictions and the sole sourcing of products/materials from specific vendors
- Restrictive technical specifications that produce and noncompetitive environment
- Changes to the project schedule that delay the project and therefore have impact on cost
- Incomplete and poorly coordinated documentation
- Access restrictions, unidentified out of hours work policies and phasing restrictions
- Restrictive technical specifications that produce a noncompetitive environment
- Unforeseen and unknown base building conditions.



Trade		Bungay ES RAN			Bungay ES New		
01 50 00	Temporary Facilities and Controls	\$	2,584,296	35.13	\$	917,158	12.80
02 80 00	Hazardous Abatement	\$	1,677,154	22.80	\$	893,265	12.46
02 41 16	Building Demolition	\$	70,979	0.96	\$	658,968	9.19
02 41 19	Selective Demolition	\$	937,786	12.75	\$	-	0.00
03 30 00	Cast-In-Place Concrete	\$	742,619	10.09	\$	2,124,238	29.64
04 20 00	Unit Masonry	\$	501,479	6.82	\$	1,479,269	20.64
05 12 00	Structural Steel	\$	694,955	9.45	\$	2,516,505	35.11
05 40 00	Cold Formed Metal Framing	\$	172,643	2.35	\$	359,583	5.02
05 50 00	Metal Fabrications	\$	278,644	3.79	\$	378,760	5.28
06 10 00	Rough Carpentry	\$	142,513	1.94	\$	107,738	1.50
06 20 00	Finish Carpentry	\$	725,000	9.85	\$	746,840	10.42
07 10 00	Damp / Waterproofing	\$	25,112	0.34	\$	64,679	0.90
07 21 00	Thermal Insulation	\$	86,181	1.17	\$	152,628	2.13
07 25 00	Air & Vapor Barriers	\$	98,252	1.34	\$	174,006	2.43
07 40 00	Siding & Panels	\$	690,843	9.39	\$	849,598	11.85
07 50 00	Membrane Roofing	\$	2,220,249	30.18	\$	1,478,814	20.63
07 84 00	Penetration Firestopping	\$	25,000	0.34	\$	20,000	0.28
07 92 00	Joint Sealants	\$	50,000	0.68	\$	50,000	0.70
07 95 00	Expansion Control	\$	25,000	0.34	\$	-	0.00
08 10 00	Hollow Metal Doors & Frames	\$	227,115	3.09	\$	260,450	3.63
08 30 00	Specialty Doors	\$	41,000	0.56	\$	41,000	0.57
08 41 00	Entrances & Storefront	\$	2,210,525	30.05	\$	1,498,570	20.91
08 44 00	Metal Framed Curtainwall	\$	-	0.00	\$	401,570	5.60
08 71 00	Door Hardware	\$	353,125	4.80	\$	398,960	5.57
08 80 00	Glass & Glazing	\$	29,740	0.40	\$	91,300	1.27
08 90 00	Louvers & Vents	\$	7,500	0.10	\$	7,500	0.10
09 21 00	Gypsum Board Assemblies	\$	1,042,845	14.17	\$	1,415,465	19.75
09 30 00	Tile	\$	87,938	1.20	\$	170,468	2.38
09 51 00	Acoustical Ceiling	\$	698,210	9.49	\$	612,746	8.55
09 64 00	Wood Flooring	\$	174,966	2.38	\$	166,002	2.32
09 61 10	Vapor Mitigation	\$	39,484	0.54	\$	112,104	1.56
09 65 00	Resilient Flooring	\$	505,693	6.87	\$	424,226	5.92
09 67 00	Resinous Flooring	\$	113,885	1.55	\$	141,645	1.98
09 68 00	Carpet	\$	49,146	0.67	\$	39,540	0.55
09 80 00	Acoustical Treatment	\$	150,000	2.04	\$	150,000	2.09
09 91 00	Painting & Wallcoverings	\$	296,772	4.03	\$	284,551	3.97
10 11 00	Visual Display Surfaces	\$	75,000	1.02	\$	75,000	1.05
10 14 00	Signage	\$	50,000	0.68	\$	75,000	1.05
10 21 13	Toilet Compartments	\$	38,665	0.53	\$	38,665	0.54
10 21 23	Cubicle Curtain & Track	\$	3,500	0.05	\$	3,500	0.05
10 26 00	Wall & Door Protection	\$	25,000	0.34	\$	25,000	0.35
10 28 00	Toilet Accessories	\$	51,725	0.70	\$	51,725	0.72
10 41 00	Emergency Access Cabinets	\$	925	0.01	\$	1,850	0.03
10 44 00	Fire Protection Specialties	\$	10,000	0.14	\$	10,000	0.14
10 51 00	Lockers	\$	156,200	2.12	\$	156,200	2.18
11 30 00	Residential Appliances	\$	8,940	0.12	\$	8,940	0.12
11 40 00	Foodservice Equipment	\$	650,000	8.83	\$	650,000	9.07
11 52 00	Audio-Visual Equipment	\$	35,000	0.48	\$	35,000	0.49
11 61 00	Theater & Stage Equipment	\$	120,000	1.63	\$	120,000	1.67
11 66 00	Athletic Equipment	\$	140,313	1.91	\$	140,313	1.96
11 90 00	Miscellaneous Equipment	\$	56,590	0.77	\$	56,590	0.79
12 20 00	Window Treatment	\$	32,500	0.44	\$	37,500	0.52
12 48 13	Entrance Mats & Frame	\$	10,404	0.14	\$	11,539	0.16
13 00 00	Special Construction	\$	231,250	3.14	\$	231,250	3.23
14 20 00	Elevators	\$	22,500	0.31	\$	177,500	2.48
21 00 00	Fire Protection	\$	591,703	8.04	\$	481,207	6.71
22 00 00	Plumbing	\$	2,113,516	28.73	\$	1,863,498	26.00
23 00 00	HVAC	\$	5,562,043	75.60	\$	5,160,456	72.00
26 00 00	Electrical	\$	5,156,853	70.09	\$	4,792,838	66.87
33 00 00	Sitework - See Attached Sitework Breakdown (Added overflow parking)	\$	4,000,305	54.37	\$	4,323,454	60.32
TOTAL DIRECT COST		\$	36,919,580	\$ 501.82	\$	37,715,171	\$ 526.21
Design & Estimating Contingency		10.00%	\$	3,691,958	\$	3,771,517	
Construction Contingency (CM@R) 5% for RAN & 3% for New			\$	1,845,979	\$	1,244,601	
Escalation - 2.5 years @ 4.0%		10.00%	\$	4,245,752	\$	4,273,129	
General Conditions- 105,000 / Month 24 Months RAN / 18 Months New			\$	2,520,000	\$	1,890,000	
Preconstruction			\$	125,000	\$	100,000	
GL Insurance - CM@R		0.85%	\$	396,978	\$	399,538	
State Education Fund		0.026%	\$	12,934	\$	12,842	
CM P&P Bond		0.70%	\$	348,307	\$	345,848	
CM Fee		1.95%	\$	977,077	\$	970,177	
TOTAL CONSTRUCTION COST		\$	51,083,564	\$ 694.33	\$	50,722,821	\$ 707.70
TOTAL PROJECT COST WITH SOFT COST (RAN 20% & New 17%)		\$	61,300,277	\$ 833.20	\$	59,345,701	\$ 828.01