

Chebeague Island School

Chebeague Island, Maine

Facility Conditions Study

Prepared by:

Stephen Blatt Architects

July 21, 2015



DRAFT

CHEBEAGUE ISLAND SCHOOL FACILITY CONDITIONS STUDY

JULY 21, 2015

We are pleased to submit this report regarding the recommended facility improvements for the Chebeague Island School. Our team of architects and engineers, consisting of Stephen Blatt, AIA (SBA), Darren Commerford, AIA (SBA), Stephen Doel, P.E. (Bennett Engineering), and David Pinkham, P.E. (Pinkham and Greer Consulting Engineers) visited the school June 4th to record observations of the existing conditions. The team toured the facilities with principal Alton Hadley. Additionally, Darren Commerford and David Pinkham returned June 26th to further investigate the existing roof structure.

RECOMMENDED IMPROVEMENTS

BUILDING ENVELOPE

Roof (Repaired in 2005) The existing roof is in poor condition. [HIGH PRIORITY]

New fully adhered EPDM w/ R-30 Polyisocyanurate insulation – 4,600 sf x \$15/sf = \$69,000

Wall Insulation/Siding – Replacement of existing siding with new fiber cement boards over 1” rigid insulation.

Approximately 3,000 sf x \$10/sf = \$30,000

Windows (Replaced in 2000)

36 windows @ \$750 ea. = \$27,000

SUBTOTAL BUILDING ENVELOPE \$126,000

KITCHEN

Provide a UL-listed Class 1 exhaust hood with UL-listed upblast roof fan and wet chemical fire suppression system. \$6,000

New Counters \$4,000

New Flooring \$5,000

SUBTOTAL KITCHEN \$15,000

ENTRY-EXIT SYSTEM

Provide vestibules at entries to create energy efficient air-locks.

New vestibules (2) – 50 sf each

100 sf new construction x \$125/sf = **\$12,500**

LIGHTING & ELECTRICAL SYSTEMS

Replace existing fixtures with energy efficient LED fixtures.

48 fixtures @ \$250 = **\$12,000**

Install lighted exit signs. **\$1,000**

Provide fire alarm system annunciation to a central dispatch location. **\$3,500**

SUBTOTAL LIGHTING/ELECTRICAL \$16,500

STRUCTURAL SYSTEM [HIGH PRIORITY]

The existing roof joists at the high roof over the classrooms are inadequate for the 23' span.

Cut down the span of the joists by adding beams below the roof joists. The beams would span the length of the classrooms and would bear on posts in the walls between the classrooms. This would require the removal of a strip of ceiling the length of a classroom, adding posts in the walls between rooms, and, more than likely, removing some floor slab to add footings below the floor. It is very unlikely that the existing floor slab would be capable of supporting the post loads. A new soffit would be required in the ceilings under the new beams.

\$28,000

MECHANICAL & PLUMBING SYSTEMS [HIGH PRIORITY]

There is a tankless domestic water heating coil on the boiler and a small 120V instantaneous electric heater for use when the boiler is shut down in warm weather. This instantaneous heater has very little heating capacity and is unlikely to heat water to 115F if normal flow rates occur. Provide and appropriately sized storage type electric water heater for summer use. The existing instantaneous water heater has very limited capacity.

	\$1,500
Provide a new double-wall stainless steel chimney.	\$4,000
Provide a water softener.	\$5,000
Insulate existing piping where accessible per the 2009 IECC.	\$4,000
Add mechanical exhaust to the bathrooms with motion detectors for actuation.	\$3,000

A Fantech HRV has been installed and ducted to all occupied spaces. However, based on the size of the supply diffusers, airflows appear to be very low, +- 25-40 cfm each. There is one diffuser in each classroom plus corridors and Multipurpose Room. Current codes would require airflows of approximately 250-300 cfm per classroom. Provide a rooftop ERV to distribute outside air to the occupied spaces to deliver approximately 15-20 cfm / student. Add duct coils for each zone to provide individually controlled heating zones. Remove existing fintube radiation. Estimated cost:

	<u>\$100,000</u>
SUBTOTAL MECHANICAL/PLUMBING	\$117,500
 TOTAL COST OF RECOMMENDED IMPROVEMENTS	 <u>\$315,500</u>
 SUBTOTAL HIGH PRIORITY ITEMS ONLY	 \$214,500

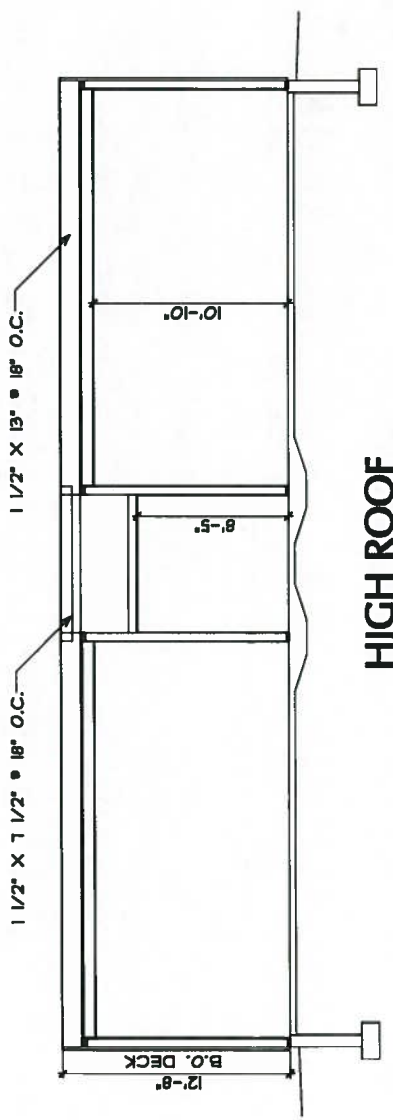


EXISTING CONDITIONS
CHEBEAGUE SCHOOL
CHEBEAGUE ISLAND, MAINE

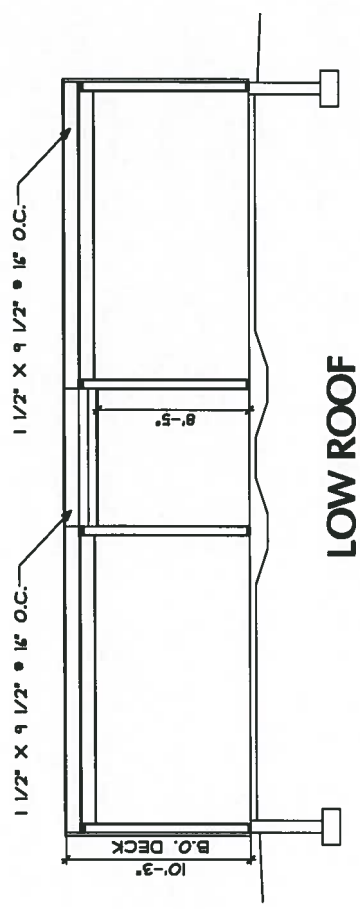
FLOOR PLAN



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HIGH ROOF



LOW ROOF

EXISTING CONDITIONS

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SECTIONS



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