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Town of Allentown

ALLENSTOWN ELEMENTARY SCHOOL FEASIBILITY STUDY

Allentown, NH

PROJECT # 22247

JANUARY 30, 2023

FINAL REPORT



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ALLENSTOWN ELEMENTARY SCHOOL, REUSE FEASIBILITY STUDY

STUDY OVERVIEW

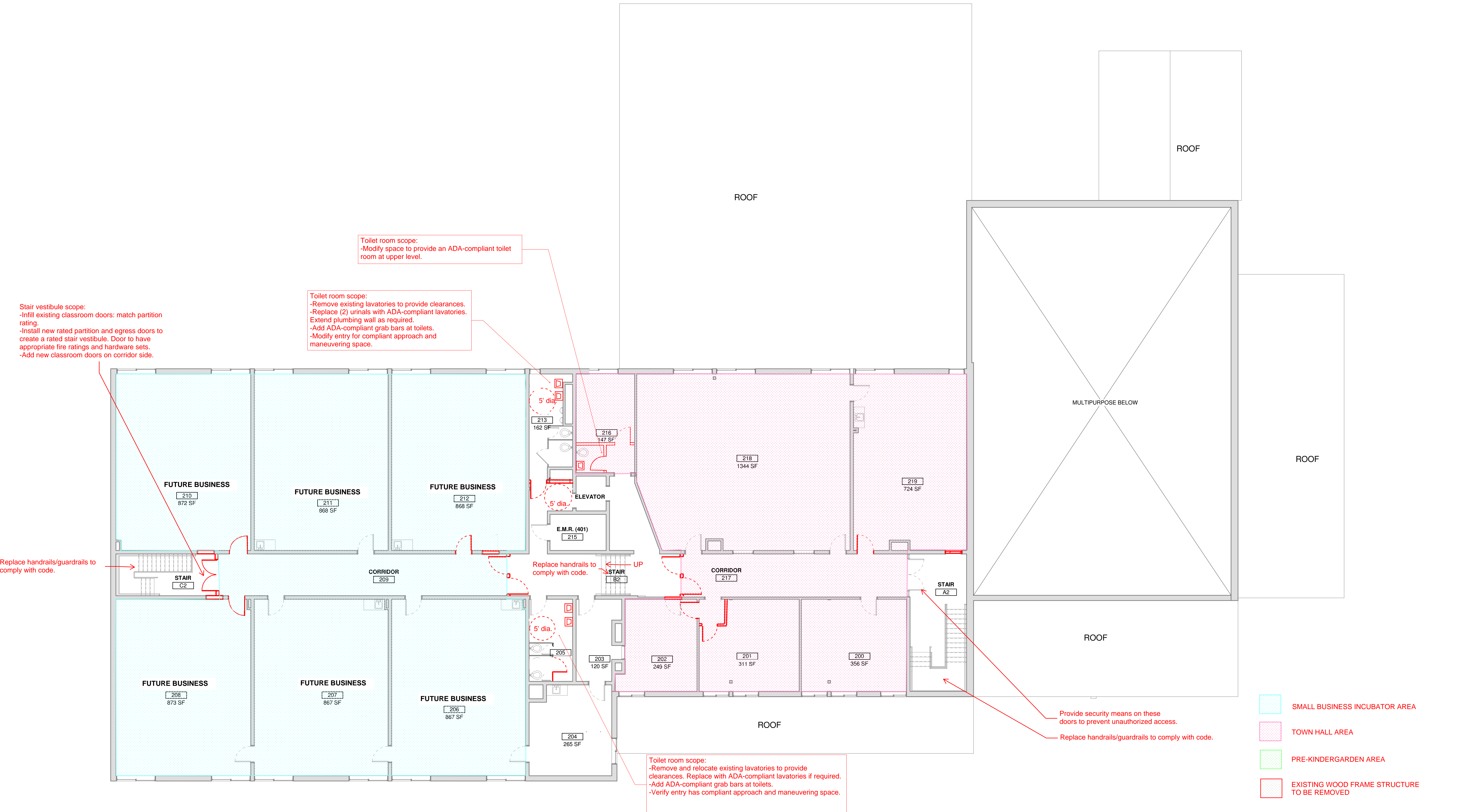
The Town of Allenstown hired Harriman to perform a preliminary feasibility study for transforming the existing Allenstown Elementary School (AES) into a mixed-use community facility. The study builds on the assessment work that Harriman completed in 2019 for the AES and Armand R Dupont School (ARD) buildings. As requested by the Town, the goal of the study was to make recommendations to support a minor renovation of the AES building so it could be utilized as a Town Office, community assembly space, and business incubator offices while retaining the existing preschool program spaces.

The majority of recommendations fell into the categories of barrier free upgrades, life safety upgrades, security upgrades, and improvements to the plumbing fixture count to support the assembly space. Recommendations can be found on the annotated floor plan diagrams in this report. The extent of the recommendations reflects an approach for limited modification and additional construction to allow the Allenstown Town Offices to move into the AES building.

The opinion of probable cost is broken into three categories representing two project phases. Phase 1 includes life safety, barrier free, and security upgrades which are required as a first step to convert the existing AES building from a school into a multi-purpose municipal resource. Phase 2 includes the minimum additional renovation requirements to complete the transition of the space to a functional town office, business incubator, and preschool facility.

Design development for renovations based on this study shall meet all applicable local, State, and national codes and laws. Please refer to the Building Codes-General section of the attached report. The report includes original assessment information from the 2019 report but adds an updated list of applicable codes, laws and requirements for reference.

This study is intended to guide the Town of Allenstown in the scope necessary to re-purpose the facility. Further effort is needed to obtain permits for the new occupancy. The town should consult with all authorities having jurisdiction in this matter





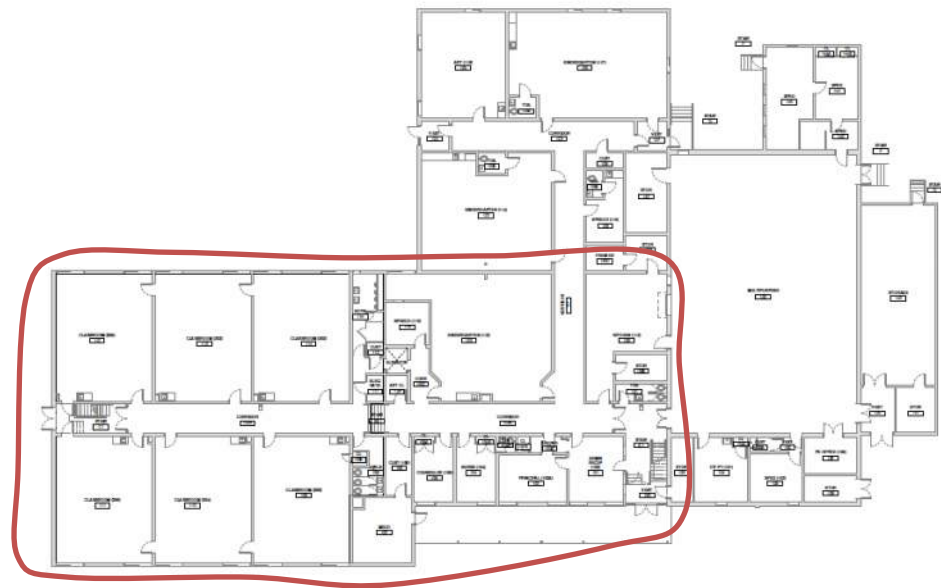
ALLENSTOWN ELEMENTARY SCHOOL – FACILITY ANALYSIS – (UPDATED TO INCLUDE CURRENT CODE REFERENCES)

ARCHITECTURAL AND CODES

Building Shell

Observations - Original 1962 Section

This section is one-story exterior masonry wall with exterior brick. It is unknown if there is insulation in the walls. Based on the era of construction, little to no insulation was used on any of these exterior walls. The brick is in good condition.



ALLENSTOWN ELEMENTARY SCHOOL

EXISTING FIRST FLOOR PLAN

Observations - Additions 1972

This section includes the second floor classrooms and Library over the administration area as well as the classrooms above the first floor classrooms after the short stairs up in the corridor. Also included is the Multipurpose, one story area (OT/PT, Sped, PE Office and Storage) in the front right side of the main entrance and the elevator. No drawings were available.



ALLENSTOWN ELEMENTARY SCHOOL – FACILITY ANALYSIS – (UPDATED TO INCLUDE CURRENT CODE REFERENCES)



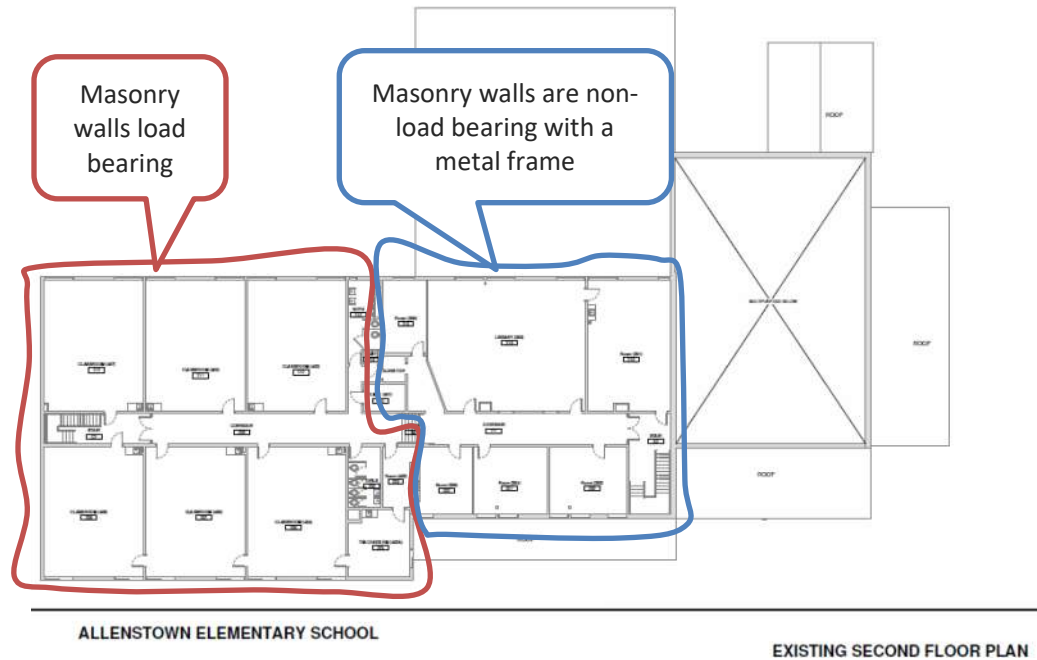
ALLENSTOWN ELEMENTARY SCHOOL

EXISTING FIRST FLOOR PLAN

The exterior second floor and Multipurpose is a masonry wall with exterior stucco insulated finish system. No documentation was available as to when the stucco finish was applied. We believe stucco finish was applied during this addition and was refurbished at a later date. The second floor was constructed with two different methods: one section is masonry walls load bearing with many interior walls appear to be masonry load bearing. The other section is masonry walls non-load bearing with a metal frame. The Multipurpose section is masonry walls load bearing and roof with open web bar joist. Per our observation, the insulation is Styrofoam with a thickness of 1-1/2 inches. The estimated R-value is approximately R-7.5.



ALLENSTOWN ELEMENTARY SCHOOL – FACILITY ANALYSIS – (UPDATED TO INCLUDE CURRENT CODE REFERENCES)



The one story area to the right of the main entrance is a masonry wall with exterior stucco insulated finish system. It is unknown if there is insulation in the walls other than the stucco insulated finish system. Based on the era of construction, little to no insulation was used in the walls on any of these masonry exterior walls.



Stucco finish with exposed 1-1/2 inch Styrofoam insulation

Recommendations - Additions 1972

If a renovation is to take place the Energy Code (IEEC) will need to be adhered to. Harriman recommends furring out exterior walls with wood studs and filling the voids with spray foam insulation to seal the perimeter of the envelope and a layer of gypsum drywall. The cavity would allow for electrical and data wiring with devices.



ALLENSTOWN ELEMENTARY SCHOOL – FACILITY ANALYSIS – (UPDATED TO INCLUDE CURRENT CODE REFERENCES)

By not taking on a major renovation project, IEEC does not apply. Repointing and ongoing maintenance are recommended to maintain exterior brick walls and to keep moisture from penetrating the building shell.



Front elevation – first story 1962 and second floor 1972 addition



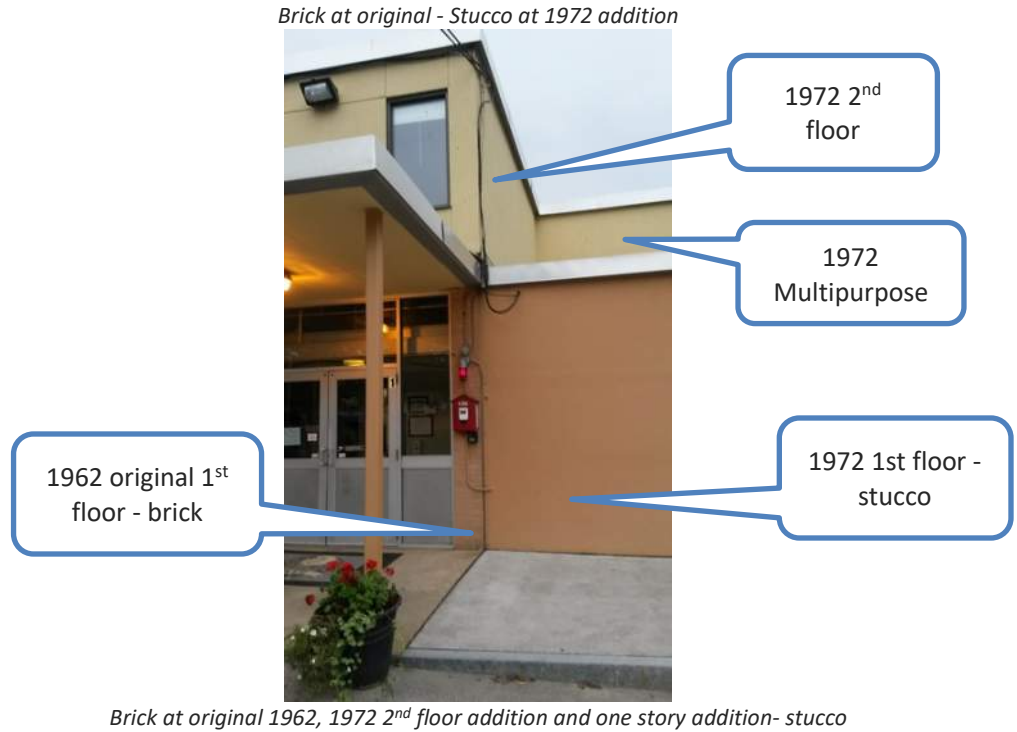
Brick at original building



1972 addition
with stucco



ALLENSTOWN ELEMENTARY SCHOOL – FACILITY ANALYSIS – (UPDATED TO INCLUDE CURRENT CODE REFERENCES)

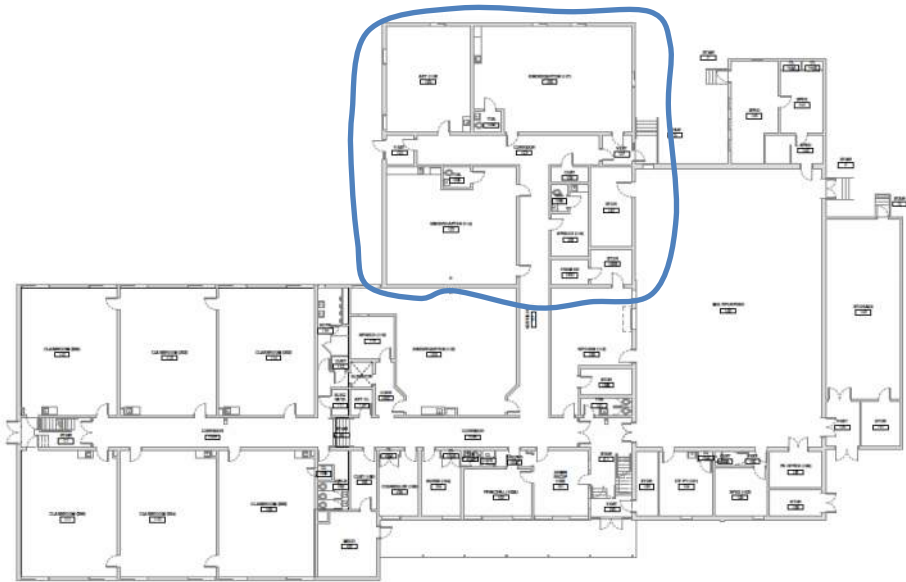


Observations - Addition 1998

This section is one-story exterior masonry wall with exterior stucco insulated finish system. This section includes the Kindergarten classrooms and Art room. No drawings were available.



ALLENSTOWN ELEMENTARY SCHOOL – FACILITY ANALYSIS – (UPDATED TO INCLUDE CURRENT CODE REFERENCES)



ALLENSTOWN ELEMENTARY SCHOOL

EXISTING FIRST FLOOR PLAN



Rear elevation



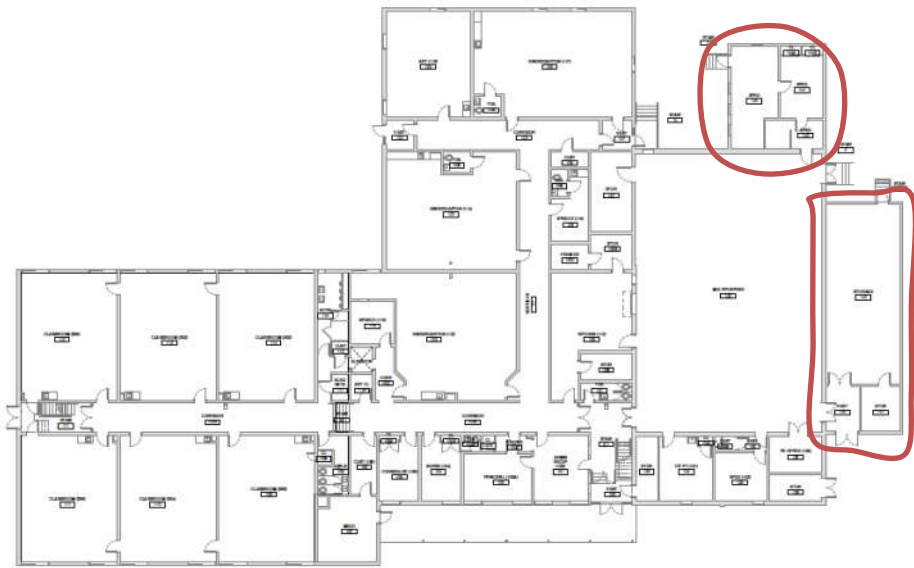
ALLENSTOWN ELEMENTARY SCHOOL – FACILITY ANALYSIS – (UPDATED TO INCLUDE CURRENT CODE REFERENCES)



Rear elevation - single story Kindergarten and Art 1998 addition

Observations and Recommendations - SPED and Storage Additions

These two additions are wood frame construction and per building code for combustible construction. The original building and other additions are non-combustible construction. Per building code, the criteria when calculating allowable square footage would be based on the code least protected building type (combustible construction) and if the building as an automatic sprinkler system (this building as no sprinkler system). With an addition or substantial renovations we would not meet the criteria. We would recommend replacing the two additions with non-combustible construction.



ALLENSTOWN ELEMENTARY SCHOOL

EXISTING FIRST FLOOR PLAN



ALLENSTOWN ELEMENTARY SCHOOL – FACILITY ANALYSIS – (UPDATED TO INCLUDE CURRENT CODE REFERENCES)



SPED addition



Storage addition

Asbestos Containing Building Materials

Note regarding ACBM: Asbestos containing building materials (ACBM) per AHERA re-inspection report dated June 3, 2016 reported all accessible areas were visually inspected for ACBM. Summary of suspect friable and nonfriable materials identified in Appendix A. Bulk material sampling was performed in Appendix B.

Included in the report the following was noted:

Sampling of materials that tested positive include; pipe insulation, door caulk, spay on ceilings, interior caulk, sink basin mastic.

Inspection did not include inaccessible interior building spaces or exterior building materials. The following are beyond the scope of an AHERA Inspection the following exterior materials and should be assumed to be ACBM; caulking & glazing compounds, roofing, sealants, EIFS siding materials, exterior felt paper materials.

Prior to any renovation or construction work further testing should be taken to verify in accordance with State and federal regulations. Abatement of ACBM should be designed and monitored by a qualified/certified consultant.

Foundation and Floor

General

All floors on the first floor level are concrete slab on-grade. Based on the era of construction, no insulation was used. Very little can be done to add insulation, other than excavating exterior walls down approximately 4 feet and adding 2 to 2-1/2 of rigid insulation. This would not be recommended due to the extensive cost.



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Interior Finishes

Floors

The predominant floor finish is vinyl tile. It is throughout the classrooms, SPED areas, Multipurpose, Offices, teacher's area, corridors and storage rooms. Classrooms in the 1998 addition are about one-third vinyl tile at cubbies, with the remaining area being carpet. Carpet was a miss-lot color run and needs to be replaced. Carpet is also installed at the Library and the SPED area by Multipurpose. The Boys and Girls toilet rooms are ceramic tile. There is quarry tile in the Kitchen.



Typical classroom



Typical stair



Typical Preschool/Kindergarten classroom



Multipurpose



ALLENSTOWN ELEMENTARY SCHOOL – FACILITY ANALYSIS – (UPDATED TO INCLUDE CURRENT CODE REFERENCES)



Typical toilet



Kitchen



Library

Recommendations

The carpet in many areas it is worn and should be replaced. The vinyl tile, ceramic tile and quarry tile vary in condition.

- Replace all carpeted areas with new carpet or alternative floor materials.
- Multipurpose to provide seamless sport floor.

Walls

The interior finished walls are a mix of painted concrete masonry units (CMU), painted bricks and painted gypsum wall board. The walls are generally in good condition throughout.



ALLENSTOWN ELEMENTARY SCHOOL – FACILITY ANALYSIS – (UPDATED TO INCLUDE CURRENT CODE REFERENCES)



CMU wall - running bond coursing



CMU wall - stacked bond coursing



Painted brick



Gypsum wall board

Recommendations

- No action at this time.

Ceilings

There is suspended acoustical ceiling tile throughout most areas of the building. A variety of conditions, from poor to good, were noted. Many ceiling tiles have been discolored and stained. Plaster ceilings are located at Rooms 112, 202, 203, 204, 205, and 206. The 1972 Multipurpose space is exposed painted acoustic metal decking.



ALLENSTOWN ELEMENTARY SCHOOL – FACILITY ANALYSIS – (UPDATED TO INCLUDE CURRENT CODE REFERENCES)



Acoustical ceiling tiles



Plaster ceiling



Exposed structure and deck

Recommendations

- Replace acoustical ceiling tiles.
- Add sound absorbing ceiling system at Multipurpose.

Exterior Windows

Observations

Exterior windows are generally aluminum sliding thermal pane that were replaced in two major window replacement projects. One series were a sliding window with one thermal pane glazing, which are in fair condition. The other series were light weight thermal pane glazing and a second single pane glazing similar to a storm window. They are very difficult to operate and in poor condition. Many of the thermal glazing have lost their seal, evidenced by condensation between the panes of glass. The SPED addition has residential windows.



ALLENSTOWN ELEMENTARY SCHOOL – FACILITY ANALYSIS – (UPDATED TO INCLUDE CURRENT CODE REFERENCES)



Thermal pane glazing that lost seal



Typical sliding window



Worn out track



SPED addition - residential windows

Recommendations

- Remove and replace all windows with commercial grade, thermally broken frames, exterior window system.
- System could be a combination of double hung windows or sliding style and fixed windows.
- Windows to be insulated glazing, low-E and argon filled for best performance.

Roofs

Per the school district, the flat roofs were re-roofed approximately 4 to 5 years ago. The thickness of the insulation is unknown. Per the building codes at the time, it would have required an R-20 minimum. Common insulation at the time was polyisocyanurate, approximately 2- ½ inches in thickness.



ALLENSTOWN ELEMENTARY SCHOOL – FACILITY ANALYSIS – (UPDATED TO INCLUDE CURRENT CODE REFERENCES)



Recommendations

- No action at this time.

Kitchen Equipment

Observations

The Kitchen is part of the original 1962 building. During the 1972 addition the kitchen serving line flipped to the new Gymnasium, now known as the Multipurpose room. The kitchen space was designed for half of the student population. It is a very cramped space with minimal aisle width. Some kitchen equipment is very old and not functioning or being used. The Kitchen does not have direct access from exterior. Deliveries occur through Multipurpose or main entrance.



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Recommendations

- Expand the kitchen area to support new equipment and serving line.
- Provide office to secure cash and files.
- Provide ADA accessible staff toilet.
- Repurpose the Kitchen to another use.



ALLENSTOWN ELEMENTARY SCHOOL – FACILITY ANALYSIS – (UPDATED TO INCLUDE CURRENT CODE REFERENCES)

Casework

Observations

All built-in casework (cabinetry, cubbies, shelving, etc.) appears to be original to the respective portions of the building. Some of the casework has been modified or added too. Casework in the classrooms and Nurse are is residential grade. Much of the casework is missing parts. Many parts are outdated and no longer available including sinks, faucets and bubblers. Refer to plumbing section. The plastic laminate countertops show signs of significant delamination and have been reported to be repaired several times. A majority do not meet ADA standards.



Plastic laminate delamination



Residential grade



ALLENSTOWN ELEMENTARY SCHOOL – FACILITY ANALYSIS – (UPDATED TO INCLUDE CURRENT CODE REFERENCES)



Bubbler not functioning



Door replaced with plywood



Most classroom sinks have bubbler and per code they must have a separate sink to meet hygiene standards



Recommendations

- All casework to be removed.

Doors and Hardware

Observations

Most classroom doors have half glass, upper viewing glass panel. Per Homeland Security's Physical Security Enhancement Master Plan, doors are to have less glass so as to deter perpetrators from easily viewing into classrooms and breaking glass to unlocking the door. Hardware locksets are to be classroom security functions, allowing teachers to lock the door without entering the corridors.

Exterior doors have a variety of maintenance repairs and finishes. Many doors are aluminum that have failed at the hinges. Typical modifications are to install hinges to the surface of frame or door, then install metal plate to reinforce hardware mounting, etc.

Interior doors vary and include wood doors in wood frames, wood doors in hollow metal frames, and metal doors in hollow metal frames. Hardware varies in age and quality. Some meet ADA accessibility with lever handles while others have knob sets that do not meet code.



ALLENSTOWN ELEMENTARY SCHOOL – FACILITY ANALYSIS – (UPDATED TO INCLUDE CURRENT CODE REFERENCES)



Door handle with knob



Doors vary from stained wood to painted hollow metal



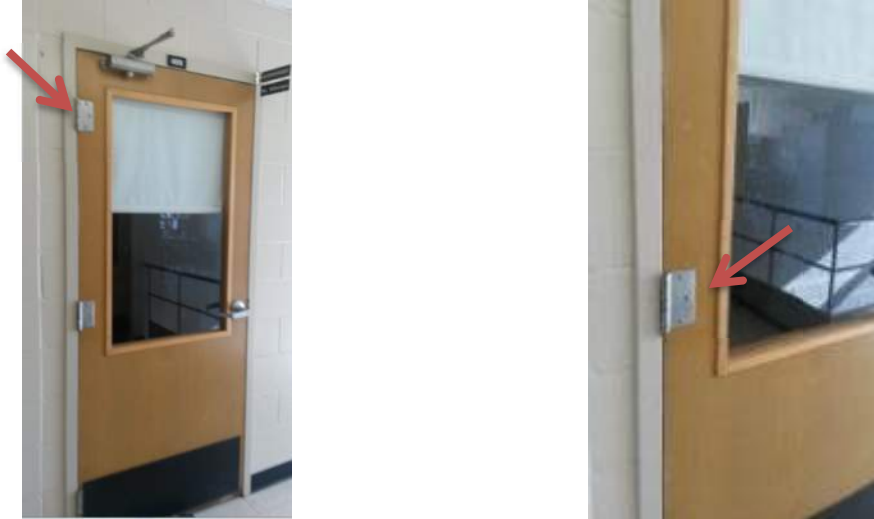
Typical wood door with half glass with knob



Typical hollow metal door with full glass



ALLENSTOWN ELEMENTARY SCHOOL – FACILITY ANALYSIS – (UPDATED TO INCLUDE CURRENT CODE REFERENCES)



Door hinges modified with face mounted hinges



Recommended classroom door

Recommendations

- All exterior and interior doors to be replaced with new doors, frames, sidelights, transom, and hardware.
- Provide fire rating assemblies as required.
- Hollow metal frames in good condition can remain.

Building Codes - General

The New Hampshire State Building Code Review Board has made revisions effective July 1, 2022. Below are the code sections that are most relevant to this analysis:

New Hampshire “fire code” or “state fire code” means the adoption by reference of the:

- Life Safety Code NFPA 101, 2009 edition
- Uniform Fire Code NFPA 1, 2009 edition



ALLENSTOWN ELEMENTARY SCHOOL – FACILITY ANALYSIS – (UPDATED TO INCLUDE CURRENT CODE REFERENCES)

New Hampshire “building code” or “state building code” means the adoption by reference of the:

- International Building Code 2018 (IBC)
- International Existing Building Code 2018 (IEBC)
- International Plumbing Code 2018 (IPC)
- International Mechanical Code 2018 (IMC)
- International Energy Conservation Code 2018 (IECC)
- National Electric Code (NEC)

As amended by the state building code review board and ratified by the legislature in accordance with RSA 155-A: 10.

Per 155-A: 2 State Building Code.

- I. All buildings, building components, and structures constructed in New Hampshire shall comply with the state building code and state fire code. The construction, design, structure, maintenance, and use of all buildings or structures to be erected and the alteration, renovation, rehabilitation, repair, removal, or demolition of all buildings and structures previously erected shall be governed by the provisions of the state building code.
- II. To the extent that there is any conflict between the state building code and the state fire code, the code creating the greater degree of life safety shall take precedence.

Construction Type and Occupancy

NFPA 101 classifies the occupancy of this facility as mixed use of both:

- Existing educational: classrooms, kitchen, and offices/support spaces
- Existing assembly: multipurpose, Library and offices/support spaces. Per NFPA under Existing Educational; these spaces can be classified as Accessory Assembly, Offices and Storage.

Because the building is not fully sprinklered, the corridors that are typically part of the means of egress need to be fire rated unless adjoining a more restrictive area by code. Typical adjoining spaces are required to have fire rated separation and with a future renovation, fire rated separations will depend on the final reconfiguration of the spaces.

Fire Protection System

There is no actual automatic sprinkler system. Some areas have sprinkler heads fed off the domestic water system.

International Building Code 2018 (IBC)

Allowable Height and Building Area



ALLENSTOWN ELEMENTARY SCHOOL – FACILITY ANALYSIS – (UPDATED TO INCLUDE CURRENT CODE REFERENCES)

The following reflects Chapter 5 of IBC 2018, Table 503: Building without automatic sprinkler system.

Group E – Education mixed use, Construction Type III-B. Excludes wood frame additions.

- Allowable height 2 story - MET

Group E – Education mixed use first floor footprint = 19,700 sq. ft. Construction Type III-B.

- Allowable square footage 14,500 sq. ft.

Note - We are allowed to increase building area due to street frontage by 1.75%.

- Allowable square footage 14,500 sq. ft. x 1.5 = 25,375 sq. ft. (existing first floor 21,550 sq. ft.) - MET

Recommendations

- With any future addition we would recommend consulting the Authorities Having Jurisdiction to review design options.
- Future additions will most likely require an automatic sprinkler system.

Life Safety Code NFPA 101

Estimated Occupant Load based on Table 7.1.1.2

Multipurpose – Assembly Use (existing 3,700 sq. ft.)

Assembly concentrated use without fixed seating $3,700 \text{ ft}^2 / 7 = 528$ occupants.

Number of Exits

Per Section 13.2.4.2 Number of Exits – Assembly - Assembly occupancies with occupant loads of 600 or fewer shall have two separate means of egress.

Presently two separate means of egress exist. There is a set of double doors leading to the exterior at Stair E and a set of double doors leading to Stair A1, leading to the exterior through Vest 100 double doors.

Assembly concentrated use requires two separate means of egress. - MET

Recommendations

- Post Maximum Occupancy load, review with local AHJ.
- Refer to 405 Ramp (egress from Multipurpose room) at the end of this report.

Arrangement of Means of Egress



ALLENSTOWN ELEMENTARY SCHOOL – FACILITY ANALYSIS – (UPDATED TO INCLUDE CURRENT CODE REFERENCES)

Common path of travel - 15.2.5.3.2

Common path of travel shall not exceed 75 feet in a building not protected throughout by an approved, supervised automatic sprinkler system. The facility is in compliance.

Recommendations

No action is recommended.

Dead-Ends – 15.2.5.2

No dead-end corridor shall exceed 20 feet, other than in buildings protected throughout by an approved, supervised automatic sprinkler system, in which case dead-end corridors shall not exceed 50 feet. The facility is in compliance.

Recommendations

No action is recommended.

Travel Distance – 15.2.6

15.2.6.2 Travel distance to an exit shall not exceed 150 feet from any point in a building, unless otherwise permitted by 15.2.6.3 or 15.2.6.4.

15.2.6.4 Approved existing travel distances shall be permitted to continue in use.
The facility is in compliance.

Recommendations

No action is recommended.

Chapter 7 – Means of Egress, Stairs- NFPA Life Safety Code Handbook 2009

Dimensional Criteria - 7.2.2.2

7.2.2.2.1.1 Stairs shall meet the following criteria (included interior and exterior to a building):
(2) Existing stairs shall be permitted to remain in use, provided that they meet the requirements for existing stairs shown in Table 7.2.2.2.1.1 (b).

Table 7.2.2.2.1.1 (b) Existing Stairs

Minimum width clear	36 inches
Maximum height of risers	8 inches
Minimum tread depth	9 inches
Minimum head room	6 feet 8 inches
Maximum height between landings	12 feet
Landing	See 7.2.1.3 & 7.2.1.4.3.1

7.2.2.3.2 Landings.



ALLENSTOWN ELEMENTARY SCHOOL – FACILITY ANALYSIS – (UPDATED TO INCLUDE CURRENT CODE REFERENCES)

7.2.2.3.2.2 Stairs and intermediate landings shall continue with no decrease in width along the direction of egress travel.

NOTE (b) - Other stair requirements are dimensions of guardrails, handrails, balusters handrail extensions, etc.

Accessibility Rules and Standards - ADA

General

Please refer to Accessibility Rules and Standards – ADA towards the end of this section. Below are requirements which are similar to NFPA.

505.2 Where Required. Handrails shall be provided on both sides of stairs and ramps.

505.4 Height. Top of gripping surfaces of handrails shall be 34 inches (865 mm) minimum and 38 inches (965 mm) maximum vertically above walking surfaces, stair nosing's, and ramp surfaces. Handrails shall be at a consistent height above walking surfaces, stair nosing's, and ramp surfaces.

Advisory 505.4 Heights. The requirements for stair and ramp handrails in this document are for adults. When children are the principal users in a building or facility (e.g., elementary schools), a second set of handrails at an appropriate height can assist them and aid in preventing accidents. A maximum height of 28 inches (710 mm) measured to the top of the gripping surface from the ramp surface or stair nosing is recommended for handrails designed for children. Sufficient vertical clearance between upper and lower handrails, 9 inches (230 mm) minimum, should be provided to help prevent entrapment.

505.10.2 Top Extension at Stairs. At the top of a stair flight, handrails shall extend horizontally above the landing for 12 inches (305 mm) minimum beginning directly above the first riser nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.

505.10.3 Bottom Extension at Stairs. At the bottom of a stair flight, handrails shall extend at the slope of the stair flight for a horizontal distance at least equal to one tread depth beyond the last riser nosing. Extension shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.



ALLENSTOWN ELEMENTARY SCHOOL – FACILITY ANALYSIS – (UPDATED TO INCLUDE CURRENT CODE REFERENCES)

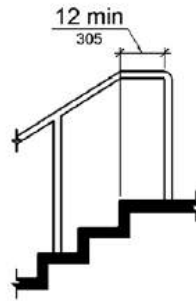


Figure 505.10.2 Top Handrail Extension at Stairs

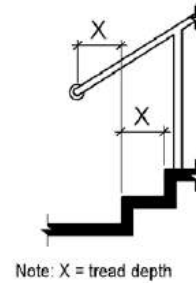
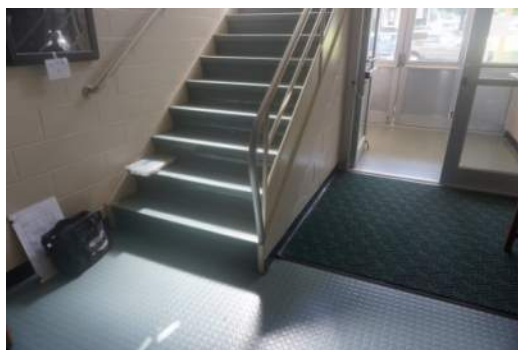


Figure 505.10.3 Bottom Handrail Extension at Stairs

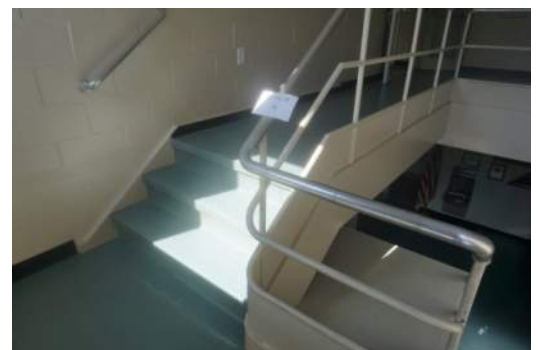
Observations

Stairs conformance to the code:

- Stair A; handrail along open stair and at landings serves as the guardrail/handrail which does not conform to code. No extension of wall handrails at bottom or top of stair runs and landings and does not conform to code. Guardrail at exterior windows does not meet height requirements or baluster spacing.
- Stair B; no handrail extensions at top and bottom run of stairs does not conform to code.
- Stair C; handrail along open stair and at landings serves as the guardrail/handrail which does not conform to code. No extension of wall handrails at bottom or top of stair runs and landings and does not conform to code. Guardrail at exterior windows does not meet height requirements or baluster spacing.
- Stair D, E, F & G; have a variety of non-code compliant issues; handrail along open stair and at landings serves as the handrail and guardrail/handrail, balusters, stair width and landing at door not meeting dimensional requirements, missing handrail, bottom riser height less than other risers, latch side of door clearance require to be 18 inches, which does not conform to code. Stairs D, E & F are precast residential style stairs not set on a concrete foundation and susceptible to frost heaving.



Stair A – handrail termination and guardrail/handrail along open stair does not meet code.



Stair A – handrail termination & guardrail/handrail at landing does not meet code.



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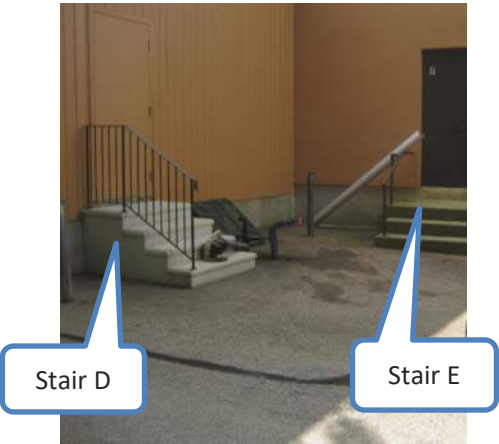
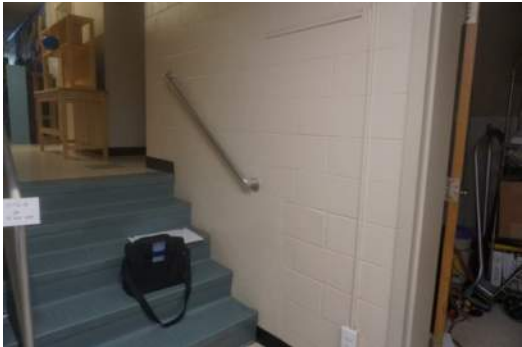
Stair A –guardrail with balusters at landing along open stair does not meet code.



Stair A – handrail termination and guardrail/handrail with balusters along open stair does not meet code.



Stair B – handrail termination above and below stairs does not meet code.



Stair D & E



Stair E



ALLENSTOWN ELEMENTARY SCHOOL – FACILITY ANALYSIS – (UPDATED TO INCLUDE CURRENT CODE REFERENCES)



Stair F



Stair G

Stairs D, E, F & G have a variety of non-code compliant issues.

Recommendations

- Stairs A & C: along open stair and at landings to have separate handrail guardrail with balusters. Provide new wall handrails with handrail extensions. Provide guardrail with balusters to section along exterior windows.
- Stair B: provide new wall handrails with handrail extensions.
- Stairs E, F & G: provide new cast in place stairs with proper width concrete foundation below frost line.
- Stairs D, E, F & G: provide new handrail guardrail with balusters.

Egress Stairs

Egress stairs require having fire rated enclosures and lead to a public way in an enclosure of same fire rating as the stair enclosure. Stair enclosures cannot have rooms within the enclosure and cannot have storage access from the stair enclosure. A corridor is an egress access element and is allowed to access into a fire rated stair leading to a public way.

Observations

Stair A: on the first floor, Storage 133 Toilet 131 and Admin Reception 101 are within the enclosure. On the second floor Room 219 is within the enclosure.

Stair C: on the first floor, Classrooms 111 and 112 are within the enclosure. On the second floor, Classrooms 208 and 210 are within the enclosure.

Recommendations

- Stair A and C to be reviewed with local AHJ for options.
- With any future renovations and/or addition we would recommend providing an automatic sprinkler system that reduces fire ratings of stairs and building new stairs that project



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outward to eliminate rooms within the enclosure. Storage door to be relocate access from the multipurpose room.

Corridor Fire Separation

Corridors shall be separated from other parts of the story by walls having a minimum of 1/2-hour fire resistance rating in accordance with Section 8.3, unless otherwise permitted by the following:

(2) The following shall apply to buildings protected throughout by an approved automatic sprinkler system with valve supervision in accordance with Section 9.7.

(a) Corridor walls shall not be required to be rated, provided that such walls form smoke partitions in accordance with Section 8.4.

Note: door openings shall meet other requirement such as door closures, smoke gaskets, etc.

Observations

Presently all corridor walls are 8 inches CMU masonry concrete block which typically meets code. The original 1962, 1972 and 1998 classroom doors do not meet code. The 1999 additions do meet code.

Recommendations

- If no change in use and 1/2-hour rating can be verified, then the corridors do meet code and it appears that the facility is in compliance. No action is recommended.
- If a major renovation were undertaken, Harriman recommends providing an automatic sprinkler system. This would take advantage of reducing the 1-hour fire resistance rating to walls forming a smoke partition and rated openings.
- In either scenario listed above, Harriman recommends consulting with AHJ.
- Replace all non-conforming doors, frames and hardware or consider an automatic sprinkler system.

Corridors 15.3.6:

In existing educational occupancies the corridors shall be separated by walls having a minimum of 1/2-hour fire resistance rating. Note: if new educational occupancies occur, (if a major renovation took place would trigger this section) the corridors shall be separated by walls having a minimum of 1-hour fire resistance rating. However, if the facility were to have an automatic sprinkler system the walls shall not be required to be rated, provided that walls form a smoke partition and rated openings meet other requirements.

Recommendations

- If no change in use and 1/2-hour rating can be verified, then the corridors do meet code and it appears that the facility is in compliance. No action is recommended.



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- If a major renovation were undertaken, Harriman recommends providing an automatic sprinkler system. This would take advantage of reducing the 1-hour fire resistance rating to walls forming a smoke partition and rated openings.
- In either scenario listed above, Harriman recommends consulting with AHJ.

OTHER COMMENTS

Extinguishment Requirements – Assembly (Multipurpose)

Per 13.3.5.2 any assembly occupancy used or capable of being used for exhibits or display purposes shall be protected throughout by an approved automatic sprinkler system in accordance with Section 9.7 where the exhibition or display area exceeds 15,000 sq. ft.

The present Multipurpose space is 3,700 sq. ft. which is less than 15,000 sq. ft.

MET: No automatic sprinkler system required at this time.

Windows for Rescue

Per 15.2.11.1 every room or space greater than 250 sq. ft. and used for classroom or other educational purposes shall have not less than one outside window for emergency rescue that complies with the following:

- (1) Such windows shall be operational from the inside without the use of a tool with a clear opening of not less than 20 in. in width, 24 in. in height, and 5.7 sq. ft. in area.
- (2) The bottom of the opening shall not be more than 44 in. above the floor, and any latching device shall be capable of being operated from not more than 54 in. above the finish floor.

Unless otherwise permitted by 15.2.11.1.2:

- (1) Building protected by approved automatic sprinkler system.
- (2) Where the room or space has a door leading directly to the outside of the building.

Observations

- The original 1962 and 1972 additions windows do meet code.
- The SPED 145 is 660 sq. ft. with windows that do not meet code.

International Energy Conservation Code 2018 – IECC

Section 101 Scope and General Requirements

101.4 Applicability.

101.4.1 Existing buildings: Except as specified in this chapter, this code shall not be used to require the removal, alteration or abandonment of, nor prevent the continued use and maintenance of, an existing building or building system lawfully in existence at the time of adoption of this code.



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This code was adopted by New Hampshire State Building Code Review Board and revised effective April 1, 2010. The code is designed to regulate new construction and new work, and is not intended to be applied retroactively to existing buildings except where existing envelope, lighting, mechanical, or service water heating systems are specifically affected by Section 101.4.3.

This section addresses that the code does not affect existing buildings.

101.4.3 Additions, alterations, renovations or repairs.

This section simply states that new work must comply with the current requirements for new work. Any alteration or addition to an existing system involving new work is subject to the requirements of the code.

Accessibility Rules and Standards - ADA

General

Note: AB (Architectural Barrier-Free) Committee has amended the rules as they have expired. AB has adopted the 2010 ADA Standards as the AB Code. This coincides with the Department of Justice stating that as of March 15, 2012 the 2010 ADA Standards for Accessibility be used.

Below are the rules and standards that are applicable:

- 2010 ADA Standards
- 2018 International Building Code (IBC). (Accessibility scoping provisions which describe “what, where and how many”. Chapter 11 “control the design and construction of facilities for accessibility to physically disabled persons”.)
- 2003 ICC/ANSI A117.1-03 standards: Accessible and Usable Buildings and Facilities. (Technical requirements which describe “how”.)

Please note: Due to the construction between 1962 through 1972, most portions of the building do not comply with current requirements for new construction. In many cases alterations to the portions of the building did comply at the time of the alteration. With future addition/renovations it is required to upgrade the facility depending on the extent of the proposed addition/alterations to the facility. Refer to Percent of Alterations and Cost at the end of this section.

Title II - § 35.150 Existing Facilities

http://www.ada.gov/regs2010/titleII_2010/titleII_2010_regulations.htm#a35150

The requirements of Title II of the ADA allow the public entity to provide “program access” when alterations of the facility would result in an undue burden for the public entity. This means that all services provided on the second floor of the original 1890 building must be provided on the first floor until an accessible route to the second floor is provided. There is no accessible route to the two-story section with the space that contains educational programs, offices, student services, etc. These areas contain “Primary functions”.

New Construction and Alterations



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35.151 New construction and alterations

(b) Alterations, (4) Path of Travel, (i) Primary functions. A “Primary functions” is a major activity for which the facility is intended. Areas that contain a primary function include, but not limited to, the dining area of a cafeteria, the meeting rooms in a conference center, as well as offices and other work areas in which the activities of the public entity using the facility are carried out.

Recommendations

To be in compliance with applicable requirements, in our judgment, is technically infeasible due to the taking of two classroom spaces out of the five existing classrooms. No action is recommended unless altered or renovated.

ICC/ANSI A117.1

Chapter 6 – Plumbing Elements and Facilities

General

The intent of ADA is to make sure that building and sites and spaces within buildings are accessible to any person with a disability. Alterations are required to make facilities compliant and accessible. However, if compliance is technically infeasible then any alterations shall comply with the maximum extent feasible. Providing equivalent accommodation when alterations are not feasible is an acceptable alternative.

Observations

The majority of the toilet rooms in the 1998 addition, Individual toilet rooms in the Kindergarten classrooms meet ADA requirements. Toilet 129A non-compliant.

Toilet rooms throughout the 1962 original building and 1972 addition are non-compliant to meet ADA requirements for size, clearances, and heights and grab bars in ADA toilet stalls.

Recommendations

- An effort for all non-compliant toilet rooms should be renovated to meet ADA requirements.
- If substantial renovation and/or additions were to proceed, then all toilet rooms that are new or modified in any way would be required to meet current codes.



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Examples of ADA toilet compartments that have no rear or vertical grab bars



Girls 205 – width from toilet stalls to lavatory wall non-compliant. Similar condition in Girls 108 and Boys 115 and 213.



Typical Boys urinals – no ADA code compliant urinals. Require 1 ADA compliant per toilet room in Boys 115 & 213.



Typical Boys and Girls lavatories – no ADA code compliant lavatory. Require 1 ADA compliant per toilet room in Boys 115 & 213 and Girls



405 Ramp (egress from Multipurpose room)

Ramp slope not steeper than 1 in 12, rise shall be 30 inches maximum, with dimensional criteria for landings, ramp run, handrails, etc.

Observations

The exterior ramp from the Vestibule 139 appears to have been originally designed as an egress from the Multipurpose room to a public way. Note the trash receptors in vestibule interior view E



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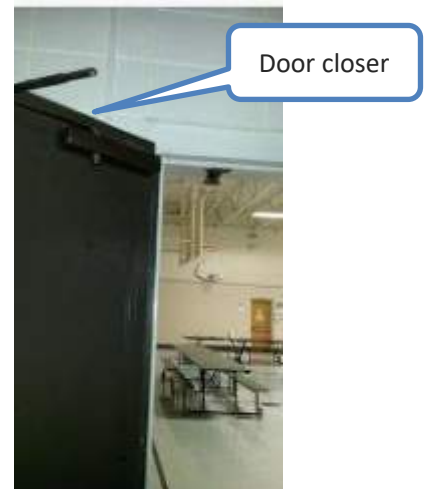
and exterior ramp view F. It is uncertain why double doors were removed; however this creates a rated and secured egress path from Multipurpose room to a public way. In its present condition this cannot be used as a means of egress. It appears this is the route to remove trash receptacles.

Recommendations

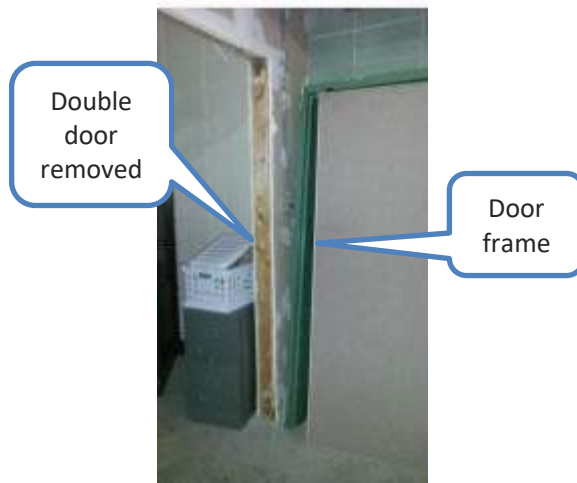
- Re-establish Vestibule as a rated egress path with door, frame and hardware. Verify fire rating of walls. No trash receptacles should be in the path of egress.
- Limits multipurpose room with 2 egresses. Review with local AHJ and post Maximum Occupancy allowed and remove EXIT sign.
- In both cases re-build ramp with code compliant landing and handrails both sides.



A - Double door viewed from Multipurpose room
Note EXIT sign above doors.



B - Double door viewed from Vestibule 148
Note door closer disconnected.



C - Double door opening viewed from Storage 140 into Vestibule 139



D - View from Storage 140 towards door to Stair D
Note wood frame construction.



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Note door and frame removed and placed to the side.



E - Double doors to exterior
Note EXIT sign above door.



F - Double doors exterior view to Vestibule 139
No landing in front of doors or handrails both sides.
If ramp were to be extended to meet code,
requirement for landing would interfere with double
doors from Storage 138.

Plumbing Elements and Facilities

Plumbing fixtures appear to be original to the date of construction. Refer to Mechanical/Plumbing section of this report.

Alterations

Should alterations to the facility be planned, at least 20% of the alteration budget must be applied to providing an accessible path of travel to the area(s) of primary function, unless the only alterations planned are to provide accessibility, in which case, the entire budget is dedicated to improving accessibility of the facility.

In overall alterations, where the cost to provide accessible facilities exceeds 20% of the alteration budget, Title II, Section 35.151(b)(4)(iv) provides priorities for barrier removal:

- (A) When the cost of alterations necessary to make the path of travel to the altered area fully accessible is disproportionate to the cost of the overall alteration, the path of travel shall be made accessible to the extent that it can be made accessible without incurring disproportionate costs.



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- (B) In choosing which accessible elements to provide, priority should be given to those elements that will provide the greatest access, in the following order:
- (1) An accessible entrance;
 - (2) An accessible route to the altered area;
 - (3) At least one accessible restroom for each sex or a single unisex restroom;
 - (4) Accessible telephones;
 - (5) Accessible drinking fountains; and
 - (6) When possible, additional accessible elements such as parking, storage and alarms.

Alterations must be completed in compliance with the ADA Standards for Accessible Design (ADA Std.) per ADA Title II, § 35.151 New construction and alterations
http://www.ada.gov/regs2010/titleII_2010/titleII_2010_regulations.htm#a35151.

ADA Standards for Existing Buildings and Facilities
<http://www.ada.gov/regs2010/2010ADASTandards/2010ADASTandards.htm#pgfld-1010052>