



Weston Board of Education Special Meeting (SLAM)
Wednesday, June 18, 2025
6:00 PM
Zoom Webinar

- I. CALL TO ORDER, VERIFICATION OF QUORUM
- II. PLEDGE OF ALLEGIANCE
 - A. I pledge allegiance to the flag of the United States of America, and to the republic for which it stands, one nation, under God, indivisible with liberty and justice for all.
- III. WESTON MIDDLE SCHOOL RENOVATION STATUS EVALUATION
(PHASE 1: 02/06/2025) BY SLAM & COLLIERS: Presentation and discussion
- IV. DISCUSSION AND POSSIBLE DETERMINATION OF NEXT STEPS
- V. ADJOURNMENT



Weston

PUBLIC SCHOOLS

MIDDLE SCHOOL STUDY UPDATE

Looking to the future

June 18, 2025



Project
Leaders

A Division of Colliers Engineering & Design

PHASE 1 - PRELIMINARY ASSESSMENT:

- Design Team visited site on 4/3/25
 - Building layout (SLAM)
 - Structural components (SLAM Structure)
 - HVAC and Plumbing components (Bemis)
 - Electrical components (Bemis)
 - Fire Suppression (Bemis)
- Reviewed and scanned existing drawings
- Analysis of DAS-3052 form
- Issued Final recommendation memo 4/16/25
- Issued Executive Summary memo 4/23/25

COMPLETED

PHASE 2 - COMPREHENSIVE RENO ASSESSMENT:

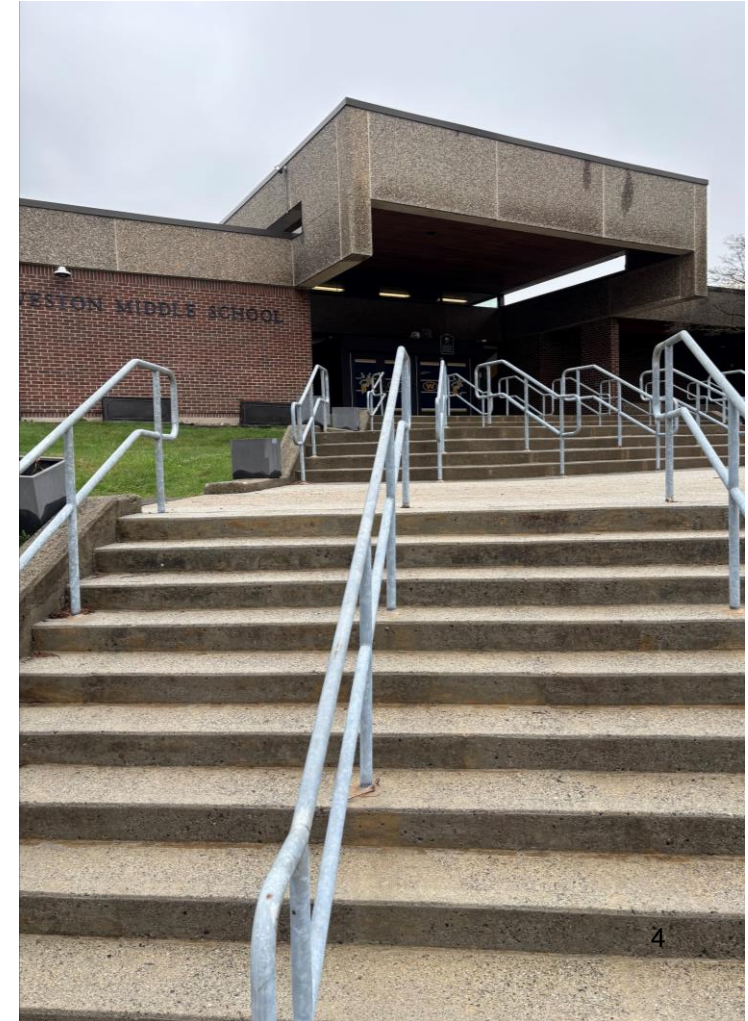
(* Only upon Notice to Proceed by Weston Public Schools)

- Will include the following:
 - Narratives for:
 - Architectural
 - Building Envelope
 - Interior Architecture
 - Structural
 - HVAC
 - Electrical
 - Plumbing
 - Fire protection
 - Opinion of probable costs
 - Conceptual Site Plan
 - Evaluate the Ed Spec to the Existing Building
 - Conceptual Floor Plan
 - Final Report
 - Required items on SCG-3052

PENDING AUTHORIZATION

LOCATION

135 School Road,
Weston, CT 06883









PHASE 1 - PRELIMINARY ASSESSMENT:

April 16, 2025

Phillip Cross
 Director of Finance and Operations
 Weston Public Schools
 24 School Road
 Weston, CT 06883

RE:

Dear Mr. Cross,

Our Project Team visited the Weston Middle School on Thursday April 3, 2025 to do our Preliminary Assessment of the building. We were asked to review the likelihood of the existing building being able to meet the requirements for renovation status. Using the State of Connecticut Department of Administrative Services (DAS)'s Form SCG-3520 "Renovation (RNV) Designation Checklist" as the framework for our study, we believe that the existing building could, with some of the qualifications listed below, be eligible for renovation status. At this time, we cannot advise you on the potential cost of achieving the "Renovate-to-New" status but are suggest at the Preliminary Assessment phase, that a renovation satisfying the criteria under Connecticut General Statutes (CGS) 10-282(18) could be achieved. That definition reads as follows: *"Renovation" means a school building project to refurbish an existing building that was not renovated in accordance with this subdivision during the twenty-year period ending on the date of application, and of which not less than seventy-five per cent of the facility to be renovated is at least twenty years old, and that results in at least fifty-five per cent of the square footage of the completed building project being so renovated and the entire completed project having a useful life comparable to that of a new construction, and for which the total project costs of the renovation are less than the total project costs of a new construction"*

It is unknown at this time if the cost of that renovation would exceed the threshold cost required on Form SCG-3501 of a new facility – that would need to be evaluated in the Comprehensive Renovation Assessment.

To achieve "Renovate as New" status for Weston Middle School in Weston, Connecticut, and comply with the Department of Administrative Services (DAS) requirements outlined in Forms SCG-3501 and SCG-3520, the following steps will need to be undertaken in the Comprehensive Renovation Assessment phase of this effort:

1. **"Renovation" designation request:**
 - o **Superintendent:** will need to fully understand the requirements. Some of the items to be considered are:
 1. **Building Age:** Ensure that at least 75% of the school building is a minimum of 30 years old. Given that Weston Middle School was originally constructed in 1960, with additions in 1970 and 1996, it is likely that this criterion is met.
 2. **Prior Renovations:** Confirm that the school has not undergone state-funded renovations within the past 20 years.
 1. The roof was replaced in 2009 and would likely not meet the 20-year threshold if a renovation was to occur prior to 2029 – some pro-ration of reimbursement may occur.

The S/L/A/M Collaborative, Inc.
 Somerset Square, 80 Glastonbury Blvd, Glastonbury, CT 06033
 ● 860 657 8077 ● slamcoll.com

1 of 4

(* full version is included in your meeting packet)

PHASE 1 – EXECUTIVE SUMMARY:

April 23, 2025

Phillip Cross
 Director of Finance and Operations
 Weston Public Schools
 24 School Road
 Weston, CT 06883

RE: Weston Middle School – Preliminary Assessment Executive Summary

Dear Mr. Cross,

Following up on your request for an Executive Summary relative to our team's Preliminary Assessment of Weston Middle School's renovation eligibility, we offer the following:

- It is the Project Team's professional opinion that a renovation satisfying the criteria under Connecticut General Statutes (CGS) 10-282(18) could be achieved, but that renovation would need to include a full replacement of nearly all of the systems currently in the building due to the requirement to certify that the systems will have an effective life of at least 20 years.
- The team also observes that the structural integrity of the original building has not been compromised, and that upon completion, the renovated facility could have a useful life for continued occupancy comparable to that of a new facility (greater than 50 years). The cost and logistics of upgrading the structural system has not been analyzed at this time.
- It is unknown at this time if the cost of that renovation would exceed the threshold cost required on Form SCG-3501 of a new facility – that is planned to be evaluated in the Comprehensive Renovation Assessment.
- For this first phase, the "Preliminary Assessment" excludes any HazMat considerations, any Site Environmental considerations and there has been no assessment of project cost relative to construction phasing, project complexity or construction logistics.

We suggest that proceeding with the Comprehensive Renovation Assessment would provide all of the additional detailed information needed to make your final decision on the direction of the project.

Best regards,

James W. Hoagland, AIA
 Senior Associate

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1 of 1

(* full version is included in your meeting packet)

What is Renovation status?

*Section 10-282 (18) of the C.G.S. defines “Renovation” as “a school building project to totally refurbish an existing building (A) which results in the renovated facility taking on a useful life comparable to that of a new facility and which **will cost less than building a new facility** as determined by the department... (B) which was not renovated in accordance with this subdivision during the 20 year period ending on the date of application, and (C) of which not less than 75% of the facility to be renovated is at least 30 years old”*

Local Education Agency	State Project No.	Phase
School	Architect	Date

Department of Administrative Services – Plan Review

RENOVATION (RNV) DESIGNATION CHECKLIST

FORM SCG-3520

- Section 10-282(18) of the Connecticut General Statutes (C.G.S.) defines "Renovation" as "a school building project to refurbish an existing building that was not renovated in accordance with this subdivision during the twenty-year period ending on the date of application, and of which not less than seventy-five per cent of the facility to be renovated is at least twenty years old, and that results in at least fifty-five per cent of the square footage of the completed building project being so renovated and the entire completed project having a useful life comparable to that of a new construction, and for which the total project costs of the renovation are less than the total project costs of a new construction."
- Submit all backup along with this form. Place an X in the District/Design Professional Submission Column when completed.
- Status column (by DAS staff): Accepted Open Item

		District/Design Professional Submission Column		Status
Submission Requirements		DAS Comments		
01.	Provide a written letter, signed by the Superintendent of Schools, requesting "Renovation" designation as defined under C.G.S. §10-282(18).			
02.	Provide a completed FORM SCG-3501 "Cost Analysis for Proposed Renovation Projects" signed by both the Design Professional and the Superintendent of Schools. The cost and square footage values on FORM SCG-3501 must reflect the most current project data, including any recent updates.			
03.	Provide a professional feasibility study comparing the proposed renovation project to constructing a new facility on the same site and at alternative locations, including an opinion of cost for each option.			
04.	Provide a professional cost estimate from an independent, licensed architect, demonstrating that the cost of renovating the existing facility is less than constructing a new one. The cost estimate must include soft costs, remediation, swing space and temporary provisions, phasing costs, escalation, and any other relevant expenses. (C.G.S. §10-286(a)(8))			
05.	Provide a signed and sealed statement confirming that the entire facility will be brought into full compliance with all applicable codes, including accessibility requirements, upon completion.			
07.	Provide a written statement, signed and sealed by a Connecticut-licensed structural engineer, confirming that the structural integrity of the original building has not been compromised. Additionally, the statement should affirm that, upon completion, the renovated facility will have a useful life for continued occupancy comparable to that of a new facility (i.e., greater than 50 years).			
08.	Provide a detailed report on all existing building systems including finishes, roofing, plumbing, water supply, fire protection, heating, ventilating and air conditioning (HVAC), electrical systems, energy monitoring, communications and security systems. The report should document the condition of these systems and justify the specific renovation needs, including any necessary repairs or replacements. (C.G.S. §10-286(a)(8))			
09.	Provide signed and sealed professional opinions confirming that all proposed systems will have a useful life of 20 years, or a comparable lifespan to a new system if the expected lifespan is shorter, upon project completion.			
NOTE: The DAS may request additional analysis or documentation, if needed, to properly evaluate this request for Renovation designation after submission.				

For DAS Use only:

Date received: Date revised: Committee recommendation: Approval recommended: Reviewer:

PHASE 2 - COMPREHENSIVE RENO ASSESSMENT:

(* Only upon Notice to Proceed by Weston Public Schools)

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PENDING AUTHORIZATION

Considerations - Renovate or Build New?

NEW CONSTRUCTION:

- New building easily supports 21st century learning layout
- Reduces construction impacts to students and staff since building elsewhere on the existing site
- New construction will be faster than phased renovation
- Can design building envelope to meet current energy codes
- A new building will likely be more compact in footprint, multi-level options can be considered
- New building can be designed to accommodate any mechanical system
- Site logistics are less complicated compared with renovation

RENOVATION:

- Adapting an existing building may result in layout compromises
- Greater construction impacts to students and staff in a building under construction
- Phased construction takes longer
- Challenging to modify the building envelope to meet current energy codes
- Final costs must be less than new construction
- Existing conditions may not support certain new mechanical systems
- More unforeseen conditions during construction
- Site logistics are more complicated compared with new construction

Schedule Considerations:

- **Grant Application Deadline:** June 30th of application year
- **Design & Regulatory Approvals:** 14 – 16 months
- **Bidding & Award:** 3 – 4 months
- **Construction (New):** 20 – 24 months
- **Construction (Renovation):** 36 – 40 months

RENOVATION VS. NEW CONSTRUCTION - ORDER OF MAGNITUDE

	Low Total Project Budget	High Total Project Budget	Low District Share	High District Share
New Construction				
New Construction (including pool)	\$112.9M	\$138.2M	\$102.7M	\$125.7M
New Construction (not including pool)	\$106.6M	\$130.3M	\$96.9M	\$118.4M
Renovated Existing MS				
Renovation (including pool)	\$113.1M	\$134.2M	\$99.9M	\$118.6M
Renovation (not including pool)	\$106.5M	\$126.0M	\$93.2M	\$110.2M

DISCUSSION / QUESTIONS

WESTON MIDDLE SCHOOL



Project
Leaders

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April 23, 2025

Phillip Cross
Director of Finance and Operations
Weston Public Schools
24 School Road
Weston, CT 06883

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- It is unknown at this time if the cost of that renovation would exceed the threshold cost required on Form SCG-3501 of a new facility – that is planned to be evaluated in the Comprehensive Renovation Assessment.
- For this first phase, the "Preliminary Assessment" excludes any HazMat considerations, any Site Environmental considerations and there has been no assessment of project cost relative to construction phasing, project complexity or construction logistics.

We suggest that proceeding with the Comprehensive Renovation Assessment would provide all of the additional detailed information needed to make your final decision on the direction of the project.

Best regards,

James W. Hoagland, AIA
Senior Associate



April 16, 2025

Phillip Cross
Director of Finance and Operations
Weston Public Schools
24 School Road
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It is unknown at this time if the cost of that renovation would exceed the threshold cost required on Form SCG-3501 of a new facility – that would need to be evaluated in the Comprehensive Renovation Assessment.

To achieve "Renovate as New" status for Weston Middle School in Weston, Connecticut, and comply with the Department of Administrative Services (DAS) requirements outlined in Forms SCG-3501 and SCG-3520, the following steps will need to be undertaken in the Comprehensive Renovation Assessment phase of this effort:

1. **"Renovation" designation request:**

- **Superintendent:** will need to fully understand the requirements. Some of the items to be considered are:
 1. **Building Age:** Ensure that at least 75% of the school building is a minimum of 30 years old. Given that Weston Middle School was originally constructed in 1960, with additions in 1970 and 1996, it is likely that this criterion is met.
 2. **Prior Renovations:** Confirm that the school has not undergone state-funded renovations within the past 20 years.
 1. The roof was replaced in 2009 and would likely not meet the 20-year threshold if a renovation was to occur prior to 2029 – some pro-ration of reimbursement may occur.

2. Complete Form SCG-3501 (Cost Analysis for Proposed Renovation Projects):

- Provide comprehensive documentation demonstrating adherence to the eligibility criteria, including details on the building's age and history of renovations.
- Perform a thorough cost analysis comparing the expenses of renovating the existing structure versus constructing a new facility. This analysis will need to substantiate that renovation is more cost-effective than new construction as defined in (CGS) 10-282(18).

3. Submit a Feasibility Study:

- This consultant team believes that the Feasibility Studies that have been previously completed, in conjunction with this team's observations, can be partially utilized for this portion of the submission. In the subsequent Comprehensive Renovation Assessment, DAS Form 3520 will be utilized and an updated opinion of cost would need to be developed.

4. Complete a Professional Cost Estimate:

- Detail the scope of the renovation project, ensuring that the proposed work will extend the building's useful life to be equivalent to that of a new facility.
- Include plans for addressing current deficiencies, such as exterior and interior decay, outdated fire alarm systems, lack of fire protection, plumbing issues, inadequate humidity controls, and non-compliance with ADA and building codes.

5. Provide a signed and sealed statement confirming compliance with all applicable Codes:

- The project team believes that this is achievable.
- As of April 2025, the Connecticut Department of Administrative Services (DAS) recognizes the following building codes:

2022 Connecticut State Building Code (CSBC)

1. Effective for permit applications filed on or after October 1, 2022.
2. Based on the 2021 International Codes from the International Code Council (ICC), including:
 - International Building Code (IBC)
 - International Residential Code (IRC)
 - International Existing Building Code (IEBC)
 - International Plumbing Code (IPC)
 - International Mechanical Code (IMC)
 - International Energy Conservation Code (IECC)
 - International Swimming Pool and Spa Code (ISPSC)
 - Incorporates the ICC A117.1-2017 standard for accessibility.
 - References the 2020 National Electrical Code (NFPA 70)

2022 Connecticut State Fire Safety Code

- Effective from October 1, 2022.
- Administered by the State Fire Marshal in conjunction with the Codes and Standards Committee.

2022 Connecticut State Fire Prevention Code

- Effective from October 1, 2022.
- Based on the 2015 edition of NFPA 1 - Fire Code.
- Administered by the State Fire Marshal with technical review by the Fire Prevention Code Advisory

*A new Code adoption is anticipated for March 2026 and may be enforceable at the time of a future project.

6. **Not used:** The current SCG-3520 Form (revised 11/01/2024) no longer requires an “item 6” Submission Requirement.

7. **Structural integrity of the existing building:**

- There is minimal existing documentation of the structural components of the existing building. Only one drawing could be found of a small renovation of the 1970 addition. From the team’s site visit, the structure appeared to be typical school construction for 1960-1970 era. It is generally single-story construction with some double-height spaces.
- Some of the items that will need to be investigated in more detail are: the roof structure and Tectum decking, wood structure in the Gym, veneer failures on the exterior masonry, snow load design criteria and the capacity of the lateral bracing system.
- From what the team knows and understands from the information that we have, the structural integrity of the original building has not been compromised, and that upon completion, the renovated facility will have a useful life for continued occupancy comparable to that of a new facility (greater than 50 years).
- Please note that SLAM’s Structural report is attached to this letter as an Appendix.

8. **Provide a detailed report on all existing building systems:**

- Including architectural systems, exterior envelope, interior partitions, finishes, roofing, plumbing, water supply, fire protection, heating, ventilating and air conditioning (HVAC), electrical systems, energy monitoring, communications and security systems.
- The building mechanical systems mostly date back to the 1960’s and 1970’s and are at the end of their useful lifetime. It is our professional opinion that these systems cannot be renovated to meet a twenty (20) year useful lifetime. New systems, however, can be certified to meet a twenty (20) year lifespan.
- Please note that Bemis Associates’ report is attached to this letter as an Appendix.

9. **Professional Opinion that the new systems would achieve a useful life:**

- There is minimal existing documentation of the existing MEP components of the current building but the team is confident that with a full systems replacement, the new MEP systems would have a useful life comparable to that of a new facility (i.e., 20 years).

10. **Submit Documentation to DAS:**


- If approved by the Town to proceed, the professional team will commence phase 2, the “Comprehensive Renovation Assessment” and compile and submit all required forms and supporting documents to the DAS Office of School Construction Grants & Review for evaluation and approval.

For this first phase, the “Preliminary Assessment” excludes any HazMat considerations, any Site Environmental considerations and there has been no assessment of project cost relative to construction phasing, project complexity or construction logistics.

By meticulously following these steps and providing detailed information in the Comprehensive Renovation Assessment, Weston Middle School may position itself to meet the DAS requirements for Renovation status, potentially qualifying for State reimbursement on eligible renovation costs. The potential costs for renovation are close to what would be required for a new facility; therefore the only significant savings might be on the preservation of the superstructure only if roof decks, lateral bracing systems and exterior wall assemblies can be retained.

We suggest that proceeding with the Comprehensive Renovation Assessment would provide all of the additional detailed information needed to make your final decision on the direction of the project.

Best regards,



James W. Hoagland, AIA

Senior Associate

Links: [FORM SCG-3500 Cost Analysis for Proposed Renovation Project](#)
[FORM SCG-3501 Guidelines for RNV Status Eligibility](#)
[FORM SCG-3520 RNV Checklist](#)

Attachments: Structural Preliminary Assessment Letter
 MEP Preliminary Assessment Letter

cc: SLAM Main File – 25047.00/30
 Kemp Morhardt, AIA



Memorandum

To: Phillip Cross
Director of Finance and Operations
Weston Public Schools

From: Steve Murray, PE

Date: 4/15/2025

Subject: Preliminary Structural Assessment

There were limited structural drawings. Only one drawing could be found of a small renovation of the 1970 addition. From my site visit the structure appeared to be typical school construction for 1960-1970 era. It is generally single-story construction with some double-height spaces.

The roof structure at the classrooms consisted of Tectum type roof deck supported by steel bulb-tee sub-purlins spaced around 32" on center. These are supported by steel joists spaced approximately 4'-0" on center bearing on steel girders framed to steel tube columns.

The existing Gym roof is wood decking supported by barrel vaulted wood purlins carried by deep wood beams spanning to steel wide flange columns.

The new Gym is similar to the classroom construction of Tectum decking, bulb tee sub purlins and steel joists. These are supported by steel wide flange girders and steel wide flange columns.

There was evidence of veneer failure on the exterior of the building. The Gymnasium masonry walls appeared to have significant cracks from differential movement. These areas would need to be investigated further and proper remediation implemented during a renovation.

Snow loads and drifting will be considered in a renovated building. Buildings built in the 1960's and 70's in this part of the country were not designed for seismic forces which is part of the current code. A lateral system was not evident during the site visit. The school can be braced and reinforced for these additional loads as part of a renovation.

From what I know and understand from the information that I have, the structural integrity of the original building has not been compromised, and that upon completion, a renovated facility could have a useful life for continued occupancy comparable to that of a new facility (greater than 50 years).



EXISTING MECHANICAL SYSTEMS NARRATIVE

General

The building mechanical systems mostly date back to the 1960's and 1970's and are at the end of their useful lifetime. It is our professional opinion that these systems cannot be renovated to meet a twenty (20) year useful lifetime. New systems, however, may be certified to meet a twenty (20) year lifespan.

Heating / Ventilation

Heating, Ventilation and Air Conditioning for the facility is provided by a combination of Air Handling Units, Packaged Rooftop Air Conditioning Units, Fan Coil Units, Unit Ventilators and perimeter fin-tube radiation.

Most of the HVAC systems are original, however, some systems have been replaced, and Air Conditioning has been added to various spaces during capital improvement projects from 2000 to 2004. The existing HVAC equipment is past its useful life, and will have to be replaced.

Heat for the facility is provided by two separate Hot Water Boiler Plants.

The 1970 addition is served by the two original HB Smith 450 Mills Boilers which have been retrofit with Power-Flame dual fuel burners. The Boilers are over 50 years old and are inefficient by current standards. The 1960 Boiler Plant was renovated around 2010 at which time two Smith Model 28-HE-18 Dual Fuel Boilers were installed along with new Hot Water Pumps, Boiler Room Piping, Hydronic Accessories, and Fuel Oil Transfer Pump Set and piping. The Boilers and equipment appear to be in good working condition. While the boilers are in good operating condition, they do not meet current energy efficiency standards.

The 1970 portions of the school including Classrooms, Library, and Administrative Offices are served by original Air Handling Units located in a mechanical penthouse. Perimeter Classrooms are served by Unit Ventilators and Fan Coil Units. The Unit Ventilators are original. The Fan Coil Units are supplied with Chilled Water and provide Air Conditioning to spaces served by Unit Ventilators.

The Air Handling Units serving the two Gymnasiums were installed at the time of construction (1960 and 1970). Unit Ventilators and Fan Coil Units do not meet current standards for classroom acoustics and should be replaced.

Air Conditioning

Packaged Rooftop mounted Air Conditioning Units provide air conditioning to parts of the building.

A 120 Ton Trane Chiller is located in the 1970 Boiler room with roof mounted Remote Condensing Unit. The Chiller supplies chilled Water to various Air Handling Units and Fan Coil Units serving the 1970 portion of the facility. The chiller is past its useful life and shall be replaced.

Several areas are provided with Air Conditioning via Ductless Split Systems including the Technology areas of the "F" Wing, the Choral Room (G Wing) and the Ensemble Room (F Wing).

Temperature Controls

The temperature controls are a combination of pneumatic controls and Direct Digital Controls (DDC) There is a legacy Building Management System (BMS) that will require the global controller and software upgrades to make it compatible with current standards.

EXISTING PLUMBING SYSTEMS NARRATIVE

General

The building plumbing systems mostly date back to the 1960's and 1970's and are at the end of their useful lifetime. It is our professional opinion that these systems cannot be renovated to meet a twenty (20) year useful lifetime. The construction of new systems, however, could be certified to meet a twenty (20) year lifespan.

Hot and Cold Water Systems

The domestic cold-water service is provided by Town wells that also supply other buildings on the property including the High School building. At the time of our visit, we were not able to determine the system capacity.

It appears to us, based on our field observations, that the domestic water service lacks proper cross contamination protection.

The majority of the domestic water pipes are copper and are original installation. Considering the age of the system, it is quite possible that lead solder was used for sweating the pipes together during installation, therefore all the domestic water pipes will be replaced.

Domestic hot water is produced at 3 different locations. An indirect hot water storage tank is located in the main Boiler Room and produces hot water by internal heat exchanger that is fed from the heating boilers. This unit was abandoned. There are also two (2) gas fired water heaters; one 75 gallon capacity water heater is located in the secondary Boiler Room, and one 50 gallon capacity water heater is located in the Kitchen. The indirect water storage tank is 1970's vintage and is in need of replacement. The two (2) gas fired water heaters appear to be in good condition.

Plumbing Fixtures

The existing plumbing fixtures are original to the building, are not handicap accessible and are not of the water saving type.

Water closets and urinals are not up to current day standards and have manual flush valves. Older style floor mount urinals were also observed during the site walk through. These fixtures do not comply with present Codes.

Kitchen

The Kitchen has an in-floor grease interceptor that is connected to the Kitchen pot sink only. The size of the grease interceptor could not be determined during the walk through. As located, the interceptor is hard to service and maintain.

Sanitary / Waste Drainage

The building sanitary / waste drainage is with internal cast-iron drain pipe. It appears that the sanitary / waste system connects to a septic system located on the north side of the building. We have no information on the septic system condition. The system is original to the building.

Storm Drainage

The building storm drainage is by roof drains with internal cast-iron drain pipe drops that are connected to the external storm drainage system. The roof drains appear to be in good condition and are free of clogs. There are no emergency roof drains with the existing system.

Gas Service

There is natural gas service to the building. The gas service is located on the outside wall of the Cafeteria Platform/stage. The gas piping is run on the roof with penetrations to the respective loads. Natural gas is used by the heating boilers, water heaters. Two, above ground propane storage tanks supply gas to the cooking appliances.

EXISTING FIRE PROTECTION SYSTEMS NARRATIVE

The building does not have a fire protection system.

EXISTING ELECTRICAL SYSTEMS NARRATIVE

General

The building electrical systems are mostly 1970's technology and are at the end of their useful lifetime. It is our professional opinion that these systems cannot be renovated to meet a twenty (20) year useful lifetime. The construction of new systems, however, could be certified to meet a twenty (20) year lifespan.

Electrical Service and Distribution

The building primary service originates from overhead utilities along the rear access drive at the east side of the building. The primary service runs underground from utility pole #23376 to a utility company pad mount transformer located just north of the Cafeteria. The pad mount transformer appears to be in poor condition. The building secondary service characteristics are 480Y/277 volts, 3 phase, 4 wire, 2500 amp capacity. The secondary service runs underground from the transformer to the building main switchboard located in the Boiler Room adjacent to the Cafeteria. The switchboard is a General Electric AV-Line switchboard with fused switch feeder distribution sections. The switchboard is believed to have been installed circa 1970 and is in poor condition. Power is distributed from the switchboard at 480 volts with radial feeders serving 480Y/277V branch circuit panelboards located throughout the building. The majority of these feeders are run buried underneath the floor slab. The utilization voltage is then stepped down locally to 208Y/120 volts with step down transformers feeding 208Y/120 volt branch circuit panelboards. In general, large electrical loads are fed at 480 volts, lighting is fed at 277 volts, medium electrical loads are fed at 208 volts, and small electrical loads and convenience outlets are fed at 120 volts. Many of the branch circuits are also run buried underneath the floor slab. The majority of the branch circuit panelboards and transformers are of General Electric manufacture and are believed to have been installed circa 1970.

Standby Power

The building has a 275 KW diesel fueled generator set for backup power. The generator set has an above ground sub-base fuel tank and is pad mounted outdoors just north of the Cafeteria. Power from the generator is run under the floor slab to an automatic transfer switch located in an electrical room adjacent to the Boiler Room and Cafeteria. The transfer switch in turn feeds a 480Y/277 volt panelboard, step down transformer, and 208Y/120 volt panelboard. The backup power system feeds various interior lighting circuits, exterior lighting, heating plant, kitchen refrigeration, fire alarm, security, intercom, and miscellaneous other loads.

The generator set and transfer switch are in operable condition but are of an older generation and are in need of replacement.

Wiring Methods

The majority of the wiring in the building is conductors in conduit. Limited quantities of flexible type BX cable was used above ceilings during the original installation and flexible type MC cable was used for newer wiring installed above ceilings. The conductor and insulation types were not determined during the site walk-through. The use of aluminum conductors was common at the time this building was constructed so it would be prudent to assume that the feeder conductors may well be aluminum. Additionally, it was common practice at the time of construction to utilize multi-wire branch circuits with a “common” or “shared” neutral conductor. This wiring scheme uses two (2) or three (3) phase conductors and only one neutral conductor as the return path. While this is still allowed by code it is no longer considered good practice and the NEC now requires these circuits to be protected by multipole circuit breakers with a common trip.

Many of the feeders and branch circuits were run under the floor slab during the original construction. The feeder and branch wiring conduits under the slab are prone to deterioration over time thus reducing continuity between sections of conduit.

The feeder and branch wiring in the building is at the end of its useful life and should be replaced.

Grounding System

We were unable to verify the grounding methods during the site walk-through. The main grounding electrode conductor at the service entrance gear is not exposed to view and no grounding connections were noted to building steel or at the building domestic water service entrance piping.

At the time this building was constructed it was common practice to utilize the panelboard feeder and branch circuit conduits as the system return ground path instead of running separate ground conductors. This is allowable by code but is not considered good practice by today’s standards. Over time the ground path can become tenuous due to oxidation and corrosion of the conduit connections. Also, with this installation methodology the underground conduits are steel and are prone to corrosion over time. Corroded conduits at slab penetrations were noted in at least one location during the site walk-through.

Lighting

The lighting in the building is mostly fluorescent technology utilizing T8 lamps and electronic ballasts. The light fixture types range from recessed fixtures with prismatic lens or parabolic louvers, surface wrap around style fixtures with prismatic lens, surface 1 X 4 vapor tight fixtures, pendant mounted 1 X 4 fixtures, and some recessed downlights. New budget grade linear LED fixtures were noted in the Media Center and Robotic Classroom.

Exit sign light fixtures in the building are by thermoplastic housing LED exit signs with on-board battery packs.

Exterior building lighting is by recessed downlights at entry canopies and wall pack fixtures at selected locations around the perimeter of the building.

Parking lot and access drive lighting is by full cutoff LED shoe-box style fixtures.

The existing building lighting does not conform to current day Energy Code requirements, is near the end of its useful life, and should be replaced.

Emergency Lighting

The emergency lighting system in the building is by self-contained battery pack 2-head emergency fixtures.

The emergency lighting system was not tested during the site walk-through but the amount of coverage appears to be inadequate.

Lighting Controls

The lighting controls in the building are mostly by manual toggle type wall switches. Automated occupancy sensor controls have been added during past upgrades but no automated lighting control system is in place.

The existing lighting controls in the building do not conform to current day Energy Code requirements.

Wiring Devices

Many of the receptacles and toggle switches in the building are original equipment and are at the end of their useful life. Requirements for ground fault circuit interrupter (GFCI) protection of receptacles was not introduced in the NEC until 1971 and GFCI protection in the building is therefore limited.

Automatically controlled receptacles are now required by the Energy Code for 50% of all receptacles in private offices, conference rooms, printing/copying rooms, breakrooms, classrooms, and individual workstations. The existing installation does not conform to this requirement.

Fire Alarm System

The building has an analog-addressable fire alarm system with voice evacuation. The system is an Edwards EST3 system. The main control panel and voice evacuation microphone are located in the Main Office and a remote Annunciator panel is located in the main entry Vestibule. The system was installed in 2002.

System initiation is both manual and automatic with pull stations located at exit doors and 100% smoke detection throughout the building. Duct smoke detectors were noted on some of the HVAC systems but this was not verified for all of the building HVAC systems.

Occupant notification is by combination speaker/strobes. The density of the speaker/strobe coverage did not appear adequate for today's standards.

Intercom/Telephone/Clock/Bell System

The building has a hodgepodge of systems interconnected to provide school communications. There is a Telecor II intercom system that handles paging announcements and class change bells; a NEC NEAX 2000 PBX telephone system with Avaya handsets providing internal and external private telephone communications, and internal communications via interconnection with the Telecor system; and a Simplex program/timer system providing manual bell activation and driving Visiplex analog clocks located throughout the building. Communications with classrooms is accomplished via classroom speakers for announcements and classroom telephone for private conversations. Each of these systems are outdated technology and are in need of replacement.

Data/Technology

The main distribution point for data technology in the building is an open data closet located adjacent to the Media Center/Library. CAT 5 data wiring is run from this location out to workstation outlets and wireless access points throughout the building. The density of data technology coverage in the building appears to be on the light side of the scale in comparison similar buildings of the same occupancy.



DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS) – PLAN REVIEW

RENOVATION PROJECT COST ANALYSIS

FORM SCG-3501

State Project No.: _____

School Name: _____

Local Education Agency: _____

Renovation Designation Criteria

A school construction project can attain renovation designation if it meets the following criteria:

- The project satisfies the definition of a “Renovation” under Connecticut General Statute (CGS) §10-282(18).
- The project adheres to the Guidelines for Eligibility of Renovation Designation.
- The project meets the cost savings criteria under CGS §10-286(a)(8).

Determining Project Cost Savings

Project cost savings can be determined when, prior to plan approval, the applicant provides:

- A professional feasibility study comparing the proposed renovation project to constructing a new facility on the same site and at alternative locations, including an opinion of cost for each option.
- A professional cost estimate from an independent, licensed architect, demonstrating that the cost of renovating the existing facility is less than constructing a new one.

Loss of Renovation Designation

A project may lose renovation designation if:

- The project costs for the renovation increase and exceed the cost of new construction, in accordance with CGS §10-286(a)(8).

Determining Construction Costs: Renovation vs. New Construction

When comparing renovation costs to new construction costs, the following factors must be considered:

- Site acquisition costs
- Demolition and remediation costs
- Swing space and temporary provision costs
- Phasing and other soft costs
- Costs associated with constructing a new facility
- Cost escalation



CONNECTICUT Administrative Services

FORM SCG-3501

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New vs. Renovation Cost Analysis

Project Type	Total Project Cost	Lesser of: Actual Building Area vs. Maximum Allowable Square Footage	Cost Per Square Foot
1. New Construction	\$		\$/SF:
2. Renovation	\$		\$/SF:

Note: The square footage used in the calculation above must be the lesser of the actual building area for the proposed project and the maximum allowable square footage based on the State Standard Space Specifications (Regulation §10-287c-15(a)).

Design Professional
Providing Data:

Firm name

Signature

Date

Printed Name

Superintendent of Schools:

Signature

Date

Printed Name

Local Education Agency	State Project No.	Phase
School	Architect	Date

Department of Administrative Services – Plan Review

RENOVATION (RNV) DESIGNATION CHECKLIST

FORM SCG-3520

- Section 10-282 (18) of the Connecticut General Statutes (C.G.S.) defines “Renovation” as “a school building project to refurbish an existing building that was not renovated in accordance with this subdivision during the twenty-year period ending on the date of application, and of which not less than seventy-five per cent of the facility to be renovated is at least twenty years old, and that results in at least fifty-five per cent of the square footage of the completed building project being so renovated and the entire completed project having a useful life comparable to that of a new construction, and for which the total project costs of the renovation are less than the total project costs of a new construction;.”
- Submit all backup along with this form. Place an **X** in the District/Design Professional Submission Column when completed.
- Status column (by DAS staff): ✓ Accepted ○ Open Item

		District/Design Professional Submission Column		Status
Submission Requirements			DAS Comments	
01.	Provide a written letter, signed by the Superintendent of Schools, requesting “Renovation” designation as defined under C.G.S. §10-282(18).			
02.	Provide a completed FORM SCG-3501 “Cost Analysis for Proposed Renovation Projects” signed by both the Design Professional and the Superintendent of Schools. The cost and square footage values on FORM SCG-3501 must reflect the most current project data, including any recent updates.			
03.	Provide a professional feasibility study comparing the proposed renovation project to constructing a new facility on the same site and at alternative locations, including an opinion of cost for each option.			
04.	Provide a professional cost estimate from an independent, licensed architect, demonstrating that the cost of renovating the existing facility is less than constructing a new one. The cost estimate must include soft costs, remediation, swing space and temporary provisions, phasing costs, escalation, and any other relevant expenses. (C.G.S. §10-286(a)(8))			
05.	Provide a signed and sealed statement confirming that the entire facility will be brought into full compliance with all applicable codes, including accessibility requirements, upon completion.			
07.	Provide a written statement, signed and sealed by a Connecticut-licensed structural engineer, confirming that the structural integrity of the original building has not been compromised. Additionally, the statement should affirm that, upon completion, the renovated facility will have a useful life for continued occupancy comparable to that of a new facility (i.e., greater than 50 years).			
08.	Provide a detailed report on all existing building systems including finishes, roofing, plumbing, water supply, fire protection, heating, ventilating and air conditioning (HVAC), electrical systems, energy monitoring, communications and security systems. The report should document the condition of these systems and justify the specific renovation needs, including any necessary repairs or replacements. (C.G.S. §10-286(a)(8))			
09.	Provide signed and sealed professional opinions confirming that all proposed systems will have a useful life of 20 years, or a comparable lifespan to a new system if the expected lifespan is shorter, upon project completion.			
	NOTE: The DAS may request additional analysis or documentation, if needed, to properly evaluate this request for Renovation designation after submission.			

For DAS Use only:

Date received: _____ Date revised: _____ Committee recommendation: _____ Approval recommended: _____ Reviewer: _____