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August 1, 2025

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Town Manager
Town of Tyngsborough
25 Bryant Lane
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Re: Evaluation Letter
Winslow School Exterior Assessment
Town of Tyngsborough
Tyngsborough, MA
Gale JN 844980

In accordance with our agreement, Gale Associates Inc. (Gale) performed an exterior visual evaluation of the in-place facade and roof components at the Winslow School. On July 14, 2025, representatives from Gale visited the site to conduct the façade and roof evaluation.



Image 1: Front view of the Winslow School.

The purpose of this evaluation is to provide the Town of Tyngsborough with a better understanding of the existing facade and roof conditions, and opinions on the prioritization and planning of future repair and revitalization efforts.

BACKGROUND INFORMATION

The Winslow School is a one and one-half-story tall former school building, reportedly constructed circa 1892. Two (2) one-story additions were constructed in 1915 and 1948, at the west and south sides of the building, respectively. The school was closed in 2002 and has remained vacant since. In 2017, the Winslow School appears to have been listed on the National Register of Historic Places as a building of local level of significance. The building is wood framed with a granite foundation. As part of a hazardous materials abatement project that was reported by Tyngsborough to have been performed in 2024, the exterior wood clapboard siding and windows were removed at a majority of the building. Weather resistive membrane was temporarily installed over the walls. The existing roof systems consist of a hip-style, steep slope architectural asphalt shingle roof system on the original building, and low-slope EPDM roofs on the additions.

EXTERIOR OBSERVATIONS

Below is a summary of Gale’s exterior observations. Refer to the attached roof plan that illustrates the general defect quantities and locations.

Facade Observations

1. Due to the aforementioned abatement project, the majority of the clapboard siding had been removed. The clapboard siding that remained in place and the back-up walls, which are comprised of tongue and groove wood planks, were not fully visible due to the installation of building wrap material. Wood planks also provide back-up substrates on the cornice around the roof perimeter and the chimney enclosure.
2. Where visible and remaining, the clapboard siding exhibits peeling paint and deterioration in the form of splitting and dry rot.



Image 2: View of the front elevation of the original building that is covered with building wrap.



Image 3: Peeled paint and split clapboard siding components were observed.



Image 4: View of peeling paint and split wood on the clapboard siding.



Image 5: Close-up end view of clapboard siding that is split and curled. View of split and rotted tongue and groove wood back-up walls.

- 3. Wood planks generally exhibit water staining and splitting at several locations.
- 4. Wood planks on the cornice are detached at the corners. Wide gaps were observed between the cornice planks. Wood framing beneath the roof is exposed to the elements, also leaving the blown foam insulation exposed to moisture.
- 5. Wood planks on the west (back) side of the building are deteriorated, with several sections of missing material that appear to be due to several years of exposure to the elements combined with insect infestation. This condition is predominantly located on the back side of the building.
- 6. Nails that remain on the back-up walls are typically rusted.
- 7. The wood sill plate on the west side of the building is severely deteriorated. The beam also appears to be affected by insect infestation, as numerous ants were observed on the wall at this location.
- 8. As viewed from the interior, daylight is visible through missing substrate sections, as well as gaps, splits, and holes in the wall substrate.



Image 6: View of detached wood substrates and gaps in the cornice substrate.



Image 7: View of deteriorated wood plank substrate above the cornice.



Image 8: View of exposed roof rafters and insulation that is exposed to the elements.



Image 9: Views of water stained and split tongue and groove wood-plank back-up walls.



Image 10: View of deteriorated tongue and groove wood plank back-up walls that encompass the chimney.



Image 11: Deteriorated wood sill plate components were observed on the back of the building.



Image 12: View of a severely deteriorated wood beam on top of the granite foundation on the back of the building.



Image 13: Views show the deteriorated and missing sections of wood plank back-up walls on the back of the building.



Image 14: Daylight was visible from the interior via gaps, cracks, and holes in the wall substrate.

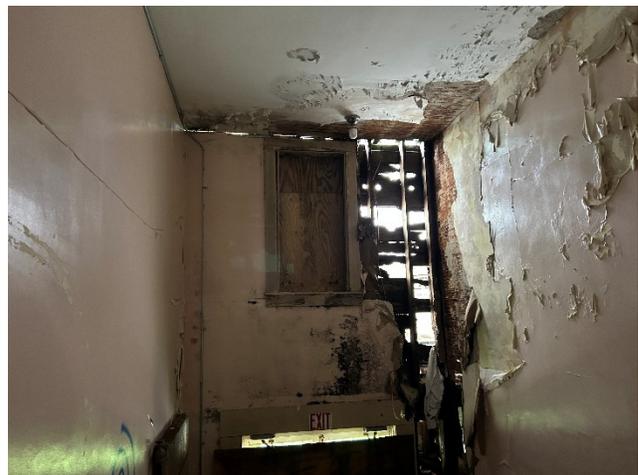


Image 15: Daylight was visible from the interior via missing and deteriorated wall substrate.



Image 16: Side and front views of the collapsed front entrance portico.



Image 17: Side view of deteriorated wood trim and column enclosure components.



Image 18: This view shows the collapsed deck.



Image 19: Closer view of the collapsed framing below the deck.

9. The front entry portico is severely damaged. Wood supports have collapsed, resulting in the collapse of the structure. The deck has also collapsed with the framing. The wood trim is deteriorated. The decorative columns are deteriorated as well, with section of material loss at the bases.
10. Aluminum framed entrances appear to be in good condition. However, door hinges are typically rusted.
11. The building foundation consists of granite and generally appears to be in fair condition. The stone units generally appear intact, with the exception of isolated cracked and delaminated stone units. Loose, displaced smaller stone units at the base of the foundation were observed. The foundation appears to be settling at outside corners.
12. Mortar joints are deteriorated at several locations. Mortar joints appear to have been repaired at some locations. However, the repairs appear to consist of butter joints, which is typically a skim coat application of mortar over the existing mortar. Wet, deteriorated joints were observed on the north side of the south entrance of the building.
13. The foundation exhibits step cracking at isolated locations.
14. Granite windowsill components appear to have settled at some locations, as they are misaligned with the foundation.



Image 20: Views of an aluminum framed entrance with rusted steel door hinges.



Image 21: Typical view of the granite foundation and plywood covered window openings.



Image 22: View of deteriorated mortar joints in the granite foundation.



Image 23: View of previous mortar repair that appears to consist of a mortar skim coat or butter joint.



Image 24: View of step crack in the foundation that could be associated with settling of the foundation.



Image 25: The foundation appears to have settled as the granite and windowsill do not align.



Image 26: View shows loose, displaced smaller stones at the base of the foundation, causing the corner of the foundation to settle.



Image 27: The granite windowsill has settled and is out of alignment with the foundation.



Image 28: View of delaminated granite.



Image 29: Deteriorated and wet mortar joints were observed on the back of the building, adjacent to the entrance.



Image 30: Plywood window covers were partially open and loose. Deteriorated wood frames were observed at the window rough openings in the foundation wall.



Image 31: View of a typical rusted steel lintel.

- 15. Wood enclosures around the basement windows are loose and partially open, exposing the existing wood framing at the rough openings. The wood framing is typically deteriorated.
- 16. Steel lintels at the window headers typically exhibit surface rusting.

Roof Observations

- 1. The asphalt shingle roof system at the original building section appears to be in relatively good condition. Deteriorated or broken shingles were observed at a few isolated locations. There are several locations where it appears that test cuts through the roof system were previously performed and patched with an unknown black material. The patching material is typically deteriorated and is open at an isolated location.
- 2. At the north side of the asphalt shingle roof, there appears to be moss and lichen growing under the shingles. Black staining was also observed at portions of the north side roof.



Image 32: Overall view of the asphalt shingle roof.



Image 33: View of typical asphalt shingles.



Image 34: View of previous test cut locations with deteriorated patching material.



Image 35: Close-up view of an open previous test cut.



Image 36: View of north side of the asphalt shingle roof. Note black staining at portions of the roof.



Image 37: View of moss growth under shingles and a previous test cut location.



Image 38: View of the dormer on the north side roof.



Image 39: View of peeling paint and deteriorated wood siding at the dormer on the south side roof.

3. Both the north and south elevations have one (1) louvered dormer at the center of the roof. The asphalt shingle roofs above the dormers appear to be in good condition, similar to the main roof areas. However, the painted wood siding and fascia appear to typically be deteriorated.
4. At the ridge, there is a brick masonry chimney with wood siding installed around the lower portions of the chimney. The masonry appears to be in poor condition, as the majority of the mortar joints appear to be open. The brick units themselves are typically stained and weathered. Additionally, the wood siding appears to be deteriorated, with gaps or missing pieces throughout.
5. There is copper flashing at the base of the chimney, where it transitions to the asphalt shingles, and at the top of the siding. The flashing at both locations appears to be typically deformed and completely missing at isolated sections. At a section of missing flashing at the base of the chimney, a gap was observed between the siding and the asphalt shingles, exposing the interior attic space.
6. The low-slope EPDM roof systems appear to be in poor condition. Tears/openings and other membrane defects were observed throughout the roof. As seen at the asphalt shingle roof, there are several previous test cuts with failed patching material. At the roof edge, stripping/flashing membranes at the base of the parapet and over the roof edge metal are typically cracking or splitting. At some isolated locations, the cracking is severe, and sections of the membrane are missing.



Image 40: View of open mortar joints.



Image 41: View of deteriorated wood siding at the chimney.



Image 42: View of deteriorated copper flashing and a gap at the base of the chimney.



Image 43: Close-up view of the gap at the base of the chimney.

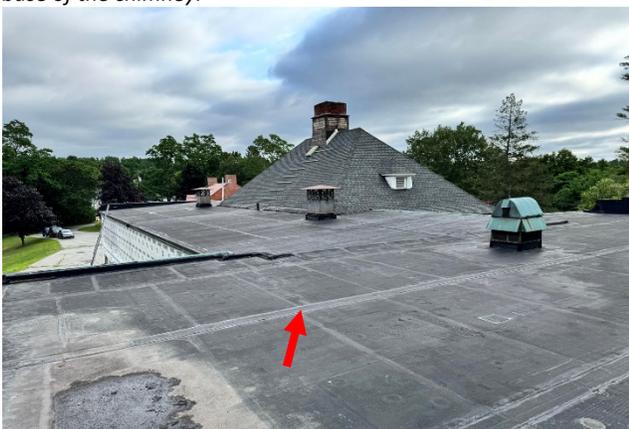


Image 44: Overall view of the EPDM roof system.



Image 45: View of an open, previous test cut location.



Image 46: View of cracking stripping membranes.



Image 47: View of severely cracking stripping membrane.



Image 48: View of severely cracking flashing membrane.



Image 49: View of open roof membrane.



Image 50: View of cracking stripping membranes.



Image 51: View of unadhered stripping membrane.

7. A majority of the membrane seams appear to be partially unadhered along their whole length and could be “peeled back” approximately 1 to 2 inches. Isolated stripping membranes are completely unadhered.
8. There is a copper roof edge fascia around the perimeter of the EPDM roofs, which appears to be in poor condition. Sections of the fascia are deformed, and isolated lap joint covers are partially detached. At an isolated parapet location, the membrane is terminated with copper flashing; the copper at this location is additionally deteriorated. Drainage on the roof is provided by three (3) copper downspouts that appear to be in fair condition relative to the other copper components.



Image 52: View of deformed copper fascia.



Image 53: View of a detached fascia lap joint cover.



Image 54: View of deteriorated copper fascia.



Image 55: View of deteriorated copper termination flashing.



Image 56: View of deteriorated, exposed wood at the parapet and cornice.



Image 57: View of deteriorated, exposed wood at the roof edge.

9. At the parapet and cornice around the EPDM roof areas, there are exposed wood components. The parapet and cornice appear to have previously been clad with copper flashing, which has since been removed, leaving the wood exposed to the elements. As such, the wood components typically appear to be severely deteriorated.
10. Sealants at vent pipes and other isolated penetrations are typically failed.



Image 58: View of failed sealant at a vent pipe.



Image 59: View of failed seal around a conduit penetration into a vent.

DISCUSSION AND OPINIONS

FACADE

With the exception of the granite foundation elements, which appear to be in fair condition, the building facade components on the Winslow Elementary School are in poor condition with the primary issues being related to general deterioration, condition of the temporary weather protection, age of the building, and several years of exposure during abandonment.

Back-up substrates on the main walls and above the cornice exhibit water staining, as well as deterioration in the forms of split lumber and dry rot. Exposure to the elements over a long period of time, combined with insect infestation, has resulted in severely damaged wood framing and back-up substrates on the back side of the building. These elements need to be removed down to the granite foundation and reconstructed.

Wood cornice components are deteriorated due to their exposure to the elements. Gaps and detached components were observed along the cornice. The cornice components will need to be removed and replaced, and ultimately flashed with new membrane and sheet metal flashing, so the cornice is protected from the elements.

The front entrance portico is badly damaged and has collapsed. It cannot be repaired. The entire structure needs to be removed and reconstructed.

Granite foundation walls appear to be in good condition with isolated delamination and cracks observed. These items can be repaired to extend the service life of the foundation components. Some granite elements have displaced, causing portions of the foundation wall – mainly the windowsills – to settle and become misaligned with the rest of the foundation wall.

Foundation mortar joints are deteriorated and are a source of water entry inside the building. However, they can be repaired to extend the service life of the foundation walls. Repairs would include removing the existing deteriorated mortar down to sound material and filling the joints with new mortar.

Step cracking in the foundation wall could be associated with settling of the foundation at building corners. Additional monitoring is required to determine if settling is ongoing. The foundation could be repaired to address the step cracking; however, should the building be experiencing ongoing settlement, the foundation will require reconstruction of the corners and locations where components have settled. This would require excavation and underpinning the foundation.

There are no visible windows on the building, however, the remaining wood framing is deteriorated and will need to be replaced for the installation of new windows.

Aluminum framed entrances appear to be in fair condition. However, they should be replaced to match new construction and to meet current energy code requirements.

ROOF

The EPDM membrane roof systems at the two (2) additions are in poor condition. Gale observed openings in the membrane, unadhered membrane seams, and cracking membrane throughout the roofs. Moisture infiltration through these openings has likely deteriorated the roof system below the membrane and the wood roof deck. The EPDM roof systems require emergency repairs and will need to be replaced to provide a long-term watertight condition. During replacement, deteriorated materials identified will need to be repaired, including repairs to the roof deck if it is found to be deteriorated. Temporary repairs, such as patches over membrane openings and stripping membranes over unadhered membrane seams, could prevent further damage to interior components affected by moisture infiltration through the roof if full roof replacement cannot be performed in the short term.

Like the wood cornice, the wood parapet components at the addition roof edges are deteriorated due to their exposure to the elements. Gaps and detached components were observed along the parapet. The parapet components will need to be removed and replaced, and ultimately flashed with new membrane and sheet metal flashing, so the parapet is protected from the elements.

The asphalt shingle roof system appears to be in good condition relative to the other roof systems. Only isolated defects and algae growth were observed. New shingles and underlayments should be installed at previous test cut holes to prevent moisture infiltration and extend the service life of the roof system.

The chimney at the asphalt roof ridge is deteriorated. Completely open mortar joints were observed at a majority of the chimney. Due to the level of deterioration, the chimney will likely need to be demolished and rebuilt, or demolished and infilled during replacement of the asphalt shingle roof, if the chimney is found to be inactive and not contributing to the historic nature of the building. The wood back-up substrate around the base of the chimney is exposed to the elements. As such, it is also deteriorated and will need to be replaced, and new siding installed. Gaps at the bottom of the chimney need to be addressed to prevent moisture infiltration into the interior. Sheet metal flashing could be installed during siding installation operations.

The siding, fascia, and other wood components at the two (2) dormers on the asphalt shingle roof are deteriorated and should be replaced. More severely deteriorated wood components were observed at the base of the dormer. If full replacement of the siding cannot be performed in the short term, repair efforts could be prioritized at these components.

We trust this information suits your needs at this time. Please do not hesitate to contact us if you require additional information regarding this matter.

Best regards,

GALE ASSOCIATES, INC.

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Enclosure: Roof Plan

CC: Gale Team (DAA, BHN, DBB, RFM)

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