Roofing and Sheet Metal Contractors

89 Research Drive, P.O. Box 2218, Stamford, Connecticut 06906-0218 PHONE: (203) 323 8173 Website: mgottfried.com FAX: (203) 359 2498

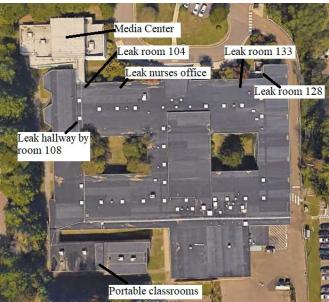
TO: Viking Construction, Inc. 1387 Seaview Avenue Bridgeport, CT 06607 ATTN: JoAnn Michaels

DATE: February 21, 2019

RE: Roof report and repair quotation Northeast School 82 Schofieldtown Road Stamford, CT 06903

Dear Ms. Michaels,

As per your request we went to the above school to perform a visual inspection of the roofs, look for possible sources of water leaks, see what leaks could be repaired under warranty, provide pricing for repairs not covered by warranties and make recommendations and provide pricing for preventative maintenance.



Active leak location and overall layout of Northeast School

Roof Warranty

Northeast School has an active Carlisle roof warranty. The warranty covers the entire school roof with the exception of the Media Center and the Portable Classrooms. The warranty will be in effect through the beginning of 2022. The Carlisle warranty will cover roof leak repairs due to a manufacturer's product or an installation problem. It will not cover leaks from damage or from non-Carlisle items (caulking, skylights, metal facias, repairs done with none Carlisle material, etc.,). A few of the leaks noted on the above map are covered under the terms of the Carlisle warranty. The repair of the other leaks will be the Owner's responsibility. Repairs on the Carlisle roof must be performed using Carlisle material and done by a Carlisle approved applicator.

	Continued on page 2	
Accepted	Date	Yours truly,
		M. Gottfried, Inc.
		Laterme
By		By David Lederman, Pres.

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Active Roof Leaks







The leak at room 104 falls at the perimeter edge of the building. We can see a gap between the high and low pieces of edging where water may be able to get into the building. The gutter and leader at the connector roof, below this corner should also be looked at. Repairing this area may or may not be covered depending on what we see when we take of the edging. Cleaning and checking the gutter and leader will be included in the Owner's quotation.

Nurses office



The leaks over the nurse's office show up under these goosenecks. The insulation around the goosenecks feels solid, leading us to believe that the problem is either the caulking at the top of the termination bar, or water that blows in. We shall also inspect the corners of the vent flashings to see if they are tight. Caulking and any hood repairs of the Owner's responsibility, corners would be Carlisle's.

Classroom 133



There is a hole in the roof over room 133. This needs to be properly patched. Repairs from damage is the Owner's responsibility.

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Classroom 128





The leak at room 128 shows up low on the wall. We did not see any issues with the roof membrane. It is possible rain may be blowing in under the loose fascia, but we suspect that water is coming in at the slab at the top of the stairs and soaking through the wall. Repairing the metal will be in the Owners quote. If the wall is leaking, its repair is by others.

Hallway by classroom 108







The leak in the hallway appears to come form the flashing around the skylight. We can see some of the membrane is wrinkled and lifting. All the flashing around the skylight will be checked and repaired. This item will fall under the Carlisle repairs.

Media Center Leaks









The media center is getting leaks on the walls alongside the vertical steel beams.

Continued on page 4

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DATE: February 21, 2019

Page 4

We can see gaps and shrunken caulking along these beams. We would like to water test these areas to confirm that the water infiltration is coming from these gaps. If this is the case, the gaps and open areas should be recaulked. The testing is included in the Owners repairs, the caulking and subsequent repairs can be priced after the results of the test are known. The Owner may also wish to have a caulking contractor come and provide a quotation to recaulk all these areas to help tighten the building regardless of the test's outcome.





The media center also is experiencing water coming in below the high block walls. We think water is soaking through the block and traveling down the wall. The walls should be sealed with an elastomeric coating or water-proof paint. We can provide a quote to perform this work, the Owner can have it done with its own staff, or the Construction manager can have this work performed by others.

Costs associated with repairs to stop the current active leaks:

Any of the above repairs noted as covered under the Carlisle warranty will take place as soon as possible, weather permitting.

Repairing some of the above noted active leaks fall under the Owners responsibility. They are properly repairing holes in the roof, fastening loose edging over the possibly leaking wall, caulking the goosenecks and skylights, and water-testing (weather permitting) at the vertical steel of the media center. The cost for these repairs is \$4,170.00

As stated above the caulking of the steel and coating the masonry walls is not included.

	Continued on page 5	
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Northeast School 82 Schofieldtown Road Stamford, CT 06903

Page 5

Strongly recommended maintenance work

There are a number of maintenance and repair items that should be performed on the roofs of the school. We have divided the school by roof section for the purpose of this portion of the report. Those sections are: the main Carlisle roof, the portable classroom roof and the media center roof.

Main Carlisle Roof

A manufacturers warranty does not cover roof maintenance. Problems from lack of maintenance or non-warranty items that grow into leaks or other issues may not be covered in the future due to the neglect of maintenance. In addition, proper maintenance will extend the life of the roof well beyond its warranty period.

Debris

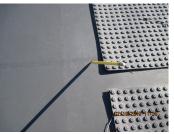




There are areas with leaves and even metal wrapped in plastic tucked under pipes on the roof. Leaves can lead to organic growth and trap moisture. Metal debris can blow around and cause holes. The roof needs to be cleaned of leaves and debris.

Holes





Holes in the roof might not cause leaks right away, but they let water into the roofing system and will eventually cause leaks. Holes must be repaired immediately before the roof is damaged and more extensive repairs are necessary, (see the next item).

Continued on page 6

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Cupped and unadhered insulation from unrepaired holes



Water has gotten into the roofing system by the holes here and by a skylight. The water has caused the insulation to cup and become unadhered to the deck. If left, the condition can grow, and more damage can be done to the roof. This could lead to shortening the lifespan of the roof and breaking the membrane. The cupped insulation must be cut out, new insulation adhered, and new membrane installed over the insulation.

Items on the roof without a protective slip sheet









The manufacturer requires that item on the roof rest on loose slip sheet of EPDM membrane. This will keep sharp edges, splinters or metal from coming in direct contact with the roof membrane, where they may cut or damage the roof if the item shifts. Slip sheets need to be installed under all the sleepers. In the last picture, the metal support has shifter and pushed up the patch. This patch will have to be repaired.

Overlaying lifting patches and repairing penetration pockets







Continued on page 7

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Stamford, CT 06903

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We found a few areas where some stripping in and patches on the roof are starting to peel or lift. These need to be cleaned and overlaid with new EPDM flashing. In addition, the penetration pockets need to be primed and "topped off" with additional pourable sealer.

Incompatible materials





Roofing cement has been applied around these goosenecks. We would assume that this was done to address a previous leak. The problem is that roofing cement is not compatible with EPDM membrane. These items need to be cleaned and the bases reflashed. The area around the gooseneck should be coated with a PMMA membrane.

Missing termination and metal flashing







Proper watertight termination flashing depends on continuous bar and maintained caulking. A piece of the termination bar is missing at the corner on the chimney. That should be installed and the top of the bar recaulked. While going around the school, we also noticed that a piece of the fascia is missing. It should be replaced.

	Continued on page 8	
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Curb flashing





The sleeper flashing for these units on the lower roof has failed. There is no separation sheet or metal cap on the sleepers, and it appears that the membrane has failed and opened and is letting water in. The sleepers should be properly flashed.

Our price to perform the necessary maintenance and repair work to the above items is: \$17,695.00

Portable Classrooms











The roofs on the portable classrooms are in poor shape. Laps are starting to peel, curb flashings need to be checked, penetration flashings need to be repaired and scuppers need to be cleaned and checked. To try to prolong the life of this roof, we can clean, prime and overlay all the laps with new EPDM membrane, repair all failing corners, penetration flashings, scuppers, etc., We cannot stop water from ponding on the roof and running over the sides.

Our price to perform the maintenance and repair work to the portable classroom roof is \$10,390.00

Continued of	on page 9	9
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Accepted	Date	
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By David Lederman, Pres.

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Media center roof

The media center roof is a modified bitumen roof. It is also in poor shape. Issues with the exposed block parapet wall and gaps along the exposed steel beams have already been discussed. General maintenance is badly needed to stop this roof from deteriorating further.

Debris









There are many levels, nooks and crannies on the library roof where leaves and debris have collected. These trap moisture on the roof and clog the drains. The roofs should be cleaned.

Open base flashing, open fishmouths in the roof membrane and open corners on curbs









We found numerous locations where the laps on the base flashing are starting to pull open. We also saw fishmouths, or lifted areas in the laps in the field membrane and open corners on curbs. These items can let water into the roofing system and should be repaired.

Bubbles and blisters in the roof membrane









Continued on page 10

Accepted	Date
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By____

Yours truly, M. Gottfried, Inc.

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There are numerous bubbles or blisters in the roof. If stepped on, they may break and allow water to enter the roof. Blisters become more pronounced in warmer weather. That being said, we saw large blisters on a cold day. Some of the smaller blisters could be left as is, but large ones in traffic areas or by laps should be cut, reset and overlaid with new membrane.

Damage from sleepers





Just as on the EPDM roof, it is important to protect the roof membrane from sleepers and other items laid on the roof. On this roof, some sleepers have separation pads, and some don't. We found one area without pad where the blocking has shifted and pushed the base flashing far enough to eliminate the lap on the field sheet. Slip sheets should be installed and the base flashing repaired where it is damaged.

Penetration pockets





Penetration pockets need to be maintained and periodically "topped off" with new pourable sealer or mastic. If this isn't done, as the filler shrinks with age, it pulls away from the pocket and penetration leaving a pathway for water. The pockets on this roof not only need filling but restriping around the base.

	Continued on page 11	
Accepted	Date	
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Page 11

Broken vent caps





Some of the vent caps have been broken. These should be refastened and resecured.

Possible non-roof sources of water infiltration



In addition to the block wall and steel, from previous caulk attempts it looks like leaks might have occurred at the windows. As stated before, the Owner/construction manager should have a professional caulking company inspect, make recommendations and provide pricing to reseal windows, gaps at steel, etc.

Our price to perform repairs and maintenance consisting of removing debris, repairing open base flashing, laps and corners, installing slip sheets under sleepers, repairing some of the blisters, repairing penetration pockets, etc., is \$ 11,225.00

Accepted	Date	Yours truly,
-		M. Gottfried, Inc.
By		By David Lederman, Pres