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January 11, 2013

Mr. Joseph W. Sabatini
Township Manager
Byram Township
10 Mansfield Drive
Byram, NJ 07874

Re: *Byram Township Municipal Building Roof*

Subject: Research, finding and recommendations

Survey and findings:

Please be advised that I have performed an onsite survey to document existing conditions of the approximately 5,000 square foot roof at the Township Municipal Building. The original building consists of two roof levels that are comprised of different systems. On September 20, 2012, I witnessed the extraction of core samplings, taken by a roofing representative of Garland Companies, to confirm the composition of each roof system.

It was determined that the 3,310 square foot upper roof is comprised of a 40 to 60 mil thick unreinforced EPDM roof membrane and glued to a wood deck that spans between wood trusses. Conversely, the 1,632 square foot lower roof is a multi-ply built-up roof, modified bitumen, with flood and gravel over 1 ½" polyisocyanurate roof insulation and a ½" recovery board over wood framing.

Additionally, I performed an above ceiling visual inspection of both roof systems. There was no evidence of roof leaking or water stains below the roof sheathing. The blanket insulation below the EPDM roof system also appeared dry at the time of inspection.

On a previous occasion, in the presence of Mr. Adolf Steyh, I witnessed a small pool of water on the floor near the Council Chambers closet and utility room. The water was from an air handler that had iced-up and thawed-out over night. This may occur if the cooling agent is low in the cooling coils, causing the ice to accumulate during operation and subsequently melt when the unit is not in use. The observed water, therefore, was not caused by a leak in the roof.

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Recommendations:

Option1:

Remove and replace both roof systems and install with same system.

Pros:

A 20 year warranty can be achieved

Cons:

Given the relatively small roof area the cost of replacement per square foot will be in the $10 to $12 per square foot for the EPDM and $18 to $20 per square foot for the Built up roof.

Option 2:

Minor repairs at EPDM roof - re-stripping at perimeter, seams and around roof drains

Pros:

Low cost

Cons:

No long term warranty can be achieved, at best 5 years for repairs but you may be locked into a repair contract

In summary, the building appears to be in sound condition for its age. Because there are no serviceable rooftop mechanical units and associated foot traffic, the roofs have been preserved and their life-cycle prolonged.

As it stands, with minor repairs and appropriate maintenance, these roof systems can function for up to another 10 years. If an addition or alteration is explored in the future, my recommendation would be to incorporate the replacement of both roofs into the project at that time as it may yield a better bid scenario.

Respectfully,

Sergio J. Chavarria, AIA
Principal

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