

August 27, 2019

Mr. Wayne Amico
Town Engineer
Town of Maynard

**Green Meadow School, Maynard
Review of Roof Deck**

Mr. Amico,

Per your request I made a site visit to the Green Meadow School to review the corroded roof deck at the area of the building which was added circa 1970. Evidence of corrosion is visible throughout the addition. The extent of corrosion varies: in some areas the deck has corroded through its entire thickness; in other areas the corrosion appears to be only surface corrosion. Areas which appeared to have light surface corrosion were probed at random locations. Some spots were found to be sound but others had more extensive corrosion which was not evident by visual inspection alone. Deck areas with significant corrosion in multiple adjacent ribs are susceptible to collapse under snow load. It is possible that the roof deck may have sufficient reserve capacity to support snow loads specified by the building code; however, this can only be determined by probing the entire roof deck. I recommend one of two options:

1. Remove roofing to install new metal deck over the existing deck. Installing new deck over the existing deck will allow the deck to be installed without removing the new ceiling below. If desired, the deck can be installed in phases over individual classrooms. A local deck supplier must confirm that new deck is available that will nest within the profile of the existing deck.
2. Remove all ceiling tiles to allow inspection and probing of the entire roof deck. It is likely that some areas will require installation of new deck as described above; however, these areas may be localized. Inspection of the entire roof deck will require significant engineering time.

Please feel free to contact me with any questions regarding these recommendations

Sincerely,



Daniel Bonardi, P.E.
Principal
Daniel Bonardi Consulting Engineers

