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NYC Department of Buildings
280 Broadway, 1st Floor
New York, NY 10007

Reference: 159 East 70th Street
New York, NY 10021

CE Project #: 20046

Dear Sirs:

We are writing this letter as a follow up to our report of 4/2/2020 (Cuono Report 1) regarding the existing roof framing at 159 East 70th Street.

This building is a residential townhouse structure erected pre-war and consists of perimeter multi-wythe unreinforced brick bearing party walls and framed with timber joists.

Cuono reviewed a destructive probe at the ceiling below the roof to ascertain the general joist construction and conditions.

As noted in our report, the roof generally consists of approximately 3x10 joists spaced at approximately 20" on center and span from brick party wall to brick party wall.

Based on our analysis of the typical conditions noted in the report, the roof can support an additional approximately 20 pounds per square foot (psf) of dead load.

We understand that there has been a consideration to install a green roof with possible solar panels, per Local Law 94 and Local Law 95.

Further, we understand from the project Architect, Nicholas Stanos Architect, PLLC, that the possible new green roof loading would exceed the capacity noted above.

In order to accommodate any weight beyond the current capacity, the joists would have to be reinforced.

Further, our analysis was limited to the basic typical joist conditions. At areas of openings like bulkheads, skylights, and chimney flues, we expect that there would be header trimmer conditions with tenon-mortice connections.

These areas may have a lesser capacity due to the increased concentrated point loadings and weaker traditional connections.

In order to accommodate a heavier loading, the joists would have to be reinforced by sistering new full span joists. At header-trimmer conditions such as at bulkheads, skylights, and chimney flues, localized shoring may be required in order to cut back the joists and reinforce the headers and trimmers with new heavy timber or engineered lumber.

All reinforcing would have to be done from below in order not to compromise the integrity of the existing roof decking (diaphragm).

In order to install reinforcing, the ceiling at the top floor, below the roof, would have to be removed and any existing mechanical, electrical, and plumbing lines temporary rerouted so that new timber joists could be lifted in place and bolted to the existing framing.

Due to these circumstances, the Owners request reconsideration of Local Law 94 and Local Law 95 for this structure.

Please feel free to contact me should you have any questions.

Respectfully,



Ciro Cuono, P.E

Cuono Engineering PLLC

