

Structural Engineering ----- Product Development ----- Allen R. Decker, PE  
June 22, 2020

To Whom It May Concern

Re: 1411 Iroquois, Detroit, MI  
Structural Condition of existing addition at rear of house

Dear Sirs:

This will follow up a review of the existing conditions at the addition at the rear right corner of the original house.

A number of defects or symptoms are noted to be present at the addition construction:

1. The existing construction has settled, causing a substantial floor slope. The amount of floor slope (approximately 6" in the length of the addition) far exceeds a normal allowance for slope. (typically 1/4" in 10 feet).
2. The existing windows are racked due to settlement of the structure and do not operate. This is an indication of more recent than historical settlement.
3. The floor of the screen porch is sloped due to very poor framing conditions below.
4. Corner posts of the porch area are failing due to high moisture conditions.
5. Cracks in the exterior stucco finish materials are present indicating movement due to settling.
6. Wood beam framing of the porch addition is subject to moisture damage due to the method of construction and lack of flashing detachment from the stucco finish.
7. Angle bracket bracing using wood materials as this addition is built with is not a form of adequate structural wind bracing support for the structure.
8. Interior wall cracks indicate foundation movement.
9. The purpose of the secondary roof structure is unknown; This may have been added to address settlement problems which caused substantial roof leakage events.

Based upon the above described visually apparent defects and symptoms, it is my professional opinion as a structural engineer, with substantial experience in dealing with single family residential homes, both old and new, that the addition portion of this home has been and is currently failing in terms of structural adequacy for a residential property.

I would advise removal and replacement of the addition, with a properly designed and installed foundation system, which can only be done with removal of the construction in place.

Should other structural questions arise during the remainder of the project, please call.

Sincerely,



Allen R. Decker, PE.  
Artisan Engineering LLC

