

CRITERIUM[®]

GILES ENGINEERS

November 17, 2014

Ms. Hong Pham

Re: Limited structural inspection
113 Stokesay Court
Cary, NC

1150 SE MAYNARD ROAD
SUITE 220
CARY, NC 27511
PHONE 919 465-3801
FAX 919 465-3802
NC LIC. NO.: C-2871

Dear Ms. Pham:

At your request, a limited structural re-inspection of the above property was performed on November 11, 2014. The report that follows has been prepared based on that inspection and a previous inspection performed on January 24, 2014. Both inspections were performed by Robert C. Giles, PE.

The scope of this project was limited to inspection and evaluation of cracking in the interior drywall and masonry foundation. The report is intended to cover only those premises that may be examined visually without excavation, removing surface materials and disassembling components.

OBSERVATIONS

1. An approximately 1/4-inch wide vertical crack noted in the brick veneer at the right side foundation near the right rear corner of the home. This crack has been previously sealed and no widening of the crack since the January 2014 inspection was observed.
2. We also observed a crack in the brick and the opposite concrete masonry unit (CMU) in the center section of the right side foundation under a foundation vent. The crack in the CMU is approximately 1/8-inch wide (same width as noted in January) and approximately 3/8-inch horizontal displacement was noted in the CMU at this crack (same displacement as noted in the CMU in January).
3. The cracking in the brick opposite the crack described above has widened since the original inspection. Note that missing mortar in part of this crack makes the crack width difficult to measure, but the brick crack appears to be at least 1/4-inch wide.
4. We also observed hairline vertical cracking in the right side drywall below the 2nd floor front wall.
5. No significant floor slope was observed in the right side of the 1st floor room.

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DISCUSSION

Foundation stabilization was conducted by Foundation Xperts after the initial inspection and we have attached their drawing of installed piers (referred to as existing piers). They have also shown two additional piers on the right side (referred to as “needed”). The foundation stabilization included the right side of front wall and front section of the right wall (includes the right front corner).

Our evaluation of the current conditions revealed no significant movement in the right side CMU foundation since our previous inspection in January. Although the crack in the brick at foundation level appears to have widened, this brick does not support the right side walls.

This crack and other observed previous cracks in the foundation walls are **not** considered significant structural deficiencies at this time. Monitoring cracks for additional settlement is an acceptable approach. If cracks widen significantly or additional significant cracks propagate then further evaluation by a structural engineer and possible foundation stabilization may be needed at that time.

The soils were noted to be moist to dry at the time of inspection. Positive grade away from the foundation should be maintained to reduce moisture infiltration under the foundation. Additional soil consolidation and settlement can occur due to water infiltration into soils and subsequent drought conditions which dry out the soils below foundations. If conditions around the foundation remain relatively dry, the likelihood of future significant settlement is unlikely. However, we cannot accurately predict future movement in the foundation.

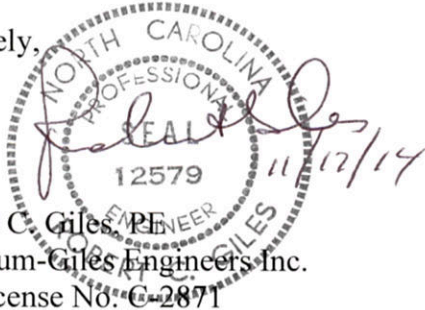
RECOMMENDATION

- 1) The right side cracking in the CMU foundation should be monitored. If significant widening (approximately ¼-inch) of this CMU crack or propagation of additional cracks in the foundation is observed, additional foundation stabilization may be required.
- 2) If additional movement in the right side foundation is observed, we recommend hiring an experienced foundation contractor to stabilize the center area of the right side foundation. Installation of approximately 2 helical piers will be required to stabilize this section of foundation as required.
- 3) Resealing the crack in the right side foundation (under the vent) is recommended. Note that this resealing has no structural impact to the foundation.

CONCLUSION

We trust that this report provides the information you require. Please contact us (919) 465-3801 if you have any questions. Thank you for the opportunity to be of assistance.

Sincerely,



Robert C. Giles, PE
Criterium-Giles Engineers, Inc.
NC License No. C-2871

Photo log enclosed
Foundation Xperts sketch enclosed

Location:
113 Stokesay Court
Cary, NC

Photo Taken by:
Robert C. Giles, P.E.

Date:
November 11, 2014



Description:

Hairline vertical
crack in front wall
below 2nd floor

Photo Number

1



Description:

View of previously
sealed crack in
brick at right
foundation wall
near right rear
corner

Photo Number

2

Location:
113 Stokesay Court
Cary, NC

Photo Taken by:
Robert C. Giles, P.E.

Date:
November 11, 2014



Description:

View of staircase
crack under
foundation vent on
right side of home

Photo Number

3



Description:

View of horizontal
displacement of
brick at crack
shown in Photo 3

Photo Number

4

Location:
113 Stokesay Court
Cary, NC

Photo Taken by:
Robert C. Giles, P.E.

Date:
November 11, 2014



Description:

View of
approximately 1/8-
inch wide crack in
CMU
approximately 12-
feet from front
right corner -

Photo Number
5



Description:

Another view of
same crack shown
in Photo 5

Photo Number
6

Location:
113 Stokesay Court
Cary, NC

Photo Taken by:
Robert C. Giles, P.E.

Date:
November 11, 2014



Description:

Note
approximately 3/8-
inch horizontal
displacement of
CMU at crack
shown in Photos 5
and 6

Photo Number

7

113 Stokesay Court, Cary, NC 27513

