



GILES & FLYTHE
ENGINEERS

Raleigh Office
7334 Chapel Hill Road
Suite 200
Raleigh, NC 27607
919 465 3801

Charlotte Office
8819 University East Drive
Suite 200
Charlotte, NC 28213
704 810 1808

December 3, 2019

Nancy Crespin

Re: Wall Removal Letter – Reinspection - Manufactured Home
380 Gilchrist Road
Cameron, NC

Dear Ms. Crespin,

We inspected the repairs of the subject home on November 25, 2019. The purpose of the inspection was to determine if the reinforcement and associated foundations were installed per recommendations outlined in the previous Wall Removal Report dated August 12, 2019. The following itemizes our review of the installed components:

- 1) In lieu of the beams recommended in the previous inspection report, the contractor had installed 2-1.75"x9.25" LVL beams (typical for Walls #1-3). Additionally, the spans for Walls #2-3 had been increased to approximately 7'-11". These alternative beam sizes and spans are adequate to support the design loads imposed on the structure.
- 2) The remainder of reinforcements and associated foundations appeared to have been installed in general accordance with the recommendations in the previous inspection report.

The above-listed determinations were made in accordance with the 2018 edition of the North Carolina Building Code.

We trust that this letter 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 to you.

Sincerely,

Harrison N. Luttman, PE
Project Engineer
Giles Flythe Engineers Inc.
NC Lic. No. C-2871





GILES & FLYTHE
ENGINEERS

Raleigh Office
7334 Chapel Hill Road
Suite 200
Raleigh, NC 27607
919 465 3801

Charlotte Office
8819 University East Drive
Suite 200
Charlotte, NC 28213
704 810 1808

August 12, 2019

Nancy Crespin

Re: Wall Removal Letter – Manufactured Home
380 Gilchrist Road
Cameron, NC

Dear Ms. Crespin,

At your request, a limited structural evaluation for supporting removed sections of the marriage wall in the manufactured home located at the subject address was performed on August 6, 2019. It is our understanding that you plan to maintain the following openings in the marriage wall (spanning left to right approximately 12' from the front perimeter wall):

Wall #1 – A section of the wall (approximately 4'-5" wide) beginning approximately 11'-10" from the left perimeter wall and extending rightward.

Wall #2 – A section of the wall (approximately 7'-8" wide) beginning at the right end of wall section #1 and extending rightward.

Wall #3 – A section of the wall (approximately 7'-7" wide) beginning at the right end of wall section #2 and extending rightward.

Wall #4 – A section of the wall (approximately 2'-8" wide) beginning approximately 5'-5" from the right perimeter wall and extending rightward.

We have provided recommendations below to support these sections of the marriage wall. The contractor should verify all dimensions prior to ordering materials. For purposes of this report, all directions (left, right, rear, etc.) are taken from the viewpoint of an observer standing and facing the front door of the home. If the contractor has any questions concerns regarding the method of construction or if conditions vary from what is described below, the engineer should be consulted. Likewise, if any changes to sizes or modifications to the structure are desired other than what is explicitly described below, the engineer should be consulted.

RECOMMENDATIONS

Wall #1

- We recommend installing a 2-2x8 beam spanning a maximum of 4'-5" between the load bearing points. The new beam should be supported by 2-2x4 jack studs at each of the load bearing points.
- New 16x16 CMU block piers should be installed below the jack studs. The new piers should be supported by a 24"x24"x8" concrete footers. Note, full depth 2x pressure treated blocking should be installed between jack studs and masonry piers.

Wall #2

- We recommend installing a 2-1.75"x7.25" LVL beam spanning a maximum of 7'-8" between the load bearing points. The new beam should be supported by 2-2x4 jack studs at each of the load bearing points.

- New 16x16 CMU block piers should be installed below the jack studs. The new piers should be supported by a 24"x24"x8" concrete footers. Note, full depth 2x pressure treated blocking should be installed between jack studs and masonry piers.

Wall #3

- We recommend installing a 2-1.75"x7.25" LVL beam spanning a maximum of 7'-7" between the load bearing points. The new beam should be supported by 2-2x4 jack studs at each of the load bearing points.
- New 16x16-inch CMU block piers should be installed below the jack studs. The new piers should be supported by a 24"x24"x8" concrete footers. Note, full depth 2x pressure treated blocking should be installed between jack studs and masonry piers.

Wall #4

- We recommend installing a 2-2x8 beam spanning a maximum of 2'-8" between the load bearing points. The new beam should be supported by 2-2x4 jack studs at each of the load bearing points.
- New 8x16 CMU block piers should be installed below the jack studs. The new piers should be supported by a 16"x24"x8" concrete footers. Note, full depth 2x pressure treated blocking should be installed between jack studs and masonry piers. Additionally, if pier height is to exceed 32" from the top of the footing the masonry pier size is to be increased to 16x16 on a new 24"x24"x8" concrete footing.

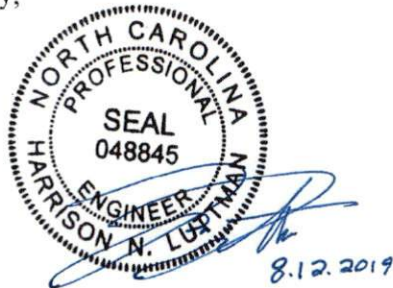
General Notes:

- All new lumber should be SPF No.2 or equivalent. All lumber exposed to concrete/masonry or weather must be pressure treated.
- All new LVL members are to be E2.0, Fb=2900 PSI (or equivalent) and plies are to be attached per manufacturer specifications. LVL members exposed to weather should be wrapped per manufacturer specifications.
- Contractor to confirm minimum soil bearing capacity of 2000 psf.
- All new concrete is to have a minimum 28-day strength of 3000 psi and new footings are to be installed a min. of 12" below grade (to the bottom of the footing) on firm, dry soils.
- All new metal hangers/ties/clips to be installed per manufacturer specifications.
- With any structural changes, finish material cracks and minor movements are typical and expected. These are associated with settlement generally observed after construction of an addition or significant remodel.
- **Note that the recommendations for supporting removed sections of the wall noted above will limit the future mobility of home if relocation is desired.**
- **Prior to installation of the beams, the unsupported sections of roof/ceiling should be temporarily supported.**



We trust that this letter 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 to you.

Sincerely,



Harrison N. Luttman, PE
Project Manager
Giles Flythe Engineers Inc.
NC Lic. No. C-2871

