

January 28, 2024

RN&M Engineers
390 Main Street
Canton, NC 28716

Attn: **Jason Moody, PE**
jmoody@rnm-engineers.com

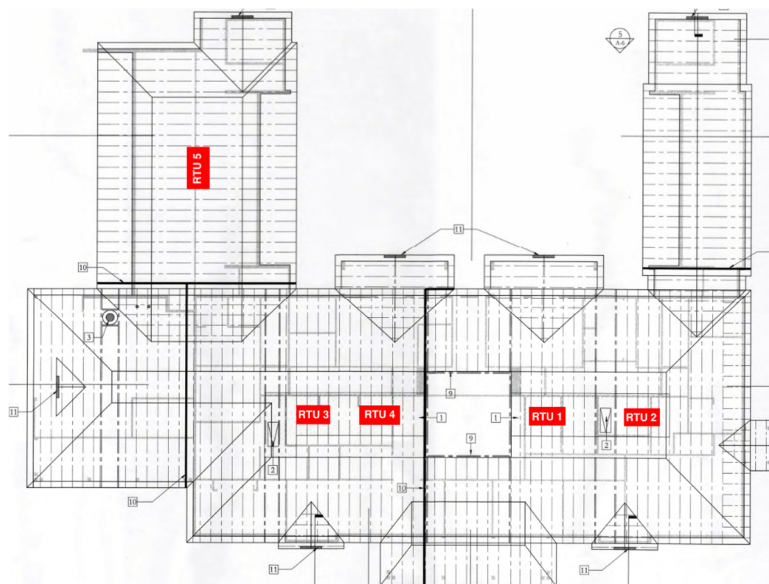
Subject: **Henderson County Animal Shelter**
828 Stoney Mountain Road
Hendersonville, NC 28791
(FSE File No: 230007)

Dear Mr. Moody:

Pursuant to your request, Paul Fama P.E. visited the subject facility on January 16, 2024. The purpose of our site visit was to observe the proposed locations for the five new roof top mechanical units (RTU) and determine if the existing structure could safely support the weight of the new units. To assist in our evaluation, you provided the existing architectural drawings for our review and the written specifications for the proposed new units. The following is a brief report of our basis of evaluation, opinions, and recommendations.

BASIS OF EVALUATION:

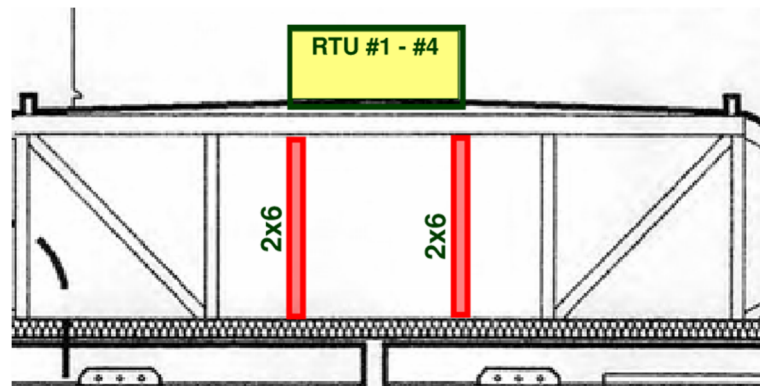
Based on the information provided and our site observations, we understand that the new RTUs will be located on top of the roof at the locations indicated on the plan below that you provided. The existing roof structure consists of prefabricated wood roof trusses spaced at 24 inches on center with plywood roof sheathing. The existing architectural drawings indicate that the attic trusses shall be designed with a 40 psf live load capacity in the attic areas. The total weight of each proposed roof top unit is 983 lbs and has a footprint area of 40 psf. Four of the units will be located directly above the attic areas. RTU #5 is located above the Dog Kennel area which does not appear to be attic trusses. RTU #5 will be located directly above the CMU wall at room 127 Dog Observation Runs.



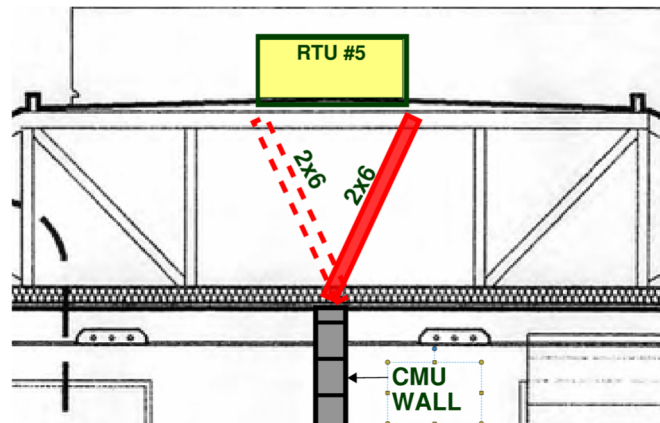
OPINIONS & RECOMMENDATIONS:

Based on our review and evaluation, the existing roof structure can safely support the weight of the new RTU if the following minor provisions are made:

- 2x6 SYP. NO. 2 blocking shall be installed between the trusses below the support locations of all RTUs, and the perimeter of the units. The blocking shall be attached to the existing trusses with Simpson LUS26 face mount metal joists hangers with (6) 0.162" diameter X 3 1/2" common nails.
- The existing roof trusses shall not be cut, notch or modified for RTU installation.
- All existing storage boxes and files shall be removed from the attic areas.
- All existing mechanical units shall be removed from the attic areas.
- RTU #1, #2, #3 and #4 - Install two vertical 2x6's below the RTU #1 through #4. Attached the 2x6's, one between the top and bottom chords below the new RTU (four trusses minimum). Fasten each 2x6 to the existing chords with (2) 0.162" diameter X 3 1/2" common nails. See sketch below:



- RTU #5 - Install two vertical 2x6's below the RTU #5. Fasten the 2x6's, one on each side of each truss below the new RTU (six trusses minimum). Fasten each 2x6 to the side of the existing truss top and bottom chords with (5) 0.162" diameter X 3 1/2". Angle the 2x6 from the edges of the new RTU down to the top of the CMU wall below. See sketch below:



In our opinion, if the following provisions are made, the existing roof trusses will be able to support the weight of the new mechanical units and maintain their existing roof live load capacity.

We hope this letter serves your current needs. If we can be of further service, please do not hesitate to contact our office.

Sincerely,

Fama Structural Engineering PC
(NC License No. C-5059)



Paul Fama, P.E.
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