

Dear Mr. Peterson:

In accordance with the scope of services described in our agreement dated July 8, 2024, we completed a site review of the existing shed footing/wall and its proximity to the septic system.

The attached photos identify the distance from the inlet end of the septic tank to the exterior concrete masonry unit (CMU) block wall at over 5 feet separation. The tank extends northeast (away from the wall) toward the gravity drain field, which begins approximately 15-20 feet further away from the CMU wall and extends away from the wall.

Sewage is pumped from a small pumping chamber adjacent to your home uphill to the septic tank through a 2-inch diameter pressure line. The septic tank was found to be water-tight and compliant based on the compliance inspection report completed by Timber Lakes Septic Service on September 20, 2023, which is on file in Aitkin County online records. The soils identified in the site soils evaluation logs are a sandy soil type which typically has a high percolation rate. The elevation of the soil treatment area is approximately 18 feet higher than the lake elevation. These factors support the likelihood that the groundwater table is several feet below the foundation/wall and the septic system.

It is our understanding, based on our conversation onsite, that your intention is to construct a shed on top of the existing CMU block wall and the roof of the shed will tie into the existing garage roof using the crossed gable concept with valleys that will direct the roof runoff to the NE and SE corners of the current CMU wall. Further, you indicated your intention to fill the cores of the CMU blocks with concrete and will consider using steel rebar reinforcement as well. These measures will improve upon the strength of the existing CMU wall/foundation. We cannot certify the wall design as we did not design it. However, considering that the wall shows no evidence of being impacted by hydrostatic water pressure or intrusion, and had reportedly been serving as a shed wall/foundation previously for many decades next to the operating septic system, it is our opinion the addition of a shed on the same wall/foundation with a roof configuration as you described should continue to not be impacted by the septic system.

Our opinions in this letter are solely intended to provide our professional opinion of the existing and proposed facilities and do not constitute a guarantee or warranty. However, we feel our opinions are appropriate based on the proposed construction that you described and that the wall/foundation should not be impacted by the septic system subject to proper maintenance and/or replacement as may be necessary in the future.

Please let us know if you have any questions regarding our review and opinions expressed.

Regards,

WIDSETH SMITH NOLTING AND ASSOCIATES, INC.



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