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September 20, 2023

Town of Nottingham Planning Board
Attention: Board Chair, Ed Viel
139 Stage Road
PO Box 114
Nottingham, NH 03290

RE: Owner: Frederick Fernald
Applicant: Owl Ridge Builders
Smoke Street and Fort Hill Road
Waiver Requests

Chairperson & Members of the Nottingham Planning Board:

In accordance with the Subdivision Regulations, the following waivers are hereby requested:

1. Identification of Waiver Request: Section 9.7.1.1(b) Cul-de-sac

- The application is proposing cul-de-sacs which require a waiver of the planning board.

Explanation:

The project site is best suited for the use of two cul-de-sacs based on the internal sensitivity the site contains. Connection of the roadways is being avoided for all of the reasons an Open Space Subdivision was chosen for this project site.

Waiver Justification:

a. Granting the waiver will properly carry out the purpose and intent of the regulations.

The intent of this regulation is to ensure the applicant and the board have reviewed connectivity potentials. In this case both the board and the applicant have placed a higher value on the use of cul-de-sacs in a segmented open space design than connection through areas that should be avoided.

b. Strict conformity to the regulations would pose an unnecessary hardship to the applicant.

Strict conformity to this regulation would require the applicant to develop the site in a manner not consistent with the Open Space Subdivision Regulations.

2. Identification of Waiver Request: Section 15.2.1 Road and Driveway Design and Construction Standards Table 1

- To permit Peekaboo Drive and Frederick Drive to be built with a reverse curve containing a tangent less than 100’.

Explanation:

In one instance near the entrance of Peekaboo Drive, and one instance on Frederick Drive there is a tangent between two reverse curves that is less than 100’. It is proposed to be 54.81’ and 24.2 respectively.

Waiver Justification:

a. Granting the waiver will properly carry out the purpose and intent of the regulations.

The intent of this regulation is ensuring safe travel along roadway alignments with a focus being on the reduction of sharp and abrupt reverse curves. In this case, the entrance platform is lengthy with an exiting radius of 100’. The next reduced tangent has an exiting curve with a radius of 175’, which is much larger than required. On Frederick the curves are proposed to be 200’ radii which again are much larger than required. The proposed geometry is easily navigated at speeds above the design speed and is capable of accommodating larger design vehicles.

b. Strict conformity to the regulations would pose an unnecessary hardship to the applicant.

Strict conformity to this regulation would require the entrance curve be modified in position to allow the tangent to lengthen. This would require the tangent to be set closer to the wetlands on one south side of the proposed road, which would increase buffer impact and may cause wetland impact that could otherwise be avoided. In the case of Frederick Drive there would be a reduction in perimeter buffer beyond what is proposed if a longer tangent is proposed.

3. Identification of Waiver Request: Section 15.2.1 Road and Driveway Design and Construction Standards Table 1

- To permit the vertical curve entering the cul-de-sac to be less than 80' in length. 75' is proposed on Peekaboo Drive in two locations on Peekaboo. A 65' curve is proposed on Frederick Drive at the entrance.

Explanation:

The applicant is proposing to enter the cul-de-sac with a vertical curve that is 75' where 80' is required and have a curve within the cul-de-sac with the same 75' length. A length of 65' is used on Fredrick Drive entrance.

Waiver Justification:**a. Granting the waiver will properly carry out the purpose and intent of the regulations.**

The intent of this regulation is to ensure roads are navigable on the vertical plane. The regulations fail to discuss a second metric that is used to determine sight distance, safety, and comfort. K Values (rate of change) are a second, and more appropriate, way of measuring this. The larger the K value, typically the larger the curve. In this case the road is designed with a K value of 30, where something much smaller is likely appropriate. Given the slope in and out the provided 65' and 75' is more than adequate to achieve the intent of the regulation.

Ironically the regulations could allow for a road to be designed where the distance of 80' is met, but the rate of change is inappropriate for the incoming and exiting slopes.

b. Strict conformity to the regulations would pose an unnecessary hardship to the applicant.

Strict conformity to this regulation would require the curve to be needlessly flatter. With the incoming slope of 1.5% and an existing slope of 1%, a flatter (longer) curve creates a longer flat spot at the apex of the curve. This becomes very challenging for pavers to achieve minimum slopes and could produce an area of the road that is prone to icing. The provided design limits this.

4. Identification of Waiver Request: Section 19.3 Well Radius Placement

- To permit well radii to be off the lot for which they serve.

Explanation:

Well radii are typically shown on the lot during the subdivision process and then constructed so that they are off lot. A radius release is then required from the land owner so as not to inadvertently encumber the neighboring lot. The proposed Open Space Subdivision allows for lots that are not as wide as standard lots and therefore the radii will extend onto abutting lots. NHDES permits the applicant to provide radius easements for the purposes of subdivision.

Waiver Justification:

- a. Granting the waiver will properly carry out the purpose and intent of the regulations.**

The intent of this regulation is to ensure each well is afforded the proper radii. The easement requirement will ensure compliance with this intent.

- b. Strict conformity to the regulations would pose an unnecessary hardship to the applicant.**

Strict conformity would require the applicant to develop a standard subdivision and not use the Open Space Subdivision ordinance.

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