

BERRY SURVEYING & ENGINEERING

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August 5, 2019

Town of Nottingham
Planning Office
Attn: JoAnna Arendarczyk, Planning Secretary
139 Stage Road
P.O. Box 114
Nottingham, NH 03820

RE: Domus Developers Inc.
Subdivision Review
Old Turnpike Road
Nottingham, NH
Tax Map 6, Lot 22

Mr. Chairman, Members of the Barrington Planning Board,

On behalf of Domus Developers Inc., Berry Surveying & Engineering (BS&E) is replying to comments made by CMA Engineers dated July 19th, 2019. Our responses are in **bold**

Zoning Ordinance Regulations

Article II

1. Commercial/Industrial Zone

- Permitted uses
 - i. The proposed residential uses are permitted. Single family, and multifamily with no more than four residential units. The multifamily buildings each have 4 residential units.
No comment needed.
 - ii. Requirements
 1. Setbacks. All are met
No comment needed.
 2. Lot size. Met
No comment needed.
 3. Building height. 34 feet max required. The architectural drawings indicate a height of 34' 11", exceeding the standard. Applicant should clarify/modify proposal or seek special exception from ZBA per the ordinance.

Updated architectural renderings will be submitted to the Town as a final condition of approval and upon a request for a building permit. The structure will remain compliant with the zoning document and will stay within the 34' max building requirement.

Article II

2. Multi Family Development

- Requirements
 - i. Land area requirements for the 12 residential units on multifamily lots are met, including 2 acres per dwelling unit (minimum of 24 acres each site).
No comment needed.
 - ii. Frontage, density, setback, and buffer zone requirements are met.
No comment needed.

Article III, Overlay Districts

- There do not appear to be any overlay districts for these projects. While there are identified wetlands soils on the sites, they do not appear to be included in the 1985 or 1999 maps. Regardless, there is no disturbance of any wetlands or prohibited uses proposed.
No comment needed.

Article IV, General Provisions

- Outdoor Lighting
 - i. Regulations: The applicant has included a lighting plan that demonstrates limited lateral lighting/lumens emanating from light fixtures at the buildings and at the intersections with Route 4. The applicant should confirm/demonstrate that the standards in a) and b) are specifically met.
 - a.) **The lamps provided are new and are of high quality, which throw the required amount of light at a medium lumen distribution at the required locations. The lamps at the door ways are residential style lamps while the parking area lamps are low lumen down lit and shielded with no proposed “hot spots” under the lamp. The greatest lumen count below the lamp is 2 candle foot.**
 - b.) **There is no light trespass proposed with the exception of at the entrances to the two proposed roads where light does travel into the NHDOT right of way. The highest lumen at the edge of pavement is 0.5 candle feet which is not a distracting amount of light.**
- Impact Fees. The applicant has prepared a Fiscal Impact Analysis. The analysis appears to show minimal impacts to municipal resources. However, this should be reviewed by the Planning Board.
A copy of the fiscal impact analysis was given to the Town in the original submittal and no comments were made regarding impacts on municipal resources.



Subdivision Regulations

Article 10 – Additional Information and Studies

- 10.5 Traffic Impact Analysis. The applicant has present sight distance plans demonstrating satisfactory sight distances for the proposed driveways. Additionally, NHDOT entrance permits will be required for each of the entrances, and NHDOT will complete their own reviews. However, it is suggested that a brief narrative be developed by the applicant describing the ADT of each entrance, and the satisfactory performance with respect to each of the criteria listed in this section.

Narratives for the ADT have been included in the traffic impact analysis and were submitted to the Town for review.

- 10.5 Environmental Impact Assessment. The applicant has prepared significant information regarding soils at the site. In the Fiscal Impact Statement, references are made to environmental impacts. We suggest the applicant prepare a brief narrative addressing the points in the section, to document the assessment.

This was discussed at the July planning board hearing and it was determined that the information previously provided was sufficient.

Article 14 – General Design Standards

- 14.5 Fire Protection. The applicant has stated that the multifamily buildings will be sprinkled for fire protection. No criteria for this or specific approaches are provided. For example, on-site water wells are proposed. What is the capacity of these expected to be, and what is the flow and pressure requirements of sprinkler systems, and what are the controls and mechanical systems? Are cisterns required or prudent with separate pumps? The applicant should consult with the Nottingham Fire Department and possibly fire protection specialists to further develop this element.

Additional information and provisions have been added to the plan however until such time as a well is drilled and the water production is established a final fire suppression design cannot be provided. These systems will be small 13 series systems. The plans now show a water closet to allow for separate risers if needed within the structure as well as a place holder for an exterior tank if additional water is needed for the suppression system. Prior to a building permit these details will be added to the plans and provided to the code enforcement officer and fire chief.

- 14.10 Names of Subdivisions and Streets. Is this section applicable for the private roadways at these sites?
No comment needed.

Article 15 – Road and Driveway Design and Construction Standards.

- The applicant cites “Minor Local Road” standards. We do not see that classification in the Subdivision or Site Plan Regulations. (We may not be accessing all relevant documents.) The proposed roadway section includes 20 feet of paved travel way, and two 2’ shoulders. The standard in the sketch in the Subdivision and Site Plan regulations includes 24’ of travel way. It is our opinion that 20’ of pavement is satisfactory for these private roads. This is subject to verification of any other local standard.



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No comment needed.

- The applicant proposed a pavement section that exceeds the standard in the Town sketch (4.5" total, vs 4"). The proposed section is superior and appropriate.

No comment needed.

- 15.6.7 Roadside Drainage

- i. Ditches: The roadside ditch on Lot 22 is just over 6%. The ditch on Lot 22-2 is 9.75%; both exceeding the standards. The ditch design appears robust (fabric, riprap, check dams) and may be satisfactory. However, the applicant should describe the measures being proposed to prevent near term or long-term erosion and the adequate functioning of these ditches (without curbing).

Long term maintenance measures are described in the Operations and Maintenance Manual. This maintenance will included inspections (twice a year), periodical mowing (to a depth of not less than 4 inches) and removal of any invasive vegetation. Long term maintenance of the swales will be conducted by the HOA.

- Crown: The roadway on Lot 22 is crowned per specs. The roadway on Lot 22-3 is super-elevated, presumably to direct drainage to the west side of the Roadway, which is satisfactory.

No comment needed.

Article 16 – Drainage, Erosion and Sedimentation Control Standards.

- The applicant proposes a complete design that we believe is robust and conservative. It uses effective methods for erosion control, and units for retention and treatment of stormwater prior to discharge. The drainage calculations support satisfactory performance of the design meeting applicable standards. It is important to note that the projects will be reviewed by NHDES under the Alteration of Terrain permit process, which is usually complete and comprehensive. The applicant should be requested to provide the Town with a copy of the final AoT application, and any agency actions.

A copy of the final Alteration of Terrain Permit will be provided to the Town when acquired.

Article 18 – Subsurface Sewage System Design Standards.

- The applicant proposes systems that serve multiple units. There are two systems proposed at each multifamily site. There have been multiple test pits and soils analyses at the site, and the systems appear to have been designed in accordance with applicable standards. The applicant describes that pre-treatment systems will be used. However, a design narrative and supporting calculations have not yet been provided. The full design will be reviewed by local and State reviewers. Documentation of that process should be provided as part of this Planning Board review process, or more detailed specific information is required.

More detailed schematics are now provided within each plan set, however these are not final designs. Until such time as the building designs are finalized, it is unclear where the most advantageous place will be to exit the proposed structures. The systems



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proposed to do not have pre-treatment, however they are Advanced Enviro Septic Systems. The narrative discusses that these systems are superior when considering nitrogen removal from effluent when compared to more conventional systems. The detailed sizing criteria has now been added to the plans as well as tank sizing and additional information. We would suggest that a condition of approval include receiving a construction approval number for each effluent disposal field and adding it to the plans.

Article 19 – Water System Design Standards.

- On site water supply wells are proposed. The locations meet the protective well radii in applicable standards. The applicant should document the design of these systems, including pressure tanks, water demand requirements, and if they are going to be used for fire protection, details of those systems (see previous comment).
As noted above, until such time as the well production is established (by drilling a well) these systems can not be designed. Considerations for additional tanks have been conceived and are now shown on the plans however. Once production levels are established, these water systems can be finalized alongside the fire suppression systems.

Article 20 – Landscaping, Recreation, and Open Space Standards.

- Logical landscaping plans have been prepared and submitted. These incorporate reasonable buffer strips and addition of street trees. Significant land area remains undeveloped and can serve as open space for the projects. The Planning Board can consider if formalization of the open space is warranted.
No comment needed.

SITE PLAN REGULATIONS

The Site Plan Regulations largely reiterate the technical requirements of the Subdivision Regulations and present no new issues.
No comment needed.

OTHER ISSUES

3. **Waiver Requests:**

- Minimum distance between reverse curves. This is a minor issue on a slow speed road, and reasonable.
No comment needed.
- Max road grade within 50' of intersection (proposed increase from 2% to 4%). It is not clear to us why the 2% cannot be met. Please explain. If it is necessary, the slope is away from the road, which is favorable. NHDOT will also look at this issue in their entrance review.

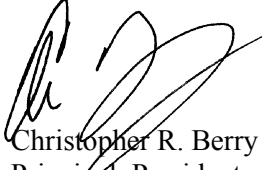
NHDOT requires all proposed driveway cuts to off a DOT controlled road to be no less than 4%. The proposed roadways were designed to be in accordance with this State regulation. NHDOT will receive copies of the proposed plans and applications.



- We have commented on the ditch grade issue above.
No comment needed.
- For the 2:1 side-slope on Lot 22, it is 5-6 feet in total elevation drop on a curve. The applicant should assess non-recoverable vehicle motions per AASHTO or other and justify or propose mitigation, such as with guardrail.
This area has been flattened to a 3:1 side slope to negate the need for guardrails. The AASHTO Roadside Design Manual was used to determine if guardrails were warranted, given the proposed fill and slope grades.
- The wetlands drawings require stamping by the wetlands scientist.
Stamps and signatures from the wetland scientist will be included as a condition of approval with the final plan set.

BERRY SURVEYING & ENGINEERING

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