



June 22, 2020

JoAnna Arendarczyk  
Nottingham Land Use Clerk  
Town of Nottingham  
1389 Stage Road  
PO Box 114  
Nottingham, NH 03290

***VIA EMAIL***

**RE: Town of Nottingham, Planning Board Support Services  
Review of Diberto Subdivision Proposal  
Mitchell Road, Nottingham Tax Map 7, Lot 1N  
CMA #887.9**

Dear JoAnna:

CMA Engineers has received the following information for this Assignment #9, review of the 14-lot single resident subdivision proposed by Robert Diberto on Mitchell Road in Nottingham (Tax Map 7, Lot 1N):

- 1) Project narrative dated March 16, 2020 by Christopher Berry, SIT, of Berry Surveying and Engineering (BSE) in Barrington.
- 2) Preliminary plan review by SRPC dated May 13, 2020; and response letter by Christopher Berry of BSE.
- 3) Plan set titled Major Subdivision for Robert L. Diberto, Mitchell Road Nottingham NH, Nottingham Tax Map 7, Lot 1N, prepared by BSE dated March 16, 2020 with revision dated April 29, 2020.
- 4) Traffic Impact Analysis and Distribution for Diberto Subdivision, prepared by BSE dated April 9, 2020
- 5) Drainage Analysis and Erosion and Sediment Control Plan, Tax Map 7, Lot 1-N Mitchell Road, Nottingham NH and application documents for an NHDES Alteration of Terrain Permit application prepared by BSE and dated March 16, 2020, revised May 2, 2020.
- 6) Fiscal Impact Analysis for Robert L. Diberto Tax Map 7, Lot 1-N prepared by BSE.

We have reviewed the information submitted for conformance with the Nottingham land use ordinances, including the Zoning Ordinance, Subdivision Regulations, and general engineering practices and offer the comments below that correspond directly to the Town's Ordinances.

## **Background**

The proposed subdivision is on Tax Map 7, Lot 1-N, and proposes to subdivide the lot into fourteen lots for single family residences. The property is in Nottingham's Residential-Agricultural District. It borders land owned by the developer in Barrington, and land along Route 4 that is in the Commercial Zone. The existing site is generally undeveloped and wooded.

The owner is Robert Diberto of Madbury, NH. Project application documents were prepared by Berry Surveying and Engineering of Barrington, NH, which has also completed the detailed on-site survey and wetlands analysis. Wetlands have been flagged by John P. Hayes, CWS and CSS. While there are significant wetlands on the site, the proposed development largely avoids impacts to wetlands except for two roadway crossings

New roadways are proposed, including a roadway with two separate entrances to Mitchell Road, and a cul-de-sac road off the loop roadway that accesses some lots. Twelve of the proposed lots have access to these new proposed roadways. The two lots are directly off Mitchell Road and are proposed to share a driveway.

A comprehensive site drainage system includes combinations of swales, culverts and ten stormwater treatment and detention features including gravel wetlands, an infiltration basin, and detention ponds to capture and treat runoff.

All properties are proposed to be served by separate individual on-site water supply wells and septic systems.

A set of water storage cisterns (30,000 gallons total storage) are proposed to be an on-site supply of water for fire protection purposes.

Mitchell Road connects to Smoke Street to the west (approximately 700' from site), which provides ready access to US Route 4. Mitchell Road is a gravel road of varying width between Smoke Street and the site and remains gravel easterly to Shannon Drive.

State permits are required for the projects, including NHDES Alteration of Terrain (AoT) permits for stormwater management and erosion control; and NHDES Wetlands Permit for the two roadway crossings of on-site wetlands. The AoT permit application is available; but the Wetlands permit application has not been reviewed. In addition, an NHDES Subdivision approval for the 14 septic systems is also required. Agency actions are not yet available.

The applicant has requested several waivers under the subdivision regulations. These are discussed later in this letter.

## **Zoning Ordinance Regulations**

### **Article II,**

#### **C. Residential-Agricultural Zone**

- Permitted uses include the proposed single-family residences.
- Requirements

- Minimum lot size of 2 acres is met
- 200-foot frontage is required and is provided
- Required lot configuration and contiguous upland area are met

#### Article III, Overlay Districts

Poorly and very poorly drained soils have been extensively mapped on the site. The required setbacks to wetlands have been included in the design. The Nottingham Aquifer Protection overlay district does not include this lot.

#### Article IV, General Provisions

- The Open Space Development provisions do not apply and are not proposed.
- Impact Fees. The applicant has prepared a Fiscal Impact Analysis. The analysis discusses impacts to municipal resources being minimal. **However, there are at least two areas that the Town can consider as impacts that may need to be mitigated:**
  1. **Roadway impacts:** The project will direct traffic onto gravel Mitchell Road. Most will proceed paved Smoke Street, which is paved and has direct access to Route 4. The Board may consider requiring upgrading Mitchell Road to a paved roadway which meets town standards between Smoke Street and the eastern entrance of the on-site roadway.
  2. There are many stormwater treatment and conveyance structures associated with the project. These are required for the project to meet stormwater management requirements and by NHDES for the AoT permit. The applicant has prepared a detailed long-term operation and maintenance plan for this system. These measures are significant, and if assumed by the Town would have cost. The responsibility for completing this O&M should be determined. The Town may wish to consider the responsibility remaining with the developer, of a legal association of property owners.

#### **Subdivision Regulations**

##### Article 10 – Additional Information and Studies

10.5 Traffic Impact Analysis. The applicant has presented a Traffic Impact Analysis and Distribution plan for the subdivision. The plan generally supports the design, sight distances, design speeds, and other aspects of the project. **However, as noted above, the recommended improvements to Mitchell Road may not be considered satisfactory. This provision, in combination with the impact analysis note above, may support paving of Mitchell Road between Smoke Street and the easterly connection of the on-site roadway to Mitchell Road.**

10.6 Environmental Impact Assessment. The applicant has prepared significant information regarding soils at the site, and documentation of the efficacy of the stormwater management system and its impacts to surrounding sensitive wetlands. In the revised Fiscal Impact Statement, references are made to environmental impacts. **Is this satisfactory to the Board?**

## Article 11- Actions on Applications

### 11.1 Waivers.

The applicant has requested waivers of two design provisions:

- Sideslope of roadway at certain sections increased from the 3 horizontal: 1 vertical standard to 2:1. This is proposed in areas where there are tight layout constraints to place stormwater features without impacts to wetlands. It is proposed to supplement the surface in these areas with materials to further prevent erosion. Additionally, guardrails are proposed for the roadways in these areas to protect vehicles. These measures are reasonable for consideration of this waiver.
- Cul-de-Sac. The dead-end cul-de-sac is proposed to access several proposed lots. This is not a long road and connects to the proposed looped roadway to Michell Road. It is a logical layout, and the cu-de-sac radius and other details are favorable. Consideration of the waive is supportable.

## Article I4 – General Design Standards

### 14.4. Protection of Existing and Historic Features

The nature and significance of the Captain Smith Stone on the eastern part of the property needs to be determined. This will likely be a requirement of State permitting processes. The applicant has stated that this process has been started with coordination with the NH Division of Historical Resources (DHR), and the engagement of an archeologist to research the site. **Any reports or conclusions regarding this work should be submitted to the Town, and design changes (if any) should be proposed.**

### 14.5 Fire Protection.

A set of water storage cisterns (30,000 gallons total storage) are proposed to be an on-site supply of water for fire protection purposes. These appear to meet the general requirements included in the Subdivision ordinance.

**It appears that they are sited with underdrains that would address flotation risks, but that should be confirmed by BSE.**

**Also, the Nottingham Fire Department should review the size and design details of the cisterns, and confirm they are satisfactory or request modifications.**

Article I5 – Road and Driveway Design and Construction Standards. The proposed roadway section includes 20-feet of paved travel way, and two 2' shoulders for areas without curbing; and 24-foot paved travel way with no shoulders here in curbed sections. This meets the written standard in 15.2.1. The standard in the sketch in the Subdivision and Site Plan regulations includes 24' paved travel way and 2-foot gravel shoulders. Because these are low volume roadways, these dimensions may be satisfactory. **If the Board wishes to accept these dimensions, confirmation that access is satisfactory for emergency vehicles, including by the Nottingham Fire Department should be confirmed.**

The applicant proposed a pavement section that is less than the standard in the Town sketch (3.5" vs 4" total). The pavement section should be increased to the standard. **We note there is a**

discrepancy between the sketch in the Ordinance (4" total), and the written standard in Article 5 (3" total). The sketch standard is superior for the long-term.

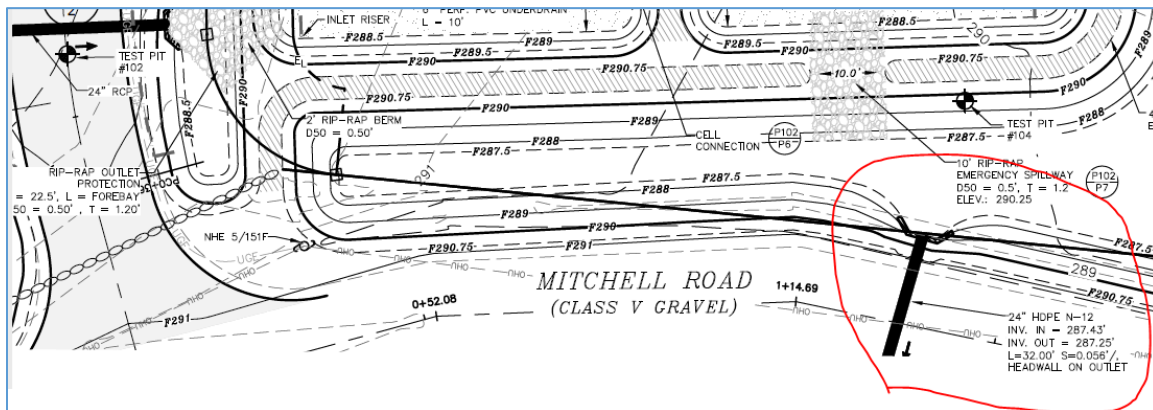
The sideslope waiver was addressed earlier in this letter.

Other construction standards in the Ordinance are met with the design.

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.**

As noted above, the O&M requirements of the design are significant, and determination of the parties responsible for compliance is necessary. The requirements may be beyond the Town's available capabilities, and a different arrangement by others may be appropriate.

On a specific feature, the proposed replacement of the cross culvert on Mitchell Road west of the first on-site road entrance is proposed as a 24" HDPE pipe. The existing pipe is a 12" HDPE. The drainage analysis shows the discharge flows being maintained or decreased. It is not clear why a large increase is warranted. Further, it does not appear that satisfactory cover would be over the pipe. This issue should be reviewed, possibly with modifications of Mitchell Road that includes paving.



Article 18 – Subsurface Sewage System Design Standards. The applicant proposes individual separate septic systems for each lot. 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. **A NHDES Subdivision approval will be necessary, along with individual local approvals for these systems.**

Article 19 – Water System Design Standards. Individual on site water supply wells are proposed for each lot. The locations meet the protective radii in applicable standards.

## Other Issues

The wetlands drawings require being stamped by the wetlands scientist.

The NHDES Wetlands permit application for the two proposed roadway crossings of wetlands should be supplied to the Town.

Should you have any questions, please do not hesitate to call.

Very truly yours,

CMA ENGINEERS, INC.



William A. Straub, P.E.  
Principal/Project Manager

WAS/kao