



November 18, 2019

Linda Smith, Northwood Board Administrator
Town of Northwood
818 First NH Turnpike
Northwood, NH 03261

**Re: Aroma Joes – Traffic Review
261 First NH Turnpike - Map 231; Lots 78 and 79, 29-1
CMA # 769 Task 17**

Dear Ms. Smith:

At the Town's request, CMA Engineers has reviewed materials supporting the site plan application for 8 Bow Lake Road, Northwood NH. The plan includes construction of a drive-thru coffee shop (Aroma Joe's), a retail green house, small office and single-family residence.

For this evaluation, we reviewed the following information:

1. "Proposed Site Plan," (18 sheets), prepared by NH Land Consultants, dated June 3, 2019, with a revision date of September 20, 2019.
2. Traffic Impact Assessment, Proposed Drive-thru Coffee Shop, prepared by Stephen G. Pernaw & Company, Inc., dated October 2019.

Our review focused on the Traffic Impact Assessment and its conformance with the Town of Northwood, NH Site Plan Review Regulations and state and federal requirements.

REVIEW OF TRAFFIC IMPACT ASSESSMENT

Based on our review, we offer the following comments, for consideration by the applicant:

1. Beyond what is shown on the plans, additional tree clearing may be required to provide required sight lines for safe operations at the site driveway and Bow Lake Road. The required sight lines/sight triangles should be shown on the plans.
2. In the AM Peak hour, the study estimates this project will increase traffic by 30% on the Bow Lake Road approach to Route 4. With this increased traffic, the expected queues (175') on Bow Lake Road for vehicles turning onto Route 4 exceed the turn lane lengths (80') at the intersection. This situation will cause cars waiting to turn left to block cars trying to turn right. To alleviate this

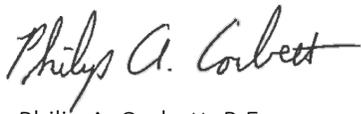
situation, the storage length in the turn lanes would need to be increased by widening Bow Lake Road further (~100') to the northeast.

3. Under existing conditions, a right turn lane is warranted on Route 4 at Bow Lake Road. This project estimates it will add 20% more traffic to this movement, exacerbating the needs for a right turn lane on Route 4.

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

Very truly yours,

CMA ENGINEERS, INC.



Philip A. Corbett, P.E.
Project Manager