

HOLDEN
ENGINEERING & SURVEYING, INC.

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December 6, 2017, 2017

1670006

C .R. Willeke
Project Manager
Bureau of Planning and Community Assistance
P: 603-271-6472
Email: charles.willeke@dot.nh.gov

Re: Sanbornton, #29744
Revisions to Drainage Design

Dear C.R,

This letter is written to explain the modifications to the drainage design, as indicated in the attached drainage report, revised November 21, 2017, and as follows:

Due to issues with negotiating an easement with the following land owners;

Map 18 Lot 52 land of Lower Bay Realty, LLC c/o Chris Kane

Map 18 Lot 51 land of Brian H Wells Revocable Trust

For a proper discharge point on their property, the existing and proposed culvert outlet has been eliminated, indicated as analysis point 2 in the analysis. And the runoff from this intermittent outlet point, has been routed via the trench drain between STA 9+78—STA 14+72 (Node 3R) to LB#105 at STA 14+30 (Node 3A), which discharges on Map 18 Lot 49 Land of Charles Lawrence, et al, also being analysis point 3.

To balance the peak rates of discharge flowing to the Lawrence property, the trench drain between STA 14+32—STA 15+72 (Node 4R) was reversed pitched against the roadway grade at 0.005 ft/ft and routed to LB 108 STA 20+50 (Node 5P).

The following is a summary of the original analysis points with the subsequent revisions in red underneath:

Analysis Point	HydroCad Sub-catchment Nodes	Tributary Area (Acres)	Composite CN	Runoff (cfs)	Volume (Acre-Feet)
2	2	4.89	60	3.21	0.470
2	eliminated	0	0	0	0
3	3/4	21.82	56	10.64	1.812
3	2/3	15.99	59	8.97	1.471
5	5/6	14.18	57	7.53	1.181
5	4/5/6	24.90	57	12.06	1.991

Sincerely,
Holden Engineering & Surveying, Inc

Douglas V Brodeur, PE
Civil Engineer