

Memorandum

By: Roger Dickinson, P.E, PTOE
Date: February 13, 2012
RE: Proposed Hannaford Supermarket, Hinesburg

As requested, the following is in response to selected questions and responses outlined in Rick Bryant's January 19th Memorandum to Peter Erb.

Q/A #3 and Q/A #5: The proposed Hannaford Supermarket will not require a cap on Lantman's future pm peak hour trip generation. Hannaford is not claiming a reduction in trips from Lantman's as part of its traffic mitigation. The traffic studies for the proposed Hannaford Supermarket have estimated a lower Lantman's future pm peak hour trip generation in order to provide the Hinesburg DRB with a reasonable and as realistic as possible analysis of future traffic conditions without a supermarket at Lantman's.

However, as was pointed out in our December 12, 2011 Memorandum and December 20th DRB presentation, eliminating the existing EB/WB split traffic signal phasing at the Charlotte Road intersection improves future traffic congestion conditions such that even in the unlikely event that Lantman's were to continue to generate 251 peak hour trips (based on VTrans June 10, 2009 turning movement count), existing Route 116 traffic conditions would continue to be improved without creating unreasonable traffic congestion on Charlotte Road or Lantman's exit. This can be seen by comparing the simulation analysis results shown in the following table.

	No-Build			Build*		
	LOS	Avg. Delay	Max. Queue	LOS	Avg. Delay	Max. Queue
<u>VT 116 & Charlotte Rd</u>						
Charlotte Rd LT	D	38	100'	D	54	101'
Charlotte Rd RT	B	13	79'	B	19	162'
Lantman's LT/TH/RT	D	46	192'	E	59	299'
Route 116 NB LT/TH/RT	D	44	631'	D	49	742'
Route 116 SB TH/RT	E	71	1,046'	C	23	825'
Overall	E	58		D	35	

* with existing Lantman's pm peak hour trips

Based on the above results, a formal agreement or permit condition limiting Lantman's future pm peak hour trips, as suggested by Rick Bryant, is unnecessary.

Q/A #4: The southbound left-turn pocket lane at Lantman's was proposed by Hannaford to help minimize conflicts between southbound left-turning vehicles and southbound through traffic passing through the Charlotte Road intersection. With this left-turn pocket lane being

located downstream of the southbound Route 116 at this intersection, its presence or absence has no effect on the numerical results of the intersection capacity analysis or simulations which have been presented to the Hinesburg DRB. Therefore, Hannaford is agreeable to eliminating the proposed southbound left-turn pocket lane if the Town and/or DRB does not desire it.

Q/A #7: Existing pedestrian crossing safety at the Mechanicsville Road/Commerce Street intersection will be significantly improved this summer with the construction of the new CVU/Road/Mechanicsville Road recreation path by the Town. That project will construct a new sidewalk from the end of the existing bike path at Commerce Street north to CVU Road. It will do so by crossing the Canal on the south side of Commerce Street, then crossing to the easterly side of Mechanicsville Road on the south side of the Commerce Street/Thorn Bush Road intersection, then crossing Thorn Bush Road and continuing northerly along the easterly side of Mechanicsville Road.

That project will install new crosswalk markings and new crossing signs at the Mechanicsville Road/Commerce Street/Thorn Bush Road intersection that will be in conformance with current *Manual on Uniform Traffic Control Devices* safety standards.

Q/A #9: Hannaford is agreeable to maintaining the existing shared left/through lane and exclusive right-turn lane on the Commerce Street approach to Route 116 at this intersection.

Q/A #10: The most recent (December 2011) intersection capacity and simulation results presented to the Hinesburg DRB utilized existing traffic signal timings, including pedestrian crossing times at the Charlotte Road and Commerce Street signalized intersections. No changes in the signal cycle lengths or existing pedestrian crossing times are now being proposed by Hannaford.

We have also examined the proposed sidewalk relocation at Lantman's exit and have softened the abruptness of the proposed jog, given the constraints imposed by existing utilities and large trees. Attached is a sketch showing the revised sidewalk alignment.

Q/A #11: Follow-up post construction traffic monitoring can be helpful in identifying actual traffic congestion and safety impacts vs. the originally projected traffic conditions. Because many factors unrelated to the proposed project can have material effects on traffic congestion, follow-up monitoring is typically limited to verifying that a development's peak hour trips and the directional patterns of those trips are similar to what was originally estimated. Additional traffic analyses and reassessment of traffic impacts are then only required in the event that substantial differences are observed.

Accordingly, we propose a permit condition requiring Hannaford to conduct a monitoring study six to twelve months after the store opens. The study would begin with counting the actual PM peak hour trip generation of the store. In the event the PM peak hour trip generation is 20% or more lower than the ITE estimates used in the pre-development traffic study, no further analysis will be required. If the trip generation is within 20% of or exceeds the pre-development estimate, then the second phase of the study would begin with post-development traffic counts at each intersection. Additionally, the actual trip distribution of Hannaford generated trips would be identified based on random customer interviews during the weekday pm peak period. If the second phase of the study shows that post-development turning movements at any intersection are 20% or more higher than predicted, then Hannaford would also be required to further examine whether further mitigation is warranted at any such intersection; keeping in mind that a development's obligation is to mitigate its impact, not solve pre-existing problems or create surplus capacity.

Similarly, the last paragraph of Rick Bryant's Memorandum suggests that Hannaford should be required to cover the cost of any required culvert widening on Route 116 north of Commerce Street. As shown on the Commerce Street Utility Plan by O'Leary-Burke Civil Associates for this Project, the existing culvert carrying Patrick Brook under Route 116 is located 450 ft north of the southbound Route 116 stop bar at Commerce Street. Hannaford is proposing to lengthen the existing southbound left-turn lane, which presently has a 75 ft storage length (3 cars), to provide 175 ft of storage length (7 cars). The remaining distance between the end of the left-turn lane and the culvert will be used for approach and entry tapers. With Route 116 being a state highway, the design details for this left-turn lane will be reviewed by VTrans. In the December 2011 analyses presented to the Hinesburg DRB, the Synchro HCM analyses predicted a 95% queue length of 156 ft. The SimTraffic simulations predicted a 95% queue length of 186 ft. The 95% queue length is the VTrans accepted design standard. That is the maximum queue length not exceeded for 3 minutes during the peak hour.

Reassessing the need to further lengthen the southbound left-turn lane and widen the Patrick Brook culvert would only be performed should traffic monitoring conducted six to twelve months after store opening show higher than predicted left-turn movement volumes, and that left-turning vehicles are impeding through traffic movement for more than 3 minutes (5%) during normal pm peak hour conditions.



VT 116

CHARLOTTE ROAD



1 inch = 20 ft.

VT 116 / Charlotte Rd
Sidewalk Relocation



LAMQURE UX & DICKINSON
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Essex Junction, VT 05442
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Scale	1" = 20'
Proj. No.	10024
Date	Sept. 2011