



# Traffic Advisory Committee

## TOWN OF BELMONT

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Laurence Macdonald, Chair  
Dana Miller, Vice Chair

Peter Curro  
Mary Gavin  
Michael Lanza  
Donald Mercier  
Tommasina Olson  
Elizabeth "Sue" Pew  
Matt Sullivan

**Date:** June 7, 2018

**To:** Members – Traffic Advisory Committee

**From:** Glenn R. Clancy, Committee Liaison

**Subject:** Agenda for Meeting on **Thursday, June 14, 2018 at 7:00 PM** in Town Hall Auditorium, Town Hall. If you cannot attend the meeting, please contact me via e-mail.

**7:00 – 7:05** Minutes (April 12, 2018, May 10, 2018)

**7:05 – 7:30** Upper Goden Street Traffic Concerns (Residents – Erin Rowland and Steve Sloan)

**7:30 – 8:15** Belmont High School Building Project

- Discussion of Peer Review of Proposed High School Entrance – Goden Street
- Discussion and Vote on TAC Recommended Actions

**8:15 – 8:30** Town Wide Traffic Study

- Update

**8:30 – 8:45** Cushing Square Parking Permit Fee (Board of Selectmen)

**8:45 – 8:50** Old Business

- No Known Items

**8:50 – 8:55** New Business

- No Known Items

**8:55** Adjourn

Note: Times are tentative depending on the flow of the meeting, the time of any particular item may deviate ten to fifteen minutes from the schedule.

**Cc:** Patrice Garvin, Town Administrator  
Sgt Ben Mailhot, Belmont Police Department  
Richard McLaughlin, Belmont Police Chief  
Jay Marcotte, Director, Department of Public Works

## Traffic Advisory Committee

April 12, 2018

Minutes

Committee Members Present: Larry Macdonald (Chair), Dana Miller (Vice Chair), Peter Curro, Mary Gavin, Donald Mercer, Sue Pew, Matt Sullivan

Ex Officio Committee Members Present: Sergeant Ben Mailhot (Belmont Police representative to the committee)

Others Present: Patricia Brusch, BHS Building Committee; Mason Peltz, 174 Beech Street; John Madden, 78 Waverley Street; John Kolterman, 107 Orchard Street, Camille Fuleihan 3 Sandrick Road; Jane Maloof, 3 Sandrick Road; Margaret Waters, 106 Orchard Street; Anne Paulsen, 90 School Street; George Wybieralla, 101 School Street.

7:02pm: Minutes. The TAC approved, with minor changes to the listing of committee-member names, draft minutes for October and December 2017, January and February 2018.

7:10pm: Town-Wide Traffic Study. One resident asked that, as part of the study, the town evaluate the current traffic restrictions on School Street and the impact of these traffic restrictions on Orchard Street traffic. Ms. Waters would like the town to remove the sign that restricts traffic during school hours from travelling down School Street, past Cottage Street. Other residents pointed out that this section of School Street is used by children to cross to the town pool and the play area uphill from the pool, that it can be difficult to see those crossing School Street in this stretch, that the proposed raised crosswalk at the corner of School and Cottage Streets (which would have provided a safer crossing) was never implemented because of technical construction challenges, and that, therefore, limiting traffic on this stretch of School Street is important for pedestrian safety.

**Need further info on cars not being allowed to exit the Wellington parking lot to School Street and what was the outcome regarding the letter from Jeanne McCarthy of Cottage Street?**

7:20pm: Waverley Street. Resident Mason Peltz addressed the issues that he raised in his January 15, 2018 letter to the Board of Selectmen. Mr. Peltz suggested that the town restrict parking on one side of Waverley Street, between Trapelo Road and Irving Street in order to improve the safety of cars moving down this section of the street. After a full discussion of Mr. Peltz's concerns and comments from other area residents, the Committee voted to take no action on this proposal.

7:45pm: No Old Business

7:50pm: New Business

- Beech Street at Upland Road -- No Parking Here to Corner

After hearing comments from Sargent Mailhot and residents, and a full discussion, the Committee voted to recommend that the town restrict parking on Beech Street, near the corner of Upland Road. **Need the exact terms for the parking restriction at the corner**

- No Parking at 145 Beech Street

Matt Sullivan explained that it is difficult for drivers to make a safe exit from the Dunkin Donuts parking lot because cars parked on the street block the driver's view of Beech Street and oncoming traffic. Mr. Mercer voiced his concern that Belmont has insufficient parking spaces and recommended that, instead of removing a single parking space, we remove half of a parking space. Sergeant Mailhot explained that removing a half of a space would be

counterproductive because half of a space would neither accommodate a parked car nor allow for a useful view of street traffic. The Committee voted to recommend the removal a single parking space next to the parking lot driveway to allow drivers a better view of the traffic.

8:40pm Meeting adjourned

## **Upper Goden Street**

**From:** Erin Rowland  
**To:** Larry MacDonald  
**Sent:** Monday, June 4, 2018 6:09 PM  
**Subject:** Questions for June 14

Laurence Macdonald  
Traffic Advisory Committee  
Town of Belmont

Dear Larry:

Thanks so much for getting back to us so quickly about getting on an upcoming agenda of the Traffic Advisory Committee. As we mentioned earlier, we are part of a group of residents (currently about 25 households on Goden Street, Long Avenue, Hillcrest Street, and Fairmont Street) who are concerned about both the existing traffic flow in the Goden Street area and the impact the new high school design may have on Goden Street and the streets connecting Goden and Common Streets.

Together, we have developed the following list of concerns and questions. As a recently organized grassroots group, we are not familiar with every committee that might be relevant to these concerns. We would appreciate TAC responding to the ones that fall into its jurisdiction and helping direct us to others where appropriate.

### Concerns:

- Goden Street and the connector streets (Long Avenue, Hillcrest, Cedar and Fairmont Streets) already sustain heavy traffic associated with the Chenery and Wellington schools. The feeling among area residents is that the volume of traffic has been steadily growing over the years.
- Traffic speed on Goden is too fast, given the residential uses and number of children who walk to and from school every day. This is especially true on upper Goden, which is longer than lower Goden and where drivers often build up more speed. In addition, residents have noticed a few cars which consistently travel at high speeds (way above the speed limit), often in the evening and at night.
- Residents of Hillcrest, Cedar and Fairmont Streets also report that folks drive too fast on these roads, and this is a particular concern given the number of children walking to and from school and the lack of sidewalks on portions of these streets.
- Goden hosts a very large number of children on foot, because Wellington, Chenery and Burbank are all nearby. Because of the high volume of traffic and the speed issues, this

leads to serious safety concerns.

- Currently, children cross Goden at unpredictable locations because there is no crossing guard at the Goden/Orchard intersection. Several of us have seen young children walk directly into traffic without looking first.
- Given this unsatisfactory current situation, the new high school plan raises even more concerns, because it has the potential to channel additional traffic through this area. It is especially troubling that our youngest cohort of drivers, high school students, will be concentrated along roads with so many young children walking along them.
- Independent of the high school plan, we would like to discuss options for reducing the volume and speed of existing traffic on Goden Street and connector streets, as well as increasing safety. These include 1-2 raised intersections, additional stop signs, new speed limit postings, and a crossing guard at the Goden/Orchard intersection.
- In addition, we would like to provide input into the planning process around traffic issues associated with the new high school, and to voice our support for measures that would reduce the number of cars driving to the high school (for example, charging for parking at the high school, subsidizing busing, building a pedestrian tunnel under the railroad tracks, so people from the Winn Brook area can drop off easily on Channing Road and also have the opportunity for their children to walk safely to school). We are also interested in pursuing strategies that would minimize the increase of traffic down Goden Street and connector streets (allowing exiting high school traffic to turn left from Underwood Street, for example, and exploring one-way road options).

#### Questions:

- Why does upper Goden Street, which has so many children walking along and across it have a posted limit of 30 MPH, when the town-wide speed limit is 25 MPH?
- What is the process for residents to request traffic calming measures, such as reduced speed limits, raised intersections, additional stop signs and/or one way restrictions?
- What is the process for requesting a crossing guard?
- How can the town successfully improve compliance with the posted speed limits on Goden Street?
- We have heard TAC has commissioned a town-wide traffic study. Where does that stand and is there an opportunity for public input?
- Does the town have any data on the daily traffic volume on Goden Street and the connector streets between Common and Goden (Long, Hillcrest, Cedar, and Fairmont) on

a school day? What is the traffic volume predicted to be once the new high school is constructed with Goden Street as a primary entrance point?

- What measures has the town committed to taking, in order to reduce automobile traffic to the high school (for example, charging students for parking at the high school and reducing bus fees)?
- Is the town committed to building a pedestrian tunnel under the railroad tracks, so that Winn Brook area students can walk to the new high school safely, and so that families on that side can drop off on Channing Road?

Thank you very much for your willingness to address these issues with us. We look forward to the discussion.

Sincerely,

Erin Rowland and Steve Sloan – 178 Goden Street  
Steve Conlin and Anne Donahue – 175 Goden Street  
Chris and Jill Babcock – 130 Goden Street  
Betsy and Fielding Lewis – 154 Goden Street  
Kate Shea – 67 Goden Street  
Jennie Ulin – 123 Goden Street  
Chris Carter – Husk and Fred Husk – 142 Goden Street  
Hildy Dvorak and Ray Jackendoff – 79 Goden Street  
Sue Garland – 172 Goden Street  
Susan Black – 148 Goden Street  
Jack and Rosemary Tobin - 78 Long Ave  
Harry and Joan Stoddard - 70 Goden Street  
Kevin Pirani - 81 Fairmont Street  
Dan and Barbara Barry - 129 Goden Street  
Peter Russell - 44 Hillcrest  
Jane Levin and Bob Rifkin - 89 Hillcrest Road  
Ellen and David Sullivan - 15 Fairmont Street  
Debora Hoffman – 118 Goden Street  
Carol Philipps – 74 Orchard Street  
Joe and Janet Rife – 34 Cedar Street  
Janet and Phil Notopoulos – 48 Fairmont Street  
Jean Layzer – 42 Fairmont Street  
Kathy Pollakowski – 24 Fairmont St.  
Danielle Lemack and Ross Bremen – 30 Fairmont St

**To:** Mr. Glenn Clancy, P.E., Director of Community  
Development, Town of Belmont

**Date:** June 8, 2018

**From:** Sam Offei-Addo, P.E., PTOE

**Proj. No.** 28374.00

**Re:** Belmont High School – Peer Review of Driveway Location

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BSC Group has been requested by the Town of Belmont to perform a peer review of the Belmont High School Building Committee's proposal to locate the new high school entrance/exit across from Goden Street. BSC has reviewed the traffic study report, site layout plans and site access analysis prepared by Nelson / Nygaard on behalf of the Building Committee. BSC also attended meetings where the Building Committee presented their findings and residents provided their input.

BSC was asked to evaluate the following:

- Is the traffic data used in the study adequate?
- Is the proposed location of the High School drive opposite Goden Street the best location?
- What if the entrance/exit was opposite Oak Street and traffic was required to turn right only from the site and then allowed to proceed to Goden Street as it does today, with Goden Street signalized or unsignalized?
- Is it better to have two separate entrance/exit points along Concord Avenue? If yes, where should they be located?
- How does one-way operation on Goden Street impact traffic flow to and from the high school?

#### **Completeness of Data Collection:**

Nelson/Nygaard obtained intersection turning movement counts (TMCs) collected in September 2017 during the weekday morning (6:30-8:30 AM) and afternoon (1:30-3:30PM). These times are consistent with the peak drop-off and pick-up times at the high school. TMC locations included Concord Avenue intersections with Common Street, Goden Street, HS Driveway/Orchard Street, and Underwood Street; as well as Brighton Street at Hittinger Street. In addition to vehicles, the number of pedestrians and bicyclists were also recorded.

Continuous 48-Hour automatic traffic counts were obtained on Concord Avenue and Brighton Street.

BSC has reviewed the traffic data and concurs that they generally meet standard traffic engineering practice, and general traffic volume data requirements contained in the Transportation Impact Assessment (TIA) Guidelines by MassDOT. The National Cooperative Highway Research Program (NCHRP) Report 457 notes that the objective is to obtain traffic volumes for the "average day"; data that represents traffic conditions occurring normally and repeatedly at the study location. For most development projects, the AM and PM peak commuter periods are needed. In the case of a school, the afternoon dismissal period also needs to be evaluated.

As part of the Town wide Traffic Study, BSC obtained twelve-hour TMCs at Concord Avenue at Common Street, Concord Avenue at Goden Street, and Concord Avenue at Brighton Street in April 2018. BSC's data at these locations are consistent with data collected by Nelson Nygaard.

Additional traffic volume counts may be required for Traffic Signal Warrant Analysis and for the PM commuter peak (4-6 PM). The intersection of Goden Street and School Street would be directly impacted by the high school traffic and needs to be evaluated.

With the proposed changes to the high school parking, traffic impacts during the major game days should be evaluated.

### Existing Driveway – Location and Operation

The existing high school driveway on Concord Avenue is offset to the west of Orchard Street without a vehicular access across the median. Only right-turning movements are allowed onto Concord Avenue from the driveway. There is a break in the median for a signalized pedestrian crossing. BSC reviewed the current traffic operations, congestion, delays, queueing, and vehicle/pedestrian conflicts documented in the traffic report by Nelson Nygaard and concurs with their findings.

### Future Conditions

Nelson Nygaard evaluated future conditions with the proposed 7/8<sup>th</sup> grade and the high school in place. Projected trips shown in the report indicate that during the AM peak student drop-off, a total of 889 vehicle trips would enter the high school campus and 615 vehicle trips would exit. This is an 80% increase over the existing trips of 486 entering and 328 exiting vehicle trips.

According to the traffic report, trip distribution assumptions were based on existing traffic data, field observation, and travel surveys prepared by the school with input from parents and teachers. The proposed arrival patterns to the campus for the combined 7/8<sup>th</sup> Grade and high school trips are different from the existing high school patterns; for example, 36% of school traffic currently turn left onto Underwood Street from the west and south of the school. Under future conditions, a total of 56% is anticipated to come from the same direction. Does the proposed trip distribution account for students who are currently dropped off on the south side of Concord Street, or on neighboring streets such as Orchard Street, that would be driven onto the campus due the change in circulation? BSC would like to review the details behind the proposed trip distribution.

Under existing conditions, turning movement counts for Goden Street at Concord Avenue show that there is a low number of right turns from Goden Street northbound onto Concord Avenue during the AM peak hour. This means that currently, fewer vehicles use Goden Street to get to the high school in the morning. It is however anticipated that with the proposed traffic signal, more high school related trips would use Goden Street. BSC recommends that Nelson Nygaard reevaluate the 4% of the project trips assigned to Goden Street northbound.

### Site Circulation

As noted above, the proposed combined 7/8<sup>th</sup> grade and high school campus is expected to generate nearly twice as many vehicle trips compared to the existing high school. Access to the campus and on-site circulation should reflect this projected increase in traffic.

BSC concurs with Nelson Nygaard that retaining the existing one-way circulation would only exacerbate the poor traffic operations during the peak school drop off and pick-up times. Two-way circulation would allow dispersion of trips, reduce delays, improve emergency access and check speeds compared to one-way circulation.

### Proposed Driveway Location

The proposed driveway configuration and location must address pedestrian and bicycle safety, increased traffic volumes, vehicular conflicts, congestion, and emergency vehicle access issues.

#### Option: HS Driveway at Goden Street - Signalized

The primary access to the high school as currently proposed, is across from Goden Street on Concord Avenue. This four-legged intersection will be signalized and allow all movements at the driveway, as opposed to the existing driveway, which permits only right-turns out onto Concord Avenue. A secondary access to the campus is proposed at Hittinger Street and Trowbridge Street.



- Provision of a left-turn bay on Concord Avenue for left turns in the school driveway will improve operations and safety. Eastbound through vehicles would not have to swerve into the bicycle lane to bypass a stopped left-turning vehicle.
- Elimination of on-street parking in the vicinity of the intersection is required.
- U-turns by high school related traffic will be eliminated at Goden Street.
- Design of traffic signals should consider timing strategies to minimize additional cut-through traffic on Goden Street.

Option: A right-in, right-out driveway with no median break opposite Oak Street. Median break remains at Goden Street.

- Intersection operations are impacted by the “functional areas” outside the physical intersection, where queueing, braking/maneuvering, and perception/reaction to stopped vehicles take place. For a 25-mph roadway, perception reaction plus braking distance is 175 feet. In addition, there should be provision for queued vehicles at 25 feet per stopped vehicle.
- The distance between the existing high school driveway and Goden Street is approximately 420 feet. Locating the proposed driveway across from Oak Street would result in an offset of 220 feet from Goden Street, a decrease in the functional area of the intersection.
- This option would result in back-ups on Concord Avenue westbound from vehicles exiting the high school and turning left onto Goden Street, increasing the likelihood for rear-end and angle collisions.
- Installing a signal at Goden Street under this option would still require vehicles exiting the high school driveway to execute a right then a left turn over a short distance. In some cases, drivers leaving the high school driveway would be tempted to speed and take advantage of a green signal at Goden Street, thereby impacting the safety of other users of the intersection.
- Operations at the proposed high school driveway would be impacted especially during the morning peak hour.

Option: Separate Entrance/Exit on Concord Avenue

- Due to the presence of Clay Pit Pond, any driveway location on Concord Avenue would be on the western section of the campus. The location of the football field is also a limiting factor.
- Entrance: A right-in entrance across from Orchard Street (at the current location of high school exit) with no break in the median. Breaking the median and allowing left turns into the high school driveway could impact operations west of the intersection, as vehicles could back up on Concord Avenue to and beyond Goden Street. To avoid the back-ups, a signalized intersection with a dedicated left turn lane would be required.
- BSC concurs with Nelson Nygaard, that more eastbound vehicles on Concord Avenue would make U-turns to get to the site drive instead of going to Underwood Street. U-turns are inherently difficult and less safe, and there is an increased risk of conflict with pedestrians.
- Exit: Across from Goden Street. Allow left, through and right turns out of the high school. Due to the high volume of traffic on Concord Avenue, a traffic signal may be required to safely exit the school’s driveway.
- Another consideration would be an exit across from Myrtle Street. This would impact the high school football field and would also push the driveway activities towards the more congested western sections of Concord Avenue. Opening the median at this location would result in weaving problems associated with closely spaced intersections.

Option: HS Driveway at Goden Street with One-way operation on Goden Street

Data from Nelson Nygaard traffic report indicates that the highest use of Goden Street by high school related traffic is during the morning drop-off peak, between 7:15 and 8:00 AM as vehicles travel south after exiting the high school. There is also another peak during school dismissal. This pattern is corroborated by traffic counts obtained by BSC. During that period, about 50% of vehicles exiting the high school turn left onto Goden Street and head southbound. Outside these periods, the majority of traffic on Goden Street is not related to the high school. Any changes to Goden Street's circulation should consider effects of the non-high school traffic.

- Restricting Goden Street to the northbound direction would mean that vehicles exiting the high school would turn left at Goden Street or make a U-turn at Cottage Street to go east or south.
- U-turns at Cottage Street would create direct conflict with vehicles exiting Cottage Street, and other existing eastbound U-turns at this pedestrian signal.
- Restricting Goden Street to the southbound direction would redistribute entering school trips onto other neighborhood streets and result in more U-turns on Concord Avenue.

**Conclusion:**

Based on our review of the data presented by Nelson Nygaard on behalf of the Building Committee and BSC's traffic data, we believe the proposed location of the HS Driveway on Concord Avenue at Goden Street is the best option. The intersection would operate most efficiently, if Goden Street is two-way. In evaluating future conditions, Nelson Nygaard should consider diverted traffic, especially during the morning and evening peak periods, that would use Goden Street because of the traffic signal. Details of the projected trip distribution should be provided for review. Also, traffic operations during games should be evaluated in light of the proposed on-site parking supply.

**cc:**

## **Cushing Square Parking Permit Fee**

The Cushing Square merchants are claiming hardship due to the fact that the Cushing Square Parking Lot has been taken out of commission. The merchants feel the employees no longer have a reasonable place to park while utilizing the Town issued monthly parking pass.

Monthly permit holders pay \$60 per month and are allowed to park on residential side streets that are otherwise restricted to two-hour parking. The permit allows them to park longer than two hours. The merchants are sometimes accosted by residents who, even though they have been educated on the Town's parking policy, still believe all day parking is a nuisance. The police department has instructed permit holders to move around from day to day so as to not impact the same property each day. This has had mixed success.

The Selectmen would like the TAC to comment on whether or not the parking fee should be reduced since the municipal lot is not available and parking in the neighborhood has proven to be a challenge for the merchants. The Board is looking for a blanket policy that would be applied to all three commercial centers (Waverley Square, Cushing Square, and Belmont Center) when access to the municipal lot is unavailable.

To be considered:

Is a temporary alternative location for parking (i.e. neighborhood streets) a reasonable solution to justify charging the full \$60 per month fee?

Should there be some consideration reflected in the monthly fee when the municipal lot is unavailable?