MEMORANDUM

TO: Chin Y. Lin, AIA LEED AP
HMFH ARCHITECTS
130 Bishop Allen Drive
Cambridge, MA 02139

FROM: F. Giles Ham, P.E.
Vanasse & Associates, Inc.
35 New England Business Center Drive
Suite 140
Andover, MA 01810
(978) 474-8800

DATE: March 14, 2018

RE: 7826

SUBJECT: Preliminary Transportation Assessment
"Baldwin North"
Brookline, MA

INTRODUCTION

Vanasse & Associates, Inc. (VAI) has conducted a Preliminary Transportation Assessment with respect to the "Baldwin North" 9th Elementary School Alternative. The "Baldwin North" School, as currently proposed, would consist of a 550-600 student elementary school to be located on Heath Street, just north of Hammond Street in Brookline, MA. The school will be serviced by two driveways on Heath Street with a one-way circulation for drop-offs and pick-ups. The queue area for drop-offs and pick-ups would be approximately 640 feet. In addition, an approximate 240-foot bus parking area is proposed along Heath Street. The conceptual school plan is attached.

Heath Street

Heath Street, in the vicinity of the proposed school, is a roadway under local jurisdiction that generally travels in an east/west orientation in Brookline Massachusetts. Heath Street accommodates a two-lane roadway in each direction with travel separated by a double yellow centerline. Concrete sidewalks are generally provided along Heath Street within the area. Land use along Heath Street consists primarily of residential, school and recreational properties. There is no posted speed limit on Heath Street in the general vicinity of the proposed school. Existing Heath Street traffic volumes are summarized in Table 1.

Table 1
EXISTING ROADWAY TRAFFIC-VOLUME SUMMARY

		Weekday Morning Peak Hour			Weekday Afternoon Peak Hour		
Location	Daily Volume (vpd)[a]	Volume (vph)[b]	Percent of Daily Traffic[c]	Predominant Flow	Volume (vph)	Percent of Daily Traffic	Predominant Flow
Heath Street, east of Soule Recreation Drive	4,850	489	10.1	86% WB	314	6.5	82% WB

[a]Two-way daily traffic expressed in vehicles per day; from ATR Counts November 2016.
[b] Manual turning movement counts conducted in November 2016.
[c]The percent of daily traffic that occurs during the peak hour.
WB = westbound

As can be seen in Table 1, Heath Street was found to accommodate approximately 4,850 vehicles per day (vpd) with 489 vehicles per hour (vph) during the weekday morning school peak hour and 314 vph during the weekday afternoon school peak hour. Directional traffic during both the morning and afternoon periods is heavily directional in the westbound direction.

Trip Generation

Trip-Generation estimates were based upon the methodology presented in the February 2017 Transportation Impact Assessment for the proposed Baldwin Elementary School. Based upon the reduced student population of 550-600 students, the revised trip-generation is shown in Table 2, which includes a 600-student school and 175 students would be bused with one METCO bus accommodated.

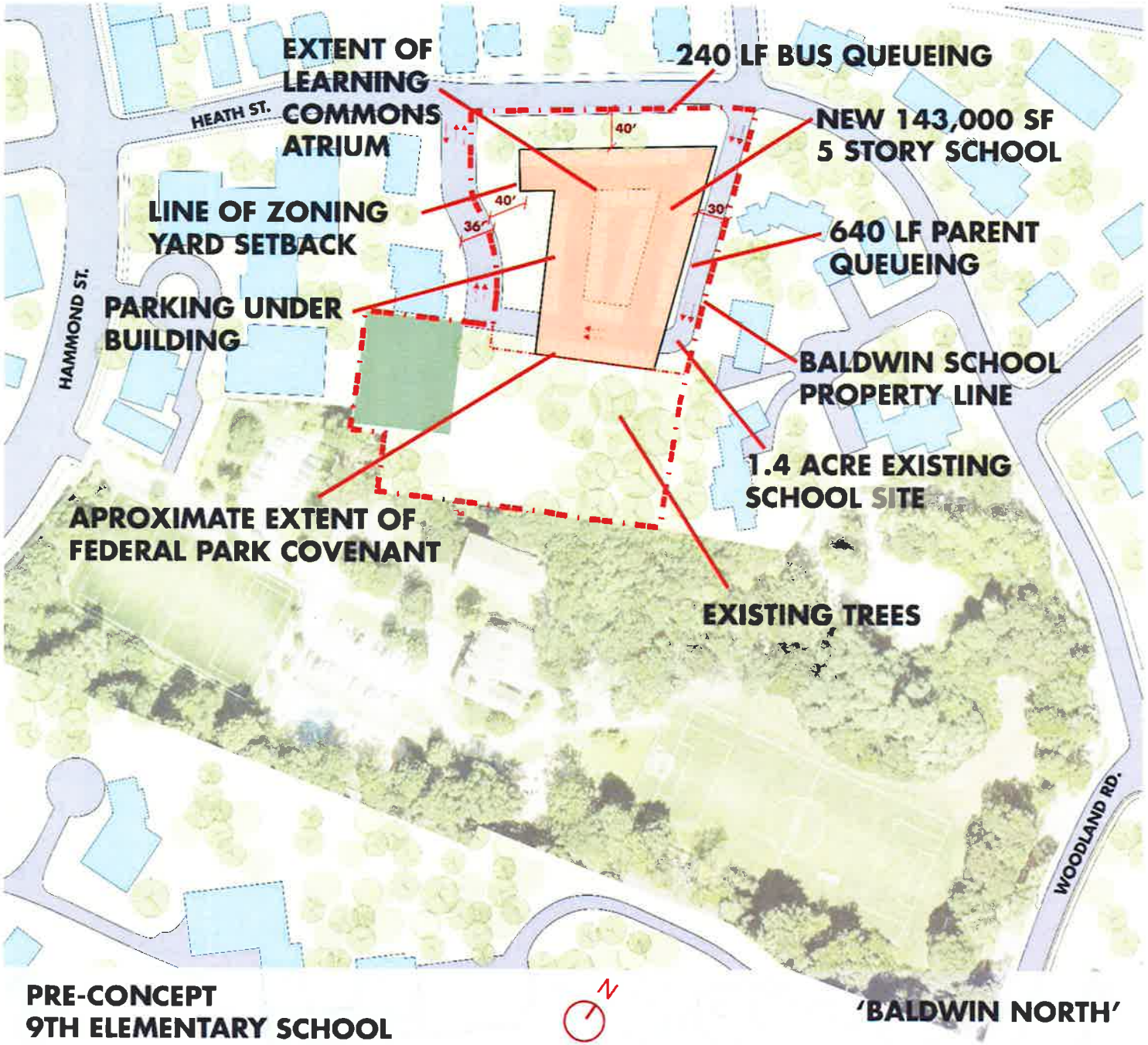
Table 2
TRIP GENERATION SUMMARY: 600 STUDENTS/150 BUSED

Time Period	Staff	Buses	Drop-off/ Pick-up	Total Trips
Weekday Morning Peak Hour:				
Entering	74	7	232	313
Exiting	0	7	232	239
Total	74	14	464	552
Weekday Afternoon Peak Hour:				
Entering	0	7	147	154
Exiting	0	7	181	188
Total	0	14	328	342

As can be seen in Table 2, the "Baldwin North" School at 600 students is expected to generate approximately 552 vehicle trips (313 vehicles entering and 239 exiting) during the weekday morning peak-hour. During the weekday afternoon peak hour the "Baldwin North" School is expected to generate approximately 342 vehicle trips (154 vehicles entering and 188 exiting).

RECOMMENDATIONS

Contained in the February 2017 Transportation Impact Assessment is a series of recommendations with respect to pedestrian improvements, off-site changes and school drop-off and pick-up Traffic Management Plan. Overall, most of the recommendations still apply with respect to the reduced school program and impacts will be less than the prior 800-student school. However, with the drop-off area reduced to 640 feet, there is not adequate area to accommodate the expected vehicle queues and backup are expected to extend onto Health Street during peak volumes.



PRE-CONCEPT
9TH ELEMENTARY SCHOOL

'BALDWIN NORTH'