

MEMORANDUM

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FROM: F. Giles Ham, P.E.
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DATE: March 15, 2018

RE: 7826

SUBJECT: Preliminary Transportation Assessment
Pine Manor Site
Brookline, MA

INTRODUCTION

Vanasse & Associates, Inc. (VAI) has conducted a Preliminary Transportation Assessment with respect to the Pine Manor 9th Elementary School Alternative. The Pine Manor School, as currently proposed, would consist of a 550-600 student elementary school to be located on Heath Street, just east of Woodland Road in Brookline, MA. The school, as currently planned, will be serviced by a driveway on Heath Street with a one-way circulation for drop-offs and pick-ups and an entrance driveway from Woodland Road. The queue area for drop-offs and pick-ups would be approximately 900 feet. In addition, an approximate 400-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. Bituminous 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

Location	Daily Volume (vpd) ^a	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour		
		Volume (vph) ^b	Percent of Daily Traffic ^c	Predominant Flow	Volume (vph)	Percent of Daily Traffic	Predominant Flow
Heath Street, east of Woodland Road	5,500	617	11.2	73% EB	335	6.1	55% WB

^aTwo-way daily traffic expressed in vehicles per day; from ATR Counts November 2016.

^b Manual turning movement counts conducted in November 2016.

^cThe 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 5,500 vehicles per day (vpd) with 617 vehicles per hour (vph) during the weekday morning school peak hour and 335 vph during the weekday afternoon school peak hour. Directional traffic during the morning periods is heavily directional in the eastbound direction, as a result of the Woodland Road right-turning volumes.

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**

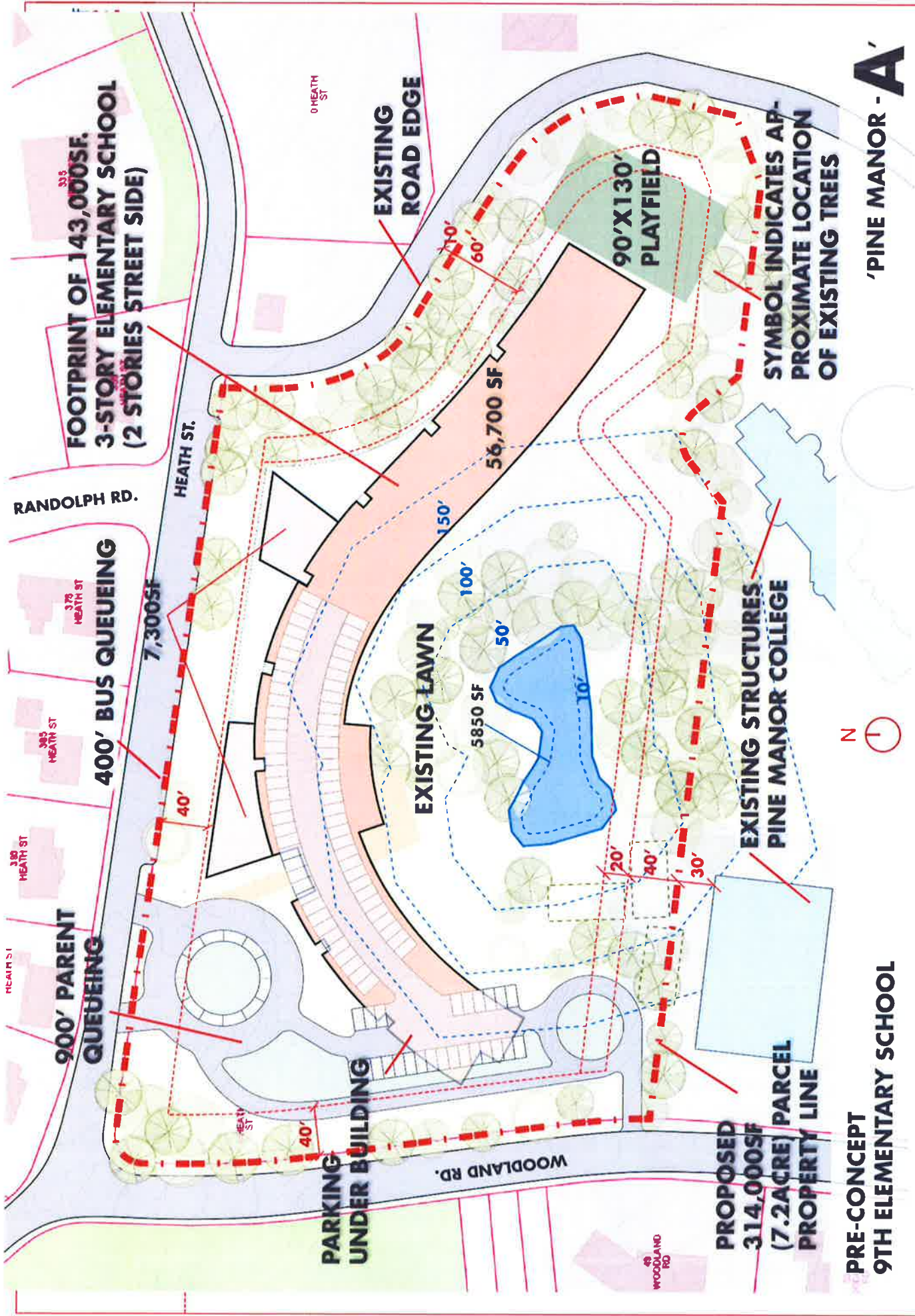
<u>Time Period</u>	<u>Staff</u>	<u>Buses</u>	<u>Drop-off/ Pick-up</u>	<u>Total Trips</u>
<i>Weekday Morning</i>				
<i>Peak Hour:</i>				
Entering	74	7	232	313
<u>Exiting</u>	<u>0</u>	<u>7</u>	<u>232</u>	<u>239</u>
Total	74	14	464	552
<i>Weekday Afternoon</i>				
<i>Peak Hour:</i>				
Entering	0	7	147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

As can be seen in Table 2, the Pine Manor 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 Pine Manor 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. The drop-off area is at 900 feet, and a more desirable length would be 1,000 feet. In addition, the Woodland Road drive, as proposed, would result in queuing onto Woodland Road and, as such, should be eliminated. On-site circulation and queue storage needs further refinement, should this alternative be pursued.





'PINE MANOR - A'



PRE-CONCEPT
9TH ELEMENTARY SCHOOL