

MEMORANDUM

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Ref: 1508
Subject: Traffic Assessment
12 Bancroft Street
Pepperell, Massachusetts
From: Kim Eric Hazarvartian, Ph.D., P.E., PTOE
Principal
Date: March 25, 2020

**INTRODUCTION**

TEPP LLC has prepared this traffic-assessment memorandum (TAM) regarding the proposed summer-camp use at 12 Bancroft Street in the Town of Pepperell, Massachusetts.

This TAM concludes that the proposed summer-camp use is not anticipated to have a significant area traffic impact.

TRIP GENERATION

The applicant anticipates daily:

- an average of about 57 campers
- about 7 staff members
- about 10 counsellors in training
- arrivals distributed over 90 minutes from 7:45 AM to 9:15 AM
- departures distributed over 180 minutes from 3:00 PM to 6:00 PM

The applicant anticipates that the 57 campers:

- have 36 campers in 3 buses carrying 12 campers each
- have 21 campers dropped off and picked up in 18 passenger cars carrying an average of 1.17 campers each

The applicant anticipates that the 7 staff members arrive and depart in 7 passenger cars.

The applicant anticipates that the 10 counsellors in training are dropped off and picked up in 10 passenger cars.

Table 1 presents calculated weekday trip generation as:

Vehicle-Trips	Calculated Weekday Vehicle-Trips					
	AM-Street-Peak Hour ^a			PM-Street-Peak Hour ^b		
	Total	In	Out	Total	In	Out
Camper Buses ^c	4	2	2	2	1	1
Camper Passenger Cars ^c	24	12	12	12	6	6
Staff ^d	5	5	0	3	0	3
<u>Counselors in Training^e</u>	<u>14</u>	<u>7</u>	<u>7</u>	<u>8</u>	<u>4</u>	<u>4</u>
Total	47	26	21	25	11	14

^a The applicant anticipates arrivals distributed over 90 minutes from 7:45 AM to 9:15 AM.
^b The applicant anticipates departures distributed over 180 minutes from 3:00 PM to 6:00 PM.
^c The applicant anticipates about 57 campers arrive distributed over 90 minutes from 7:45 AM to 9:15 AM and depart distributed over 180 minutes from 3:00 PM to 6:00 PM, with 36 campers in 3 buses carrying 12 campers each and with 21 campers in 18 passenger cars carrying an average of 1.17 campers each.
^d The applicant anticipates about 7 staff members arriving and departing in 7 passenger cars.
^e The applicant anticipates about 10 counselors in training dropped off and picked up in 10 passenger cars.

- AM-street-peak hour, 47 (26 in and 21 out)
- PM-street-peak hour, 25 (11 in and 14 out)

POTENTIAL IMPACTS

The Institute of Transportation Engineers (ITE) suggests that land developments generating at least 100 peak-hour vehicle-trips, in the busier direction, are candidates for consideration of traffic-impact analysis.¹ The calculations show less than 100 peak-hour vehicle-trips, in the busier direction, being added by the proposed summer-camp use.

Calculated vehicle-trips:

¹ ITE, *Manual of Transportation Engineering Studies* (Prentice Hall: Englewood Cliffs, New Jersey, 2000), page 144.

- are split in versus out of the site
- are split between Bancroft Street and Townsend Street from and to the south, west and east
- for the weekday AM-street-peak hour, yield an average increase of about 7.8 vehicle-trips per direction on Bancroft Street and Townsend Street, or an average of one vehicle-trip per 7.7 minutes
- for the weekday PM-street-peak hour, yield an average increase of about 5.2 vehicle-trips per direction on Bancroft Street and Townsend Street, or an average of one vehicle-trip per 14.4 minutes

Therefore, the proposed summer-camp use is not anticipated to have a significant area traffic impact.