



TO:	L. Duane Jackson Alinea Capital Partners, LLC	DATE:	August 5, 2021
FROM:	Elizabeth Peart Emma Parisi	HSH PROJECT NO.:	2021166.00
SUBJECT:	278 Union Street, New Bedford Vehicle Trip Generation		

Introduction

As requested, *Howard Stein Hudson* has prepared this technical memorandum to assess new traffic activity associated with Alinea Capital Partners' planned redevelopment of 278 Union Street in New Bedford, Massachusetts. Known as The Caravela, the Project will be a five-story, mixed-use building with 53 residential units, 18 parking spaces, supporting amenity space, and approximately 4,100 square feet (sf) of ground floor retail or community workspace. The site formerly housed a bank and subsequently a state Registry of Motor Vehicles (RMV) office.

Trip Generation Methodology

Trip generation estimates are based on data published by the Institute of Transportation Engineers (ITE) in the Trip Generation Manual¹. ITE provides data to calculate the total number of "unadjusted" vehicle trips related to a variety of Land Use Codes (LUCs). In urban settings, trips are often "adjusted" to reflect other travel modes, such as transit and walking. While residents at this site are expected to travel by foot, bicycle, bus, and vehicle, for this assessment all Project trips have been assigned to vehicles to produce a conservative (i.e., higher) estimate of vehicle activity.

The following ITE land use codes (LUC) were chosen as most appropriate for this Project

- **Land Use Code 220 – Multifamily Housing (Mid-Rise)** - As described by ITE, mid-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have between three and ten levels (floors). Calculations of the number of trips use ITE's average rate per unit.

¹ Trip Generation Manual, 10th Edition; Institute of Transportation Engineers; Washington, D.C.; 2017.



- **Land Use Code 820 – Retail** - Although the type of non-residential space within the Project has not yet been finalized, this LUC was adopted as most appropriate for the potential use. A retail shopping center is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. A shopping center's composition is related to its market area in terms of size, location, and type of store. Calculations of the number of trips use ITE's average rate per 1,000 square feet.

Project Vehicle Trips

The estimated vehicle trips for the Project, as shown in **Table 1**, were calculated for daily, a.m. peak hour, and p.m. peak hour conditions. The a.m. and p.m. hours are the most important in considering a project's potential traffic impacts to area roadways and intersections.

Table 1. Vehicle Trip Generation for 278 Union Street

Land Use	Vehicle Trip Generation								
	Daily			a.m. Peak Hour			p.m. Peak Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
Multifamily Housing (Mid-rise) <i>LUC 220 53 units</i>	148	148	296	5	14	19	14	9	23
Retail <i>LUC 820 4,100 sf</i>	77	77	154	2	1	3	7	8	15
Total	225	225	450	7	15	22	21	17	38

Summary

The Project will generate 22 vehicle trips during the a.m. peak hour, or approximately one trip every three minutes. During the p.m. peak hour, the Project will generate 38 vehicle trips, or approximately one trip every one to two minutes. It should be noted that the former uses on the site (bank, RMV office) generated certain levels of vehicle activity that no longer occur, yielding net new Project trips that would be lower than the trips shown in **Table 1**.

Based on the results of this trip generation assessment, the Project's peak hour vehicle trip activity will be relatively low and the associated impact to area traffic operations in downtown New Bedford will be imperceptible.