

29 July 2022

Jamie Hellen
Town Administrator
Town of Franklin
355 East Central Street
Franklin, MA 02038

**Re: Traffic Assessment
237 Pleasant Street Housing Development
Franklin, MA
Langan Project No.: 151019601**

Dear Mr. Hellen:

Langan prepared this traffic assessment for the proposed affordable housing development at 237 Pleasant Street, Franklin, Massachusetts. We determined that the proposed housing development will generate no more than 48 peak hour trips. In addition, the proposed driveway connection to Pleasant Street will be designed to provide sufficient sight distance and safe access to the site. This letter report includes anticipated daily and peak-hour trip-generation and site access review, based on industry standards. Figure 1 below shows an aerial photograph of the site location.



Figure 1: Site Aerial Photograph

Project Description

The 19.46-acre site is currently occupied by a 5,125 square-foot church (St. John's Episcopal Church), served by two driveways to Pleasant Street. The north driveway operates as an enter-only driveway and the south driveway operates as an exit-only driveway. The proposed development will not demolish the existing church, rather the project is proposing to reconfigure the existing driveways to separate the church traffic from the residential traffic. Both driveways will be modified to operate as full-access driveways, with the north driveway will serving the residential development and the south driveway serving the church. The proposed residential development will comprise the construction of seven three-story residential buildings with a total of 64 units and a surface parking lot with 104 vehicle parking spaces. The project will also redevelop the existing surface parking lot of the church to provide safe access and proper circulation with a new parking layout of 53 parking spaces serving the church. In addition, the church will have an emergency access connection to the proposed residential parking lot. Attachment A contains a copy of the survey and the proposed site plan showing the proposed parking spaces and access to the site.

Trip Generation Analysis

We performed a trip generation analysis for the proposed residential development using equations from the 11th Edition of the *ITE Trip Generation Manual* and found that the proposed development would generate 486 daily trips, 43 morning peak hour trips and 48 afternoon peak hour trips. Table 1 summarizes the trip-generation estimates. We did not apply a multi-modal credit due to the lack of surrounding transit and pedestrian/bicycle infrastructure.

TABLE 1 ANTICIPATED TRIP GENERATION – 237 PLEASANT ST RESIDENTIAL								
USE	LAND USE CODE ¹	DAILY	AM PEAK HOUR			PM PEAK HOUR		
			ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
Multifamily Housing - Low-Rise (64 DU)	220	486	10	33	43	30	18	48

¹ Land Use Code and site trips based on ITE Trip Generation Manual 11 Edition.

Safety Analysis

Pleasant Street is a two-lane, north-south, undivided minor collector roadway under local jurisdiction with a 35 MPH posted speed limit and an average daily traffic between 2,500 - 3,000 vehicles per day. In addition, Pleasant Street has sidewalks on both sides of the road between Union Street and Hillside Road and a sidewalk on the north side north of Hillside Road.

Crash Analysis

We obtained the most recent three years (2019 to 2021) of accident data from the MassDOT Crash Portal along Pleasant Street within a 2,500 foot radius of the project site and found that 15 accidents have occurred in the last three years within this area. Accidents included various types of crashes such as rear-end, sideswipes and angle crashes, which are behaviors typical for a collector roadway. Four of the reported accidents resulted in injuries and none resulted in a fatality. The majority of accidents occurred during dry weather conditions (67%) and during daylight hours (73%). Table 2 provides a summary of the accident history. It should be noted that

only three accidents occurred within 100-feet of the project site and none of them resulted in injuries, and none of the intersections along Pleasant Street have been identified as top crash locations.

TABLE 2 ACCIDENT DATA SUMMARY (2019 - 2022) ¹									
ROADWAY	NUMBER OF ACCIDENTS		SEVERITY			ROAD SURFACE		TIME OF DAY	
	Total	Avg. Per Year	Property Damage Only	Personal Injury	Fatality	Clear (Dry)	Rain / Snow	Day	Night
Pleasant Street ²	15	5	11 (73%)	4 (27%)	0 (0%)	10 (67%)	5 (33%)	11 (73%)	4 (27%)

1.- Source: MassDOT Crash Data Repository.

2.- Accidents within a 2,500 feet radius from the project site.

Intersection Sight Distance Analysis

We evaluated the sight distances at the proposed site driveway on Pleasant Street to determine if the available sight distances meet with minimum requirements established by the by the American Association of State Highway and Transportation Officials (AASHTO) as outlined in A Policy on Geometric Design of Highways and Streets, 7th Edition (also known as the AASHTO Green Book). As shown in Table 3, the intersection sight distances (ISDs) provided at the proposed driveway meet AASHTO minimum requirements. Attachment A shows the sight triangles at the project driveway.

TABLE 3 INTERSECTION SIGHT DISTANCE SUMMARY				
LOCATION	Design Speed ²	Required SSD ¹	ISD	
			Passenger Car ³	
			Required	Provided
Pleasant Street Site Driveways (unsignalized)	40 mph			
Right Turn from Stop		305 ft	385 ft	>385 ft
Left Turn from Stop		305 ft	445 ft	>445 ft

1.- Based on Table 3.1 of AASHTO Greenbook 7 Ed.

2.- Based on posted speed limit plus 5 MPH.

3.- Based on Tables 9.7 & 9.9 of AASHTO Greenbook 7 Ed.

Conclusion

Langan prepared a traffic assessment for the proposed 64-unit residential development at 237 Pleasant Street in Franklin, MA and found that the proposed development is expected will generate no more than 48 new peak hour trips and the roadway appears able to accommodate this additional traffic volume.

Sincerely,

Langan Engineering and Environmental Services, Inc.



Maximo Polanco, P.E.
Project Engineer



John Plante, P.E.,
Managing Principal

MGP:mgp

Attachments: Site Plan

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