
Hamal Associates, Inc.

Traffic and Transportation Consulting

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N.J. CERT. OF AUTH. NO. 24GA27922200

January 12, 2024

Mr. Moshe Sugar
410 Main Holdings, LLC
6 Emma Lane
Jackson, NJ 08527

Dear Mr. Sugar:

Re: Trip Generation & Parking Analysis
410 Main Holdings, LLC
Prop. 12 Unit Apt. Bldg. & Comm. Space
Block 113, Lot 262
410 Main Street
Township of West Orange, Essex Co., NJ

410 Main Holdings, LLC (Applicant) is proposing to construct a mixed-use building consisting of twelve (12) apartment rental units (2-1 BR, 2-1 BR+den, 8-2 BR) plus 900 sf of commercial space located at 410 Main Street, in the Township of West Orange, Essex County, New Jersey. The site is located at the southwest corner of the intersection of Main Street & Park Drive N. The proposed building will consist of two (2) residential floors over a garage parking level which includes the commercial space. Access for the site is proposed through one driveway to Park Drive N from an under the building parking garage. Based on the project engineer's site plan, a total of thirteen (13) parking spaces are proposed (incl. 1 HC/EV & 1 EV spaces).

The site is currently occupied by a two-story, one-family house, which will be demolished as part of the project. One access drive to Park Drive N currently exists. Within the vicinity of the site, there are residential homes located along Park Drive N. Main Street has a mixture of residential and commercial uses.

The purpose for which Hamal Associates, Inc. (HMA) is being retained, in this matter, is to perform trip generation analysis of the proposed twelve residential apartments plus 900 sf commercial space. This analysis will be for weekday am and pm street peak hours. A review of site parking will also be addressed.

A. Existing Conditions

Park Drive N is a municipal roadway that extends one-way westerly away from its T-intersection with Main Street. At a distance of approximately 600 feet from Main Street, Park Drive N turns southbound for approximately 170 feet where it turns easterly, changing name to Park Drive S, which terminates at a 'Stop' controlled T-intersection with Main Street. The noted roadway layout forms a one-way, one lane counter-clockwise traffic flow with parallel parking only permitted along the 'outside' curblane. The inside curblane is posted 'No Parking This Side'. This roadway is 24 feet wide, curb-to-curb, and has a 25 mph speed limit in effect.

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Main Street is a County roadway (Co. Rt. 659) that follows a north-south alignment in the vicinity of Park Drive N/S. Although Main Street is striped as two lanes in each direction, the presence of permitted parking (2 hour limit, 8am – 8pm, Mon-Sat) along each curbline reduces the usable roadway to a wide single travel lane each way. Along the site's Main Street frontage, the roadway is 46 feet wide with an unposted 25 mph speed limit in effect.

In addition to the residential and commercial uses present in the area, The Washington Elementary School and Edison Middle School are located a short distance to the south of the site. NJ Transit bus service is provided along Main Street and at the nearby Mississippi bus station loop.

B. Traffic Projections

Traffic projections were prepared based on the 12 unit residential apartment use and 900 sf commercial space proposed for the site. These projected volumes were compiled for the weekday am and pm street peak hours of operation and inbound/outbound traffic patterns. As the commercial space use is not known, its peak hour trip generation was identified for two alternative, permitted uses; retail and office. The traffic volume projections were based on trip generation rates developed by the Institute of Transportation Engineers (ITE) and as published in their text, Trip Generation Manual – 11th Edition (Land Use Code #220: Multifamily Housing (Low-Rise), LUC #822: Strip Retail Plaza <40k, LUC #712: Small Office Building <10K – See Appendix pages A-1, 2, 3). It is noted that the NJ Residential Site Improvement Standards (RSIS) require the use of the ITE Trip Generation publication for calculating peak hour trips for any residential land use.

Table 1 summarizes the negligible magnitude of projected weekday peak hour trip generation for the several uses. The residential apartments will generate 5 am and 6 pm peak hour trips. The retail use will generate 2 am and 6 pm peak hour trips, while an office use will generate only 2 trips in each peak hour. All trips are a total two-way flow (in/out). The residential/retail combination equals 7 am and 12 pm peak hour trips. The residential/office mix results in 7 am and 8 pm peak hour trips. The calculated peak hour trip generation for each scenario are too small to have any perceptible traffic impact at any intersection location. On an average basis, it is equivalent to one (1) vehicle entering or exiting the site every 5-9 minutes, in either the am or pm peak hours. No trip reductions have been applied for use of nearby mass transit.

TABLE 1
TRAFFIC PROJECTIONS

USE	VEHICLE TRIPS GENERATED					
	AM PEAK HOUR			PM PEAK HOUR		
	IN	OUT	TOTAL	IN	OUT	TOTAL
12 units Residential Apartments	1	4	5	4	2	6
900 sf Retail	1	1	2	3	3	6
900 sf Office	2	0	2	1	1	2
Apartment + Retail	2	5	7	7	5	12
Apartment + Office	3	4	7	5	3	8

C. Parking Analysis

The residential portion of the proposed project is subject to the NJ Residential Site Improvement Standards (RSIS), whereas the commercial use is subject to the municipal ordinance. Based on the RSIS guidelines, HMA notes the following related to parking:

- 1.a. Applying the RSIS parking standards, the 12 unit apartment building (8-2 BR, 2-1 BR, 2-1BR+den) requires a maximum of 23 parking spaces. The municipal parking ordinance for the retail or office uses is 1 space per 250 sf GFA. Consequently, either of these commercial uses would require four (4) parking spaces, based on the 900 sf of commercial space proposed. The total maximum required parking for the site is 27 parking spaces. With the two (2) space adjustment (credit) for the two (2) EV charging spaces being provided, the maximum required site parking is reduced to 25 spaces. There are 13 spaces provided in the parking garage under the building, which includes one EV and one handicapped/EV space. Consequently, a parking supply difference of 12 spaces is calculated. The preceding parking analysis does not reflect the availability of nearby mass transit bus service or other adjustments affecting parking needs.
- b. As previously noted, the residential component of the site is to consist of 12 apartment units, which are distributed as 8-2 bedroom, 2-1 bedroom and 2-1 bedroom+den units. Based on the NJ Residential Site Improvement Standards (RSIS), the parking requirements (RSIS – Table 4.4) are 1.8 spaces/unit for 1 bedroom and 2.0 spaces/unit for 2 bedrooms. This results in a maximum total of 23 spaces required for the residential use.

Section 5:21-4.14c of the RSIS states:

Table 4.4 specifies the maximum number of parking spaces planning boards and other local reviewers shall require. The number of parking spaces is based on the number, size, and type of dwelling.

1. *Reviewers may allow fewer parking spaces, when warranted. Factors that may affect parking include the following:*
 - i. *Household characteristics;*
 - ii. *Access to mass transit;*
 - iii. *Geographic location; and*
 - iv. *Offsite parking resources.*

The proposed site is located in very close proximity to NJ Transit bus stops on each side of Main Street and the Mississippi bus loop, the latter a short distance to the north of the site. Therefore, a reduction to what would otherwise be the RSIS maximum parking requirement of 23 spaces would be appropriate.

Related to the foregoing, the NJ Transit publication, Planning for Transit Friendly Land Use – A Handbook for New Jersey Communities, identifies parking reductions to standards for residential, office and non-office/residential land uses, based on the location (distance) to and type of mass transit hub available (See Appendix A-4,5). Within the ‘Station Area Parking Reduction Schedule’ (see A-5) of the NJ Transit publication, the nearby Main Street bus stops and Mississippi bus loop correspond to the Transit Corridor category, which is “An area within a ¼ mile radius of a bus or light rail route...” As the location of the proposed site is well within the ¼ mile distance specified in the schedule, a parking reduction of 5%-10% is identified for the residential and commercial uses. Applying the 10% parking reduction to the total residential plus commercial uses (calculated as 27 spaces w/o 2 space EV credit), results in a 3 space reduction. The adjusted total parking requirement is 22 spaces (27 -2 EV credit -3 mass transit = 22 spaces). Based on the foregoing, in conformance with RSIS guidelines and the NJ Transit criteria, it is recommended that the alternative parking standard be accepted. A parking difference between calculated and parking provided of nine (9) spaces is identified.

- c. To mitigate the nine (9) parking space difference, the Applicant is proposing to lease restrict each apartment unit to one (1) parking space. This will reduce total on-site parking demand to 11 spaces (12 resid. -2 EV credit – 3 mass transit reduction + 4 comm. = 11 spaces), with 13 spaces being provided.

The proposed lease restriction to one (1) parking space per unit is reflective of lower vehicle ownership potential related to the 4 – 1 bedroom units and 8 – 2 bedroom units being proposed. Consideration of the foregoing is identified in RSIS Section 5:21-4.14c.1.i. (see Hamal report Section C.1.b.), which notes that; “Reviewers may allow fewer parking spaces, when warranted. Factors that may affect parking include the following:... i. Household characteristics.”

- d. The RSIS also notes that fewer parking spaces may be allowed with consideration of ‘offsite parking resources’ (RSIS Section 5:21-4.14c.1.iv.). There is on-street parking permitted along one side of Park Drive N/S, as well as both sides of Main Street (2 Hour Parking, 8AM-8PM, Monday-Saturday). The on-street parking would accommodate visitor and commercial related parking demand.
 - e. Based on the noted permitted adjustments to the maximum RSIS parking standards (access to mass transit, household characteristics, offsite parking resources) and the parking credit for provision of EV spaces, the 13 garage parking spaces provided are adequate to meet the parking needs of the residential/commercial mixed-use project and are in compliance with the RSIS guidelines.
2. The proposed garage parking aisle is 22 feet wide. This width is to accommodate 90 degree parking, as represented by the garage perpendicular parking spaces shown on the architectural and site plans. As noted in RSIS Table 4.5 Parking Angles and Aisle Widths, a 24 foot wide parking aisle is required for 90 degree parking. Consequently, a

diminimus exception to the RSIS standards is required to be granted by the Board. In considering the 22 foot aisle width, HMA notes that the garage is of limited length, accommodating only tenants and minimal parking turnover activity. Also, at worst, a driver might have to perform one additional back-up maneuver in the 22 foot aisle.

3. The twelve (12) standard, perpendicular parking spaces are 9'x18' in size, which conforms with RSIS Sect. 5:21-4.15. The one (1) handicap space conforms to ADA standards.

D. Conclusions

From the analysis performed, the 12 residential apartment units plus 900 sf retail use peak hour trip generation is nominal in magnitude, being only 7 and 12 trips (total two-way) in the respective am and pm peak hours. This volume of traffic increase is too small to have any perceptible traffic impact at any intersection or location. The residential plus office uses will generate only 7 am and 8 pm peak hour trips. On an average basis, it is equivalent to one (1) vehicle entering or exiting the site or area every 5-9 minutes, in either the am or pm peak hours.

Applying the RSIS parking standards, the 12 unit apartment building (8-2 BR, 2-1 BR, 2-1 BR+den) requires 23 parking spaces. Either 900 sf commercial use will require 4 parking spaces, based on municipal ordinance. The combined total is 27 spaces. With a 2 space adjustment (credit) for the two (2) EV charging spaces being provided and a 3 space reduction for nearby mass transit availability, the maximum calculated site parking is 22 spaces. There are 13 spaces provided in the parking garage under the building (includes 1 EV and 1 handicapped/EV space). To mitigate the nine (9) parking space difference, the Applicant is proposing to lease restrict each apartment unit to one (1) parking space. This will reduce total on-site parking demand to 11 spaces (12 resid. -2 EV credit - 3 mass transit reduction + 4 comm. = 11 spaces).

Based on the noted permitted adjustments to the maximum RSIS parking standards (access to mass transit, household characteristics, offsite parking resources) and the parking credit for provision of EV spaces, the 13 garage parking spaces provided are adequate to meet the parking needs of the residential/commercial mixed-use project and are in compliance with the RSIS guidelines.

The garage parking stall dimensions conforms to the RSIS, as the standard perpendicular spaces are 9'x18'. The handicap space conforms to ADA standards.

The proposed garage parking aisle is 22 feet wide. As noted in RSIS Table 4.5 Parking Angles and Aisle Widths, a 24 foot wide parking aisle is required for 90 degree parking. Consequently, a diminimus exception to the RSIS standards is required to be granted by the Board. HMA notes that the garage is of limited length, accommodating only tenants and minimal parking turnover activity. Also, at worst, a driver might have to perform one additional back-up maneuver in the 22 foot wide aisle.

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The preceding represents our analysis of the proposed peak hour trip generation and parking for this site. If you have any questions, please do not hesitate to contact us.

Very truly yours,

Hamal Associates, Inc.

Harold K. Maltz, P.E., P.P.
President
NJ PE Lic. No. 20986

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