

TRAFFIC AND PARKING STUDY

For

Proposed Residential Development

Property Located at:

35 Evergreen Avenue
Block 7400 – Lots 1 & 13
Township of Nutley, Essex County, NJ

Prepared by:



50 Park Place, Suite 901 | 245 Main Street, Suite 110
Newark, NJ 07102 | Chester, NJ 07930



Craig Peregoy, PE
NJ PE License #55686

Joseph Staigar, PE/PP
NJ PE License #30024

October 19, 2023

REVISED: February 1, 2024 - (Address Pennoni Cmts)

Our Project No. 4526 23-03172

INTRODUCTION

This analysis was prepared to examine the future traffic impact and adequacy of parking for the proposed redevelopment of the former Diamond Springs Restaurant and Beach Club to an 85-unit multi-family residential development located at 35 Evergreen Avenue (Block 7400, Lots 1 and 13) in the Township of Nutley, Essex County, New Jersey.

The property in question is located along eastbound Evergreen Avenue and northbound Harrison Avenue, along which roadway access will be provided. The site is currently developed and former uses include a pool and terrace area, as well as a bar and restaurant, and playground area with basketball and bocce ball courts. While the pool club use was generally active from end of May to early September, the bar/restaurant and presumably the recreational facilities were active all year (weather-permitting for the recreational areas).

This study identifies the projected future traffic movements along the roadways in the site vicinity that would occur as a result of the proposed redevelopment, and has examined the ability of the adjacent surrounding roadway network to safely and efficiently accommodate any potential additional demand, as well as parking adequacy. In addition, this analysis has examined the suitability of the site for the proposed use based on a traffic engineering and safety evaluation. Accordingly, this analysis includes the following information:

- A review of the existing roadways and traffic conditions in the vicinity of the site, including roadway geometry, traffic volume flow conditions and operations, roadway capacities, etc.;
- Projection of the volume of site traffic and parking demand expected to be generated by the proposed redevelopment of the property including an identification of the “new” component of the site generated traffic;
- An examination of the on-site layout, parking supply, drive aisle geometry, access design, etc.

EXISTING CONDITIONS

Evergreen Avenue is a north/south local roadway under municipal jurisdiction. The pavement width is thirty (30) feet and one (1) lane of travel is provided in each direction across the site frontage. The regulatory Speed Limit is 25 MPH. Street parking is permitted on both sides of the roadway with no posted time restrictions. The surrounding land uses along Evergreen Avenue are single-family residential units. Curbing and sidewalks are provided on both sides of the roadway.

Harrison Street is an east/west local roadway under municipal jurisdiction. The pavement width is thirty (30) feet and one (1) lane of travel is provided in each direction across the site frontage. The posted Speed Limit is 25 MPH. Street parking is permitted on the northerly side of the roadway with no posted time restrictions. The surrounding land uses along Evergreen Avenue are mixed commercial and residential units. Curbing and sidewalks are provided on both sides of the roadway.

EXISTING TRAFFIC VOLUMES AND FLOW CONDITIONS

To examine the existing traffic conditions that could be affected by new site traffic, manual turning movement traffic volume counts were recently conducted during weekday morning and evening periods when area traffic is typically at peak levels, coincident with the peak hours of the proposed residential use. Vehicular traffic counts were performed by Dynamic Traffic, LLC at the intersection of Harrison Street and Ernest Street from 7:00 to 9:00 a.m. and from 4:00 to 6:00 p.m. on Wednesday, September 20, 2023, and at the intersection of Evergreen Avenue and the Site Driveway on Thursday, September 21, 2023, also from 7:00 to 9:00 a.m. and from 4:00 to 6:00 p.m. The morning peak hour was found to occur from 7:45 a.m. to 8:45 a.m. and the evening peak hour was found to occur between 4:30 p.m. and 5:30 p.m. The following tables provide the representative peak hour traffic volumes along the site frontage:

TABLE I
BASE PEAK HOUR ROADWAY TRAFFIC VOLUMES

<u>Weekday Peak Hour</u>	<u>Harrison St. & Ernest St.</u>	<u>Evergreen Ave. & Site Driveway</u>
Morning	511	17
Evening	488	22

These peak hour volumes were compared to the traffic volume counts conducted by the Neglia Group in their Traffic Review for the Former Diamond Springs Restaurant & Beach Club, dated July 15, 2022. The Neglia Group May 4, 2022 and May 5, 2022 traffic counts were conducted at the same intersections and same time periods. A comparison of the two (2) sets of independent counts were consistent with one another with the Neglia Group volumes found to be in the order of 3% higher than the Dynamic Traffic, LLC volumes.

Traffic volumes at other times of the day are lower than during the peak hours identified. This is primarily the result of the “work-to-home” commuting trip patterns that are evidenced along primary roadways. Traffic operations are generally at their worst during the peak traffic hours due to higher traffic volumes. As a result, these time periods, where peak site generated traffic is coincident with peak street traffic, are typically the focus of a traffic impact study.

TRAFFIC/PARKING CHARACTERISTICS OF THE EXISTING AND PROPOSED USES

TRIP GENERATION OF EXISTING USE AND PROPOSED USE COMPARISON

The next step in the analysis procedure is to project the potential change in volume of traffic and parking demand generated by the proposed redevelopment.

The existing conditions development of the site as the Diamond Springs Pool Club and Restaurant consists of the following:

- Full movement access driveways at Evergreen Avenue and Harrison Street.
- Pool and terrace area, as well as a bar/restaurant and basketball and bocce ball courts.
- On-site parking for approximately 200 vehicles.

The pool and terrace area were utilized seasonally from the end of May to early September. The bar/restaurant was open year-round.

Based on historical aerial imagery the parking lot had been filled to or near capacity during the summer season. With a parking field of up to 200 vehicles, the projected peak hour trip generation is 100 vehicles entering and 30 vehicles exiting, for a total of 130 trips per peak hour during the late morning/early afternoon period on a weekend. Weekdays are projected to be one-half of the weekend at 50 trips entering and 15 trips exiting, for a total of 65 trips per peak hour. It is noted that the Pool Club had swimming competitions during the peak summer season, which likely resulted in higher trip generation than indicated on a typical day, and during which time overflow parking would be accommodated on Evergreen Avenue and Cross Street.

The bar/restaurant use overlapped with the Pool Club during the summer season. Based on historic experience and Institute of Transportation Engineers (ITE) trip rates, the 2,200 SF bar/restaurant generated a peak volume of 30 entering and 10 exiting trips, for a total of 40 trips during weekday evenings and coincidental weekend pool use. On occasion, the restaurant use would hold special events under an event tent in the playground area. This traffic volume is projected to be double that of a typical day for the restaurant, or 50 trips entering and 20 trips exiting, for a total of 70 trips during the peak hour

The former Diamond Springs Restaurant and Beach Club is a unique type land use that no reliable documented trip generation rates exist that could be used to establish its trip generation, so best efforts were made to perform such a task. In particular, the Traffic Review for the Redevelopment Plan, dated 7/15/2022, prepared by Brian Intindola, PE, CME, PP, CPWM, of Neglia Engineering was referenced whereby Mr. Intindola used historic data and reasonable assumptions. Mr. Intindola's methodology is deemed the best means and appropriate given the circumstances. It is noted that the Restaurant and Swim Club is not represented by the ITE Trip Generation Manual and to attempt to apply it to the former use of the property would be inaccurate and futile. The only reasonable ability to have established the trip generation of the former use would have been to conduct trip generation surveys as it operated in the past based on ITE methodology. That ability has long passed.

The premise of this Traffic Impact Study prepared for the proposed 85-unit residential development is to determine if the trip generation characteristics of the proposed residential development are in the order of magnitude of being equal or less intensive than the former use. If so, it could be reasonably accepted that traffic conditions would be equal to or less than when the former use was in operation.

The proposed development is a 3-stories in height. The 2021 11th Edition changed the definition and height differentiation of low-rise and mid-rise multi-family units of the 2017 10th Edition due to the technical variation of such land uses with and without ground level commercial, using the same number-of-floors threshold for low-rise, mid-rise and high-rise. The 10th Edition definition of a mid-rise was a 3 to 10 story building. That was changed to a 4 to 10 story building in the 11th Edition, yet the 11th Edition utilizes empirical trip generation data from 1990's, 2000's and 2010's, when a midrise was defined as having 3 stories, to establish its trip rates, which poses a potential inconsistency.

However, there is little difference between the trip generation using the 11th Edition rates for low-rise and mid-rise. Table II below provides the comparative peak hour trips generated by the existing/former use of the site to the proposed development based on the 11th Edition for low-rise multifamily residential units (not close to rail transit):

TABLE II
COMPARISON OF PEAK HOUR TRIP GENERATION OF PROPOSED USE TO
EXISTING USE

Pk Hr.	Existing			Proposed			Difference		
	In	Out	Total	In	Out	Total	In	Out	Total
AM	2	2	4*	3	27	30	+1	+25	+26
PM	80	25	105	22	2	24	-58	-23	-81

*Employee/Service Vehicles

NA = Data Not Available

To further exemplify the fact that the proposed use is less intensive overall, it is noted that the proposed use will consist of 82 age-restricted and 3 non-age-restricted units. The above table is conservatively based on non-age-restricted units. Using ITE Land Use Code 252 of the 11th Edition (Senior Adult Housing – Multi-family) presents a more accurate representation of the proposed development. However, the published ITE trip rates in the 11th Edition are inordinately low (0.03 total peak hour trips per unit) and are

solely based on only 1 study (inconsistent with ITE recommended methodology). Therefore, the 10th Edition peak hour trip rates (0.20 total AM trips per unit and 0.26 total PM trips per unit) based on 11 studies and consistent with ITE methodology were used. These rates result in 17 weekday morning peak hour trips and 22 weekday evening peak hour trips as compared to 30 and 24 trips as tabulated above for the morning and evening respectively for the non-age-restricted units.

While the weekday morning peak hour will experience an increase in traffic activity due to the redevelopment of the site, the increase is very modest in magnitude. The weekday evening peak hour, and weekend peak hours when the former Swim Club was at its projected maximum peak intensity will experience a decrease in trip generation. It is noted that NJDOT and ITE criteria identify a significant increase in trips of 100 or more per hour to be the threshold whereby an impact to traffic operations might occur. The increase identified for the proposed redevelopment is only 26% of that threshold. Therefore, no impact is identified by the proposed action. The order of magnitude of an additional trip generation increase of 26 trips per hour will have no appreciable impact on the roadway network that surrounds the site. It is noted that this trip increase will be dispersed across two (2) access points intersection with two (2) separate roadways, resulting in even lesser potential of impact.

Further ameliorating any potential impact is the type of vehicle classifications for the proposed residential use is of a lesser size (Amazon/UPS/Fedex step vans and sprinter vehicles) than the former pool/bar/restaurant use which likely had larger vehicle deliveries (food, paper goods, beer and soda, liquor, etc.).

One other point of significance that will have a beneficial effect on traffic conditions is the convenient availability of mass transit. The area is serviced by NJ Transit bus lines within less than ½ mile walking distance from the subject site, with connection to rail service of the NEWARK LIGHT RAIL BRANCH BROOK PARK STATION and the BROAD STREET STATION, which will be complimentary to a residential use.

Parking Generation

The redevelopment plan calculates a requirement of 1.75 parking spaces per unit which equates to 149 spaces. Given 10% credit for Electric Vehicles (EVs) for the amount of parking required, the actual required amount of parking is adjusted to less than 149 spaces. The proposed parking supply of 148 spaces exceeds the required number of spaces. Therefore, the parking requirement is met and no deviation from the Redevelopment Plan is required.

Based on the ITE Parking Generation Manual, an 85th percentile peak parking demand is 1.47 spaces per unit, or 125 spaces. This further exemplifies that the parking provided will be more than adequate.

CONCLUSIONS

This Traffic Impact and Parking Analysis has clearly shown that the proposed redevelopment will generate peak hour traffic volumes that can be accommodated by the surrounding roadway network, and that the site traffic will not create any detrimental impact on the abutting roadways or at the adjacent intersections. Based on the projections of traffic volume generated by the proposed use, the operational conditions of the studied roadways and intersections will not degrade to any appreciable degree, and thus, will have no significant impact on the operational conditions of the surrounding roadway network.

The amount of parking provided per the proposed site plan will accommodate the projected parking demand. The layout and dimensions of the parking areas will adequately provide safe and efficient maneuvers.

In conclusion, the proposed action will result in no negative impact to traffic conditions.