TRAFFIC ENGINEERING EVALUATION

PROPOSED RESIDENTIAL DEVELOPMENT
64 – 68 Harmon Street
BLOCK 18702, LOTS 16, 17, 18 & 19
CITY OF JERSEY CITY
HUDSON COUNTY, NEW JERSEY

Prepared for:

SELA REALTY INVESTMENTS, LLC
3 Executive Drive, Suite 430
Fort Lee, NJ 07024

Prepared by:

KLEIN TRAFFIC CONSULTING, LLC
156 Walker Road
West Orange, New Jersey 07052
leekleintraffic@gmail.com

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KLEIN
TRAFFIC CONSULTING, LLC

INTRODUCTION

The purpose of this Traffic Engineering Evaluation is to assess the traffic impacts associated with the redevelopment of the subject property known as Lots 16, 17, 18 & 19 Block 18702 located at 64-68 Harmon Street in the City of Jersey City, Hudson County. The site has approximately 200 feet of frontage along the north side of Harmon Street, and approximately 80 feet of frontage on the west side of Arlington Avenue. The site is currently occupied with parking with two curb cuts on Harmon Street.

The proposal is to construct a four-story, 27-unit, multifamily housing (mid-rise) building with ground floor parking capacity for 36 cars: 8 standard parking spaces, 6 compact parking spaces, 2 ADA compliant parking spaces, and 10 pairs of double stacked mechanical parking system (capacity for 20 cars).

EXISTING CONDITIONS

The site is located within four lots, three lots front on Harmon Street, and one lot fronts on Arlington Avenue. The site currently contains approximately 28 parking spaces. The surrounding properties generally consist of a mix of commercial and residential uses. The adjacent roadways serving the site are described as follows:

Harmon Street is a local street under the jurisdiction of the City of Jersey City, oriented in a one-way westbound direction. There are sidewalks on both sides of the street. Parking is permitted on both sides of the street with a capacity of approximately 24 cars in the block of Harmon Street between Arlington Avenue and Crescent Street. Harmon Street connects Garfield Avenue in the east to Crescent Avenue in the west. There are speed humps on Harmon Street between Arlington Avenue and Crescent Street. The posted or statutory speed limit is 25 miles per hour (MPH).

Arlington Avenue is a local street under the jurisdiction of the City of Jersey City. There are sidewalks on both sides of the street. Parking is permitted on the west side of the street. Arlington Avenue is a two-way street and connects Communipaw Avenue in the north to Bayview Avenue in the south. The posted or statutory speed limit is 25 MPH. Arlington Avenue is stop-controlled at its intersections with Harmon Street and with Grand Street.

Mass Transportation Options

There are bus stops on Grand Street for the number 6 bus route with services to Journal Square, the 81 bus with service to Exchange Place and Bayonne, and on Communipaw Avenue for the 1 bus with service to Newark. With frequent service during the peak commuting hours, bus service is an attractive alternative to commuting by passenger car or owning a car.

Bicycle Master Plan 2019

Near the subject site, as of 9/30/2019, the *Let's Ride JC Bicycle Master Plan* shows protected bicycle lanes or shared bicycle lanes on Communipaw Avenue, Arlington Avenue, and Grand Street. There is a Citi Bike coral on Communipaw Avenue at Berry Lane, approximately 0.2-mile/4-minute walk from the subject site.

Pedestrian Enhancement Plan 2018

Near the subject site, Harmon Street and Arlington Avenue were not identified by the public as key streets that need improvement for walkability. There were no crashes involving pedestrians or bicycles on Harmon Street. However, Grand Avenue and Communipaw Avenue were identified by the public as key streets that need improvement for walkability. The intersection of Communipaw Avenue with Grand Street was identified as an intersection having pedestrian and bicycle crashes.

School Travel Plan 2019

Near the subject site, as of July 2019, the Jersey City School Travel Plan shows there are crossing guards at the intersections of Crescent Avenue with Communipaw Avenue, and Park Street with Communipaw Avenue. The subject site is within the area identified in the Jersey City Priority Area Map as area #3. The intersection of Communipaw Avenue with Grand Street and the intersection of Grand Street with Arlington Avenue were identified as intersections having pedestrian and bicycle crashes.

Crashes (2012 to 2016)

Between the years 2012 and 2016, the *School Travel Plan* identified no crashes involving pedestrians or bicycles along Harmon Street; however, the intersection of Communipaw Avenue with Grand Street and Grand Street with Arlington Avenue were identified as intersections having pedestrian and bicycle crashes.

Vision Zero Action Plan

The *Vision Zero Action Plan*, February 2019 does not show Harmon Street as being in the High Injury Network. However, Communipaw Avenue west of Park Street was identified as being in the High Injury Network.

DEVELOPMENT PROPOSAL

The proposed development consists of the construction of 27 units of multifamily housing (mid-rise) in three-stories over ground floor parking with a total capacity of 36 parked cars including 8 standard parking spaces, 6 compact spaces, 10 pairs of mechanical stackers, and 2 ADA compliant parking spaces. Proposed access to the site would be provided by one, right-turn in/right-turn out driveway on Harmon Street. The proposed curb cut on Harmon Street will be 22 feet wide, which would be a reduction from the two existing 22-foot wide curb cuts on Harmon Street and may provide for one additional on-street parking space.

TRIP GENERATION

According to the *Trip Generation Manual, 11th Edition* published by the Institute of Transportation Engineers, Multifamily Housing (Mid-Rise) includes apartments, townhouses, and condominium located within the same building with at least three other dwelling units and that have between three and 10 levels (floors). Trip generation for the proposed 36-unit, residential building was calculated using the current Institute of Transportation Engineers (ITE) *Trip Generation, 11th Edition*. The average trip generation rate for "Dense Multi-Use Urban" setting/location with no rail transit within one-half mile was chosen to replicate the surrounding traffic conditions. Table 1 - Trip Generation Summary, tabulates the trip generation for the proposed 27-units of Multifamily Housing (Mid-Rise). As shown in Table 1, the proposed 27-units of Multifamily Housing (Mid-Rise) would generate 6 vehicle trips during the AM peak hour, and 5 vehicle trips during the PM peak hour. On average, this proposed development is expected to generate 1 vehicle entering or exiting the site every 10 minutes during either the weekday AM or the weekday PM peak hour.

According to Transportation Impact Analysis for Site Development, published by the Institute of Transportation Engineers (ITE), an increase of less than 100 vehicle trips would not change the level of service of the local street network nor appreciably increase the volume-to-capacity ratio of an intersection approach. Also, NJDOT Access Management Code considers a significant increase in trips greater than 100 peak hour trips AND greater than a 10 percent increase in previously anticipated daily trips. Therefore, the proposed development is not anticipated to significantly impact the operations of the local streets.

SITE PLAN REVIEW

The site is proposed with 8 standard 9-foot wide by 18-foot long parking spaces, 6 8-foot wide by 18-foot long compact parking spaces, and 2 ADA compliant parking spaces. Each of the 10 stacked mechanical parking systems would accommodate two standard passenger vehicles, one in the upper position and one in the lower position. The proposed 6 compact spaces would be 17 percent of the total 36 parking spaces.

The main drive aisle is adequately sized at 22 feet wide to provide access into and out of each standard parking space, compact parking spaces, stacked mechanical parking space, and the ADA compliant parking spaces. The parking area is designed to accommodate ease of maneuvering for appropriate vehicle types.

Garbage and recycling would be collected within the building and brought to the curb on collection days by the building superintendent.

Due to the proximity of bus service to Journal Square, Exchange Place, Bayonne, and Newark, as well as local shopping, dining, and entertainment options, it is anticipated that a certain amount of the potential residents of this proposed apartment building would take advantage of

the frequent commuter bus service and would not own a vehicle. Each tenant of the building who has an automobile would be assigned a parking space.

The local community group preferred one parking space per dwelling unit. *Parking Generation, 5th Edition*, published by ITE, provides data supporting a lower parking demand for Multifamily Housing (Mid-Rise) in a Dense Multi-Use Urban setting/location with no rail transit within one-half mile. The average peak parking demand is 0.48 parked vehicles per bedroom. With 18 one-bedroom or studio units, 16 two-bedroom units, and 1 three-bedroom unit, a total of 37 bedrooms, the average peak parking demand in the overnight hours would be 18 parked cars. The ITE average peak period parking demand data shows that the proposed parking supply of 0.77 parking spaces per bedroom (36 parking spaces divided by 47 bedrooms) would exceed the average peak parking demand for Multifamily Housing (Mid-Rise). With an average parking supply of 0.97 parking spaces per bedroom, the on-site capacity of 36 cars would be adequate to accommodate the average peak parking demand of the 37 bedrooms or 0.48 parked cars per bedroom or 17 parked cars.

With a proposed parking supply of 1.33 parking space per dwelling unit, the project would exceed the average peak parking demand of a Multifamily Housing (Mid-Rise) with no rail transit within one-half mile in a Dense Multi-Use Urban setting/location of 0.90 parked vehicles per dwelling unit or 24 parked cars. Also, the proposed parking supply provides enough capacity to meet the local community's preference for parking supply.

The ADA parking spaces are designed to be accessible for tenants of the building. Adequate pedestrian access is provided between the building elevators and stairs and the parking area.

Adequate sight distance is provided from the proposed driveway on Harmon Street. The design speed of Harmon Street is 30 miles per hour thus resulting in a recommended stopping sight distance of 200 feet, in accordance with A Policy on Geometric Design of Highways and Streets (AASHTO). The available sight distance is approximately 180 feet from the site driveway on Harmon Street looking toward Grand Street. Although the available sight distance does not meet the required sight distance, 180 feet is the maximum distance that is physically available based on the existing roadway conditions. Travel speeds of traffic turning into Harmon Street from both Arlington Avenue and Grand Street would be lower than the 30 MPH design speed, on which the 200-foot stopping sight distance is based.

CONCLUSIONS

Based upon our trip generation evaluation, it is our professional opinion that the proposed 27-unit, Multifamily Housing (Mid-Rise) building would not generate a significant amount of weekday peak hour vehicle trips and would not have a significant impact on traffic conditions during the weekday AM and PM peak commuter traffic hours.

The proposed parking supply would adequately serve the needs of the project's residents. The site plan is designed with adequate parking and circulation for the residents of the project.

In conclusion, the development of this project would have no significant impact on the traffic operations of area roadways and intersections and would not have a significant impact on local parking conditions.

The foregoing is a true representation of my findings.

Lee D Klein

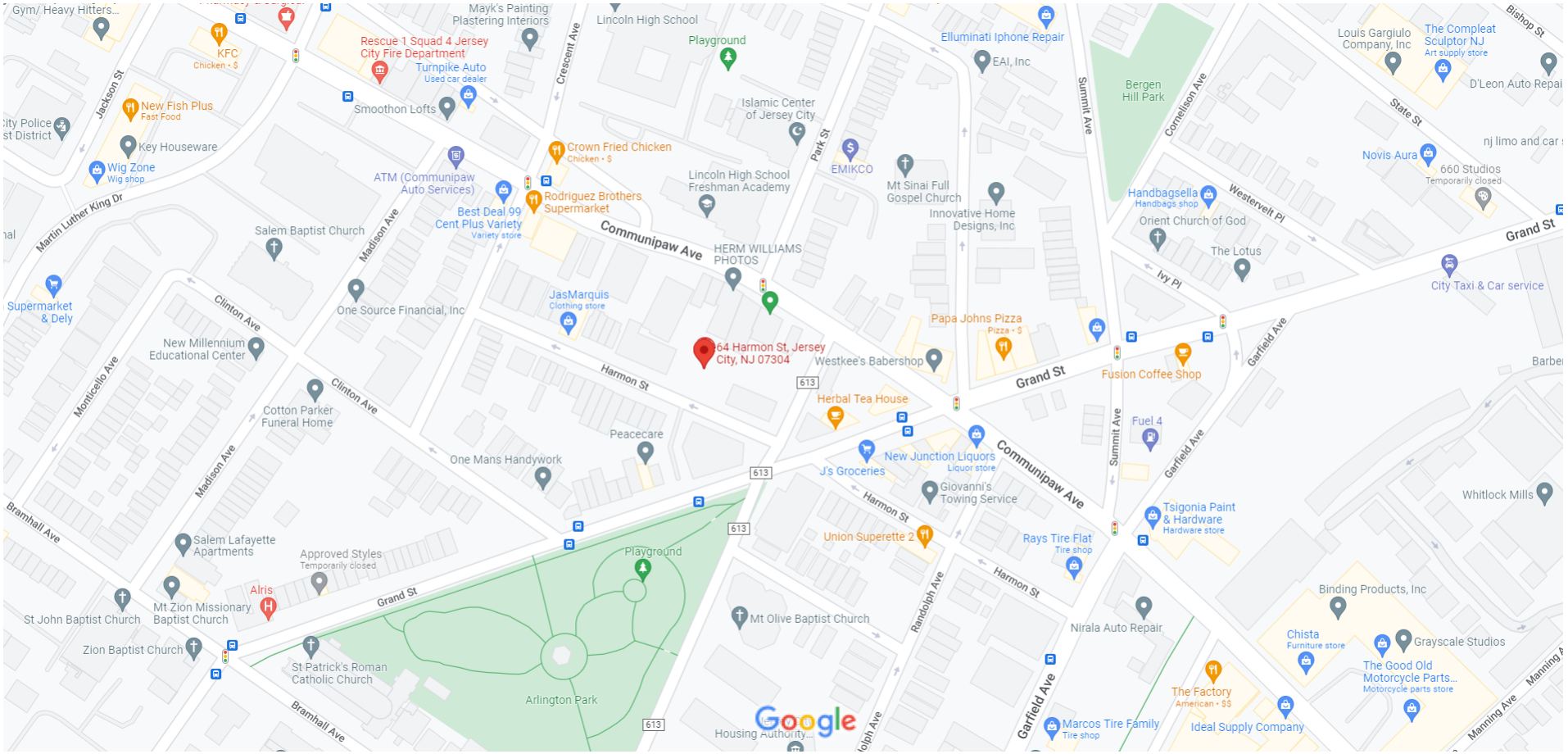
LEE D. KLEIN, P.E., PTOE
Professional Engineer License No. 37104
Professional Traffic Operations Engineer 1627

Table 1 - Trip Generation Summary
64-68 Harmon Street (Block 18702, Lots 16, 17, 18 & 19), Jersey City, Hudson County, NJ

			WEEKDAY					
			AM PEAK HOUR			PM PEAK HOUR		
CODE	LAND USE	AMOUNT	IN	OUT	TOTAL	IN	OUT	TOTAL
PROPOSED VEHICLE TRIPS								
221	Multifamily Housing (Mid-Rise)(Average)(Dense Urban)	27 units	2	4	6	3	2	5
PROPOSED PEDESTRIAN TRIPS								
221	Multifamily Housing (Mid-Rise)(Average)(Dense Urban)	27 units	3	13	15	10	5	15

Source: *Trip Generation, 11th Edition* , published by the Institute of Transportation Engineers (ITE)

Google Maps 64 Harmon St



Map data ©2023 Google 100 ft