

TRAFFIC ENGINEERING EVALUATION

1012-1022 AVENUE C &
53-57 W. 48th STREET
BLOCK 64, LOTS 2 & 3
CITY OF BAYONNE
HUDSON COUNTY, NEW JERSEY

Prepared for:

John & Maryan, LLC
140 Bleeker Street
Jersey City, NJ 07307

Prepared by:

KLEIN TRAFFIC CONSULTING, LLC
www.kleintraffic.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 Block 64, Lots 2 & 3 located at 1012-1022 Avenue C and 53-57 W. 48th Street in the City of Bayonne, Hudson County. The site is approximately 153 feet wide on Avenue C and approximately 38 feet wide on W. 48th Street and is situated in the northeast corner of the intersection of Avenue C with W. 48th Street.

The structure will be demolished, and the proposal is to construct a multifamily housing (mid-rise) building with 40 dwelling units on four floors over ground floor parking for 44 cars in a 38-car mechanical stacking system, plus 2 ADA parking spaces, 2 standard surface parking spaces, and 2 compact surface parking spaces. The location of the project site is illustrated in the Project Location Map.

EXISTING CONDITIONS

The site is on the east side of Avenue C between W. 48th Street and W. 49th Street. The site was most recently occupied by a house of worship and a two-story residential building. The surrounding properties generally consist of a mix of commercial and residential uses.

The adjacent roadways serving the site are described as follows:

Avenue C is categorized as an urban principal arterial and is under the jurisdiction of the City of Bayonne. Avenue C is oriented in a north-south direction, extending between the NJ Turnpike interchange in the north and W. 8th Street in the southern end of Bayonne. Near the proposed site, Avenue provides a two-lane cartway with parking on both sides of the street and there are sidewalks on both sides of the street. Parking is restricted on both sides of the street by signed posed "Residential Permit Parking Yellow Zone, Monday to Friday, 8 AM to 9 PM, Tow Away Zone". There is parking for approximately 12 cars along both sides of Avenue C between W. 48th Street and W. 49th Street. The posted speed limit is 25 miles per hour (MPH).

W. 48th Street is a local street under the jurisdiction of the City of Bayonne. W. 48th Street is oriented in a one-way westbound direction. There are sidewalks on both sides of the street. Parking is restricted on both sides of the street by signed posed "Residential Permit Parking Yellow Zone, Monday to Friday, 8 AM to 9 PM, Tow Away Zone". There is parking capacity for approximately 24 cars on both sides of W. 48th Street between Broadway and Avenue C and approximately 24 cars on both sides of W. 48th Street between Avenue C and Avenue B. The posted speed limit is 25 MPH.

W. 49th Street is a local street under the jurisdiction of the City of Bayonne. W. 49th Street is oriented in a one-way eastbound direction. There are sidewalks on both sides of the street. Parking is restricted on both sides of the street by signed posed “Residential Permit Parking Green Zone, Monday to Friday, 8 AM to 9 PM, Tow Away Zone”. There is parking capacity for approximately 33 cars on both sides of W. 49th Street between Avenue C and Broadway and approximately 24 cars on both sides of 49th Street between Avenue B and Avenue C. The posted speed limit is 25 MPH.

Mass Transportation Options

The Hudson-Bergen Light Rail Station at 45th Street is approximately a 0.4-mile/10-minute walk from the subject site. Within a one-block walk of the subject there are bus stops on Avenue C at the intersections of W. 48th Street and W. 49th Street for the 81 and the 120 bus routes with service to Exchange Place and Grove Street in Jersey City and the 8th Street Light Rail Station. With frequent service during peak commuting hours, light rail service and bus service provide an attractive alternative to commuting by personal automobile as well as owning a car.

DEVELOPMENT PROPOSAL

The proposed development consists of the construction of a 40-unit multifamily housing (mid-rise) building with ground floor parking for up to 44 vehicles in a 38-car capacity mechanical stacking system, 2 standard surface parking spaces, 2 compact surface parking spaces, and 2 ADA parking spaces.

TRIP GENERATION

According to the *Trip Generation Manual, 11th Edition* published by the Institute of Transportation Engineers (ITE), 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 40-unit, multifamily housing (mid-rise) building was calculated using the current *Trip Generation, 11th Edition*. The average trip generation rate for “Dense Multi-Use Urban” setting/location with rail transit within one-half mile was chosen to replicate the surrounding traffic conditions.

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 development of the subject property into 40 multifamily housing (mid-rise) units is not anticipated to significantly impact the operations of Avenue C or the adjacent intersections at W. 48th Street or W. 49th Street.

SITE PLAN REVIEW

The site is proposed with ground floor parking for up to 44 vehicles in a 38-car capacity mechanical lift-slide parking system, 2 standard surface parking spaces, 2 compact surface parking spaces, and 2 ADA parking spaces. The parking requirement is 1 parking space per one-bedroom unit or 20 parking spaces, and 1.25 parking spaces per two-bedroom unit or 24 parking spaces for a total of 44 required parking spaces. Therefore, the proposed parking supply of 44 parking spaces meets the parking requirement of 44 parking spaces.

Electric Vehicle Charging Stations (EVCS)

NJ legislation C.40:55D-4 states that “e. A parking space prepared with electric vehicle supply equipment or Make-Ready equipment pursuant to this section shall count as at least two parking spaces for the purposes of complying with the minimum parking spaces requirement. This subsection shall result in a reduction of no more than 10 percent of the total required parking.” The legislation continues “f. All parking space calculations for electric vehicle supply equipment and Make-Ready equipment pursuant to this section shall be rounded up to the next full parking space.” Since the site proposes 15 percent (6.6, round up to 7 EVCS/make-ready parking spaces) of the proposed 44 parking spaces as EVCS per the legislation, then a 10 percent reduction in the required parking spaces can be permitted, which would result in a reduction in the required parking by 4 parking spaces from 44 to 40 required parking spaces. Therefore, 7 parking spaces would be designed and equipped as EVCS/Make-Ready equipment. The proposed 44 physical parking spaces exceed the requirement of 40 equivalent parking spaces.

Parking Demand

The *Parking Generation, 6th Edition*, published by the Institute of Transportation Engineers (ITE) At 44 proposed physical parking spaces for 56 total bedrooms the proposed site provides 0.79 parking spaces per bedroom. *Parking Generation, 6th Edition* provides parking demand data for Multifamily Housing (Mid-Rise) in a Dense Multi-Use Urban area, within half mile of a rail station, during weekdays (Monday – Friday) between 10 PM and 5 AM. The Average weekday peak parking demand would be 0.42 parked vehicles per bedroom or 24 parked cars and the 85th percentile weekday peak parking demand would be 0.62 parked cars per bedroom or 35 parked cars. The proposed 44 on-site parking spaces satisfies the weekday average peak parking demand as well as the 85th percentile peak parking demand for 64 bedrooms in a Multifamily Housing (Mid-Rise), in a Dense Multi-Use Urban area, within half mile of a rail transit station.

CONCLUSIONS

Based upon our trip generation calculations and evaluation, it is our professional opinion that the traffic generated by the proposed development of 40-units of multifamily housing (mid-rise) would have a negligible impact on traffic conditions during the peak commuter traffic hours.

The design of the site conforms to the requirements of the zone, with 44 physical parking spaces proposed whereas 44 parking spaces are required. The 44 proposed parking spaces exceed the requirement of 40 parking spaces with the 10% credit for providing 15% EVCS. The proposed parking supply of 44 physical parking spaces exceeds the Parking Generation, 6th Edition peak parking demand for 56 bedrooms in a Multifamily Housing (Mid-Rise), in a Dense Multi-Use Urban area, within half mile of a rail transit station.

The pedestrian and vehicular trips generated by the development of the subject property will have no significant impact on the operations of the area roadways and intersections. The 44 physical on-site parking would not have an impact on the on-street parking supply within the area since there are robust mass transportation options for the future tenants of the project. The parking demand would be satisfied and would not have a significant impact on the parking of the surrounding streets.

The foregoing is a true representation of my findings.



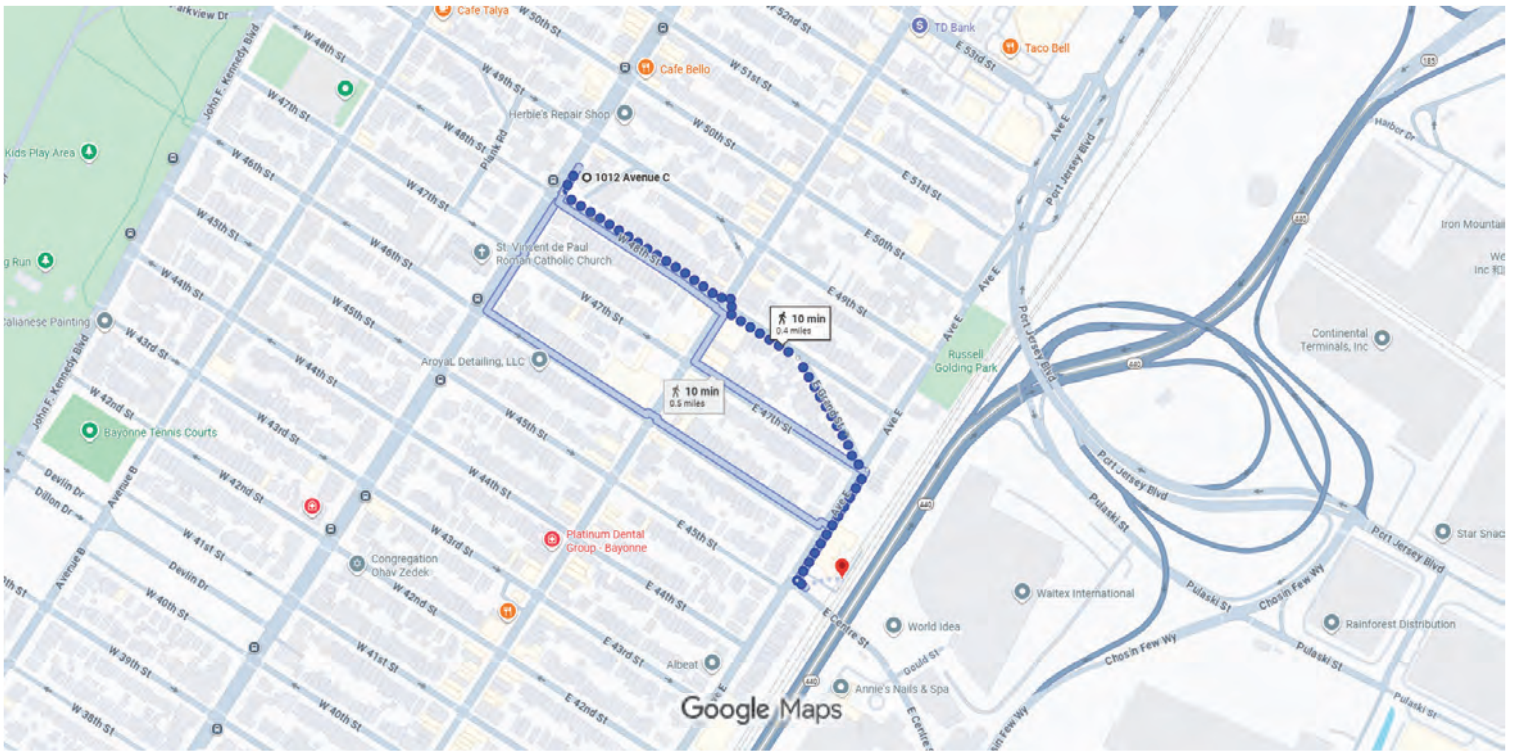
LEE D. KLEIN, P.E., PTOE
Professional Engineer License No. 37104
Professional Traffic Operations Engineer 1627

1012 Avenue C, Bayonne, NJ 07002 to 45th Street, Bayonne, NJ 07002

Walk 0.4 mile, 10 min



PROJECT LOCATION MAP



Map data ©2025 Google 200 ft

Table 1 - Trip Generation Summary

1012-1022 Avenue C & 53-57 W. 48th Street, Bayonne, Hudson County, NJ

CODE	LAND USE	AMOUNT	WEEKDAY			WEEKDAY		
			AM PEAK HOUR			PM PEAK HOUR		
			IN	OUT	TOTAL	IN	OUT	TOTAL
PROPOSED								
VEHICLE TRIPS								
221	Multifamily Housing (Mid-Rise)(Average)(Dense Urban)	40 units	2	11	13	8	3	11
PERSON TRIPS								
221	Multifamily Housing (Mid-Rise)(Average)(Dense Urban)	40 units	4	19	23	20	9	29

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