# TRAFFIC ENGINEERING EVALUATION

# PROPOSED RESIDENTIAL DEVELOPMENT
## 70 OAKLAND AVENUE
## BLOCK 6806, LOTS 1, 2, 25, 26 & 27
## CITY OF JERSEY CITY
## HUDSON COUNTY, NEW JERSEY

Prepared for:

GN Management
101 Hudson Street, Suite 1702
Jersey City, NJ 07302

Prepared by:

KLEIN TRAFFIC CONSULTING, LLC
156 Walker Road
West Orange, NJ 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 1, 2, 25, 26, & 27 in Block 6806 located at 70 Oakland Avenue in the City of Jersey City, Hudson County. The site has approximately 113 feet of frontage along the east side of Oakland Avenue, approximately 111 feet of frontage on the north side of NJ Route 139, and approximately 133 feet on the south side of Fleet Street. The site is in the R-1 One & Two-Family Housing district and is currently occupied by five two-family residences and five garages along NJ Route 139. The proposal is to demolish the existing buildings and construct a new building to include a total of 73 dwelling units of multifamily housing (mid-rise) in six stories, approximately 1,705 square feet of office space, approximately 1,215 square feet of commercial space (café), and on-site parking for up to 47 cars.

EXISTING CONDITIONS

The site is located on northeast corner of the intersection of Oakland Avenue, Fleet Street, NJ Route 139. The site is currently occupied by a five, two-family residence with five garages along NJ Route 139. The surrounding properties generally consist of a mix of residential uses. The streets that serve the subject site are described as follows:

**Oakland Avenue** is categorized as a local street under the jurisdiction of the City of Jersey City. Oakland Avenue is oriented in a north-south direction and connects from Prospect Street to Newark Avenue. Near the project site, Oakland Avenue provides one travel lane in each direction. There are sidewalks on both sides of the street. Parking is permitted on both sides of the street. There is a parking restriction for street cleaning posted "No Parking, 10 AM – Noon, Tuesday & Friday" on the east side and "No Parking, 10 AM – Noon, Monday & Thursday" on the west side. Zone 16 Permit Parking is required on the north side of the street for parking over 4 hours, Monday through Saturday. There is capacity for approximately 7 on-street parking spaces on the block of Oakland Avenue between Fleet Street and NJ Route 139, and approximately 9 parking spaces between Fleet Street and St Pauls Avenue. The statutory speed limit is 25 miles per hour (MPH).

**Fleet Street** is a local street under the jurisdiction of the City of Jersey City, oriented in an eastbound direction. There are sidewalks on both sides of the street. Parking is permitted on both sides of the street. There is a parking restriction for street cleaning posted "No Parking, 1 PM – 3 PM, Tuesday & Friday" on the north side and "Monday & Thursday" on the south side. Zone 16 Permit Parking is required on both sides of the street for parking over 4 hours, Monday through Saturday. There is capacity for approximately 25 on-street parking spaces on the block of Fleet Street between Central Avenue and Oakland Avenue, and approximately 20 on-street parking spaces on the block between Oakland Avenue and Baldwin Avenue. The statutory speed limit is 25 MPH.

*Mass Transportation Options*

The Journal Square Transportation Center is a 10-minute/0.5-mile walk from the subject site. The number 84, 86, and 123 bus lines run along Palisade Avenue with stops at St Pauls Avenue, approximately 0.3-mile/6-minute walk from the subject site and the 87, 88, and 119 bus lines run along Central Avenue with stops at St Pauls Avenue, approximately 0.1-mile/2-minute walk. These mass transportation options provide service between the subject site and Journal Square, Hoboken PATH, New York City, Christ Hospital, Newport Mall, and Union City. With the variety and frequency of mass transportation service during the peak commuting hours, as well as the variety of local commercial, retail, and entertainment options, this location provides adequate transportation infrastructure to afford a resident of 70 Oakland Avenue to not own a personal vehicle.

*Bicycle Master Plan 2019*

Near the subject site, as of 9/30/2019, the *Let's Ride JC Bicycle Master Plan* shows bicycle lanes or shared bike paths on Central Avenue, St Pauls Avenue, and Baldwin Avenue, which surround the subject site. There is a Citi Bike coral on Jefferson Avenue at Oakland Avenue.

*Pedestrian Enhancement Plan 2018*

There was no mention of improvements such as improvements to walkability with signalization, crosswalk improvements, intersection treatments, curb extensions, bicycle facilities, transit connections, and streetscape treatments along Oakland Avenue or Fleet Street near the subject site. However, Central Avenue, one block to the west is shown as one of the "Key streets identified by the public" and Baldwin Avenue, two blocks east of the subject site is shown as one of the "Key streets identified by the TAC".

*School Travel Plan 2019*

Near the subject property, at the intersections of St Pauls Avenue with Oakland Avenue and St Pauls Avenue with Central Avenue, there are crossing guards.

*Crashes (2012 to 2016)*

Between the years 2012 and 2016, the *School Travel Plan* identified no crashes involving pedestrians or bicyclists at the intersection of Oakland Avenue with Fleet Street

*Vision Zero Action Plan*

The *Vision Zero Action Plan*, February 2019 shows NJ Route 139, Central Avenue and Baldwin Avenue near the subject property as being in the High Injury Network.

DEVELOPMENT PROPOSAL

The proposed development consists of the construction of 73 units of multifamily housing (mid-rise) and approximately 1,705 square feet of office space and approximately 1,215 square feet of commercial space (café) with on-site parking capacity for up to 47 cars, including 42 mechanical stacker parking spaces, 4 standard parking spaces, 7 electric vehicle charging stations (EVCS), and 2 ADA compliant parking spaces.

TRIP GENERATION

According to the *Trip Generation Manual, 11th Edition* published by the Institute of Transportation Engineers, "Multifamily Housing (Mid-Rise)" are located in rental buildings that have between three and ten levels (floors). Therefore, trip generation for the proposed 73 units of multifamily housing (mid-rise), 1,705 square feet of office space, and 1,215 square feet of commercial space (café) were calculated using the current Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition* for the land use "Multifamily Housing (Mid-Rise)" in a dense multi-use urban setting/location not within one-half mile of rail transit was used. Table 1, Trip Generation Summary, tabulates the trip generation for the proposed 73 units of multifamily housing (mid-rise), 1,705 square feet of office space, and 1,215 square feet of commercial space (café). Due to the small size, the trips associated with the proposed café would be 100 percent pass-by (trips already passing the subject site) and would be 100 percent pedestrian trips. The same assumption was made for the office space, 100 percent pass-by and 100 percent pedestrian trips.

The existing five, two-family residences generate some vehicular and pedestrian trips. Table 1 summarizes the vehicular and person trips generated by the existing five, two-family residences, as well as the overall increase in trips by the redevelopment of the subject site with 73 dwelling units.

The route that pedestrians could take between the subject site and the Journal Square Transportation Center would be via Fleet Street, crossing NJ Route 139 at the traffic signal, then continue to Central Avenue to Summit Avenue to the Transportation Center. The route for pedestrians to access the bus stops on Central Avenue would be from Fleet Street to Central Avenue. To access the bus stops on Palisade Avenue, a pedestrian would walk along Fleet Street to Palisade Avenue. The proposed redevelopment is expected to generate 77 pedestrian trips during the AM and 133 pedestrian trips during the PM peak hour. The proposed development is expected to generate 18 vehicular trips during the AM peak hour and 18 vehicular trips during the PM peak hour. The previous use of the subject site was five, two-family residences, which generated 5 pedestrian trips per peak hour as well as 5 to 6 vehicular trips per peak hour. Therefore, in my professional opinion, the number of new pedestrian trips along the existing sidewalks and crossing the existing intersections and the new vehicular trips on the nearby street would not have a significant impact on traffic operations in the area.

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 parking requirement is 1 parking spaces per dwelling unit or 73 parking spaces, where the site is proposed with 47 parking spaces, which would be assigned to the tenants of the proposed multifamily housing (mid-rise) building that require a parking space. There is access to robust mass transportation services, shared bicycles, and bicycle lanes, as well as local shopping, dining, and entertainment options; therefore, residents would not need to own a vehicle.

According to the *Parking Generation, 5th Edition*, published by the Institute of Transportation Engineers (ITE), the peak parking demand would be 0.50 parked cars per bedroom. With a total of 101 bedrooms (53 one-bedroom, 12 two-bedroom, and 8 three-bedroom units), the proposed parking supply is 0.47 parking spaces per bedroom. The proposed parking supply of 47 parking spaces is within the range of the 95 percent confidence interval of the peak parking demand of 0.44 parked cars per bedroom to 0.56 parked cars per bedroom or 44 parked cars to 67 parked cars for a total of 101 bedrooms. With frequent mass transportation service during the peak commuting hours, as well as the variety of local commercial, retail, and entertainment options, this location provides an attractive alternative to automobile ownership.

Rideshare vehicles, such as Uber or Lyft, would park in an available, on-street, parking space to pick-up or drop-off a passenger associated with the proposed multifamily housing.

The existing five, two-family homes did not have on-site parking. Therefore, it is assumed that additional on-street parking may become available when the five, two-family homes are removed.

CONCLUSIONS

Based upon our trip generation evaluation, it is our professional opinion that the proposed 73-unit, multifamily housing (mid-rise), 1,705 square feet of office space, and 1,215 square feet of café space, with on-site parking for up to 47 cars would generate an insignificant number of vehicle trips and would not have a significant impact on traffic conditions during the weekday AM and PM peak commuter traffic hours.

The Journal Square Transportation Center is a 10-minute/0.5-mile walk from the subject site and within two to three blocks of bus service on Central Avenue and Palisade Avenue. The proposed development is expected to generate 77 pedestrian trips during the weekday AM peak hour and 133 pedestrian trips during the PM peak hour. Therefore, in my professional opinion, the increase in pedestrian trips along the existing sidewalks and crossing the existing intersections would not have a significant impact. The project is expected to generate 18 vehicular trips during the weekday AM peak hour and 18 vehicle trips during the PM peak hour, which would be an increase of 13 peak hour trips or 1 new trips every 5 minutes on average. Therefore, it is my professional opinion that the increase in trip generation based on the change of use from five, two-family homes to 73 dwelling units of multifamily housing (mid-rise) would not have a significant impact on traffic operations of the adjacent intersections.

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

## Table 1 - Trip Generation Summary
## 64, 66, 68, & 70 Oakland Avenue & 77 Fleet Street, Jersey City, Hudson County, NJ

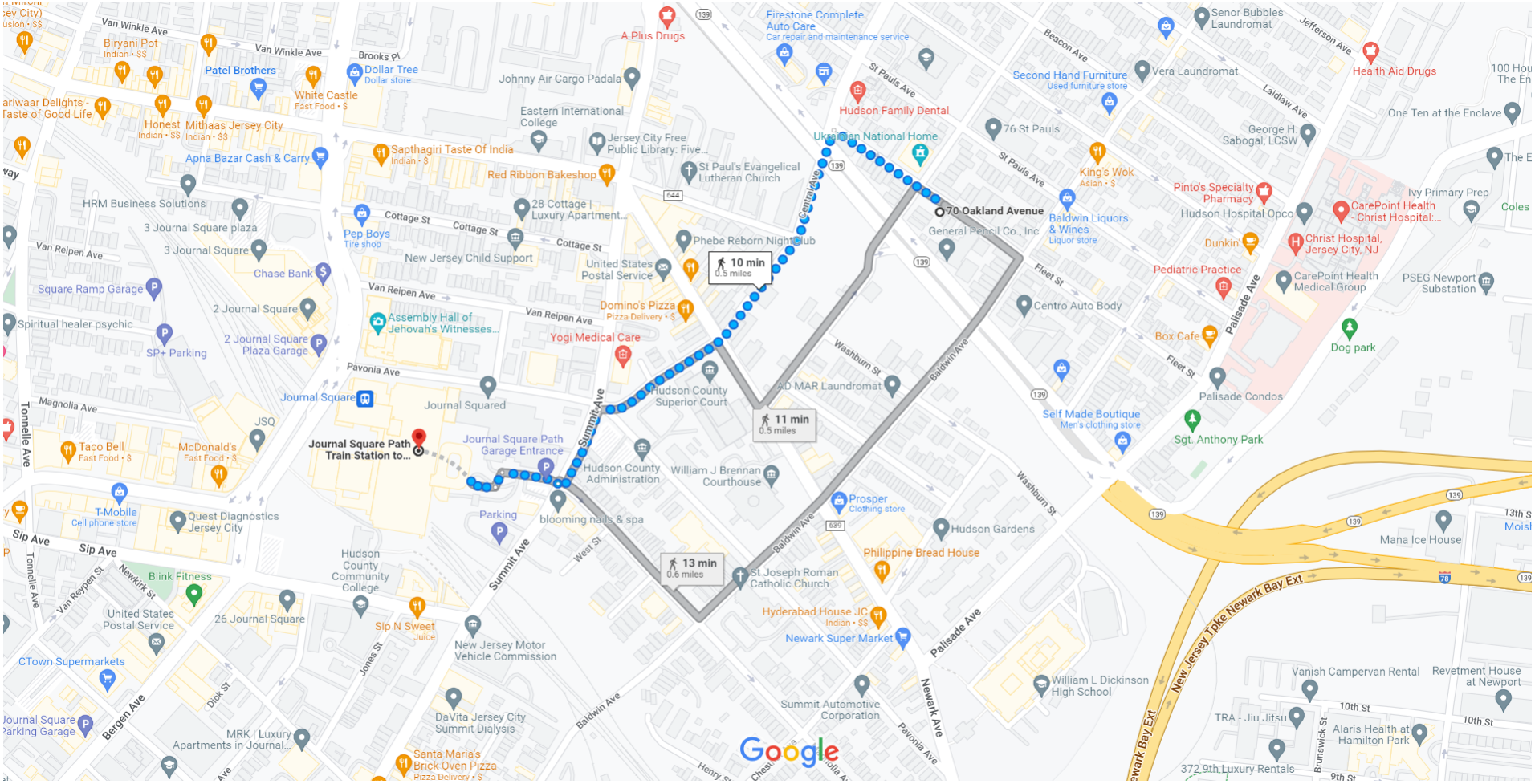
| | | | WEEKDAY | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | AM PEAK HOUR | | | PM PEAK HOUR | | |
| CODE | LAND USE | AMOUNT | IN | OUT | TOTAL | IN | OUT | TOTAL |
| **EXISTING USE - VEHICLE TRIPS** | | | | | | | | |
| 215 | Single-Family Attached (Avg Rate) | 10 units | 1 | 3 | 5 | 3 | 2 | 6 |
| **EXISTING USE - PERSON TRIPS** | | | | | | | | |
| 221 | Multifamily Housing (Mid-Rise)(Average)(Dense Urban) | 10 units | 1 | 4 | 5 | 4 | 2 | 5 |
| **PROPOSED USE - VEHICLE TRIPS** | | | | | | | | |
| 221 | Multifamily Housing (Mid-Rise)(Average)(Dense Urban) | 73 units | 3 | 16 | 18 | 14 | 5 | 18 |
| | **TOTAL CHANGE IN VEHICLE TRIPS BASED ON CHANGE OF USE** | | **1** | **12** | **13** | **10** | **3** | **13** |
| **PROPOSED USES - PERSON TRIPS** | | | | | | | | |
| 221 | Multifamily Housing (Mid-Rise)(Average)(Dense Urban) | 73 units | 6 | 29 | 35 | 27 | 12 | 39 |
| 712 | Small Office Building (Dense Multi-Use Urban) | 1,705 SF | 5 | 1 | 6 | 0 | 2 | 3 |
| 936 | Coffee/Donut Shop without Drive-Thru | 1,215 SF | 19 | 17 | 36 | 47 | 45 | 92 |
| | **TOTAL SITE-GENERATED PERSON TRIPS** | | **30** | **47** | **77** | **74** | **59** | **133** |

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

Google Maps

# 70 Oakland Ave, Jersey City, NJ 07306 to Journal Square Path Train Station to Newark Penn Station and WTC, 24 Path Plaza, Jersey City, NJ 07306

Walk 0.5 mile, 10 min




Map data ©2022 Google 200 ft