## TRAFFIC ENGINEERING EVALUATION

## PROPOSED REDEVELOPMENT 681 – 685 NEWARK AVENUE BLOCK 7902, LOTS 33 & 34 CITY OF JERSEY CITY HUDSON COUNTY, NEW JERSEY

## Prepared for:

Canbis LLC 119 Mountain Road Jersey City, NJ 07307

## Prepared by:

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## 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 33& 34 in Block 7902 located at 681 – 685 Newark Avenue in the City of Jersey City, Hudson County. The site has approximately 75 feet of frontage along the south side of Newark Avenue.

The site is in the Journal Square 2060 Redevelopment Plan Area and is currently occupied by three, three-story, mixed-use commercial/residential buildings. The proposal is to construct a multifamily housing (mid-rise) building to include a total of 40 dwelling units (36 studios and 4 one-bedroom units) in four stories above 4,502 square feet of commercial space on the ground floor with no proposed on-site parking spaces.

## **EXISTING CONDITIONS**

The site is located on the south side of Newark Avenue near the intersection of Summit Avenue. The site is occupied by commercial uses on the first floor and residential uses on the second and third floors. The surrounding properties generally consist of a mix of commercial and residential uses. The subject site is located in the Journal Square 2060 Redevelopment Plan Area. The adjacent roadways of Newark Avenue and Summit Avenue serving the subject site are described as follows:

**Newark Avenue** is a local street under the jurisdiction of the City of Jersey City, oriented in an east-west direction. Newark Avenue connects Route 1&9 in the west to Christopher Columbus Drive in the east. There are sidewalks on both sides of the street. Parking is restricted on both sides of the street, No Parking Except Vehicles Loading and Unloading, 8 AM to 2 PM, Monday to Friday, No Parking Monday - Friday from 7 AM to 9 AM and Saturday 9 AM – 10 AM on both sides of the street. There are metered parking spaces along both sides of Newark Avenue. There is on-street parking for approximately 20 cars on the north side and approximately 30 parking spaces on the south side of Newark Avenue. The statutory speed limit is 25 miles per hour (MPH).

**Summit Avenue** is categorized as an urban principal arterial and is under the jurisdiction of the City of Jersey City. Summit Avenue is oriented in a north-south direction, extending between 32<sup>nd</sup> Street in Union City in the north and Baldwin Avenue in Jersey City in the south. Near Newark Avenue, Summit Avenue provides two northbound travel lanes; a through lane and exclusive left turn lane; and one southbound travel lane. Parking is permitted on both sides of the street. There are sidewalks on both sides of the street. The posted speed limit is 25 MPH.

**Summit Avenue with Newark Avenue/Hoboken Avenue** is a five-legged intersection controlled by a semi-actuated, three-phase, traffic signal with a 110-second background cycle. The Hudson County Courthouse traffic study recommended a change from 110-second cycle length to a 120-second cycle length, to save "lost time". The northbound approach of Summit Avenue provides an exclusive left-turn lane and a shared movement lane. The southbound approach

provides an exclusive left-turn lane, one shared movement lane, and one shared through/right-turn lane. The eastbound approach of Newark Avenue has a left-turn/through lane and an exclusive right-turn lane. The north-westbound approach of Newark Avenue has a single shared left-turn/through/right-turn lane. The westbound approach of Hoboken Avenue has a single shared movement lane. The intersection provides crosswalks, pedestrian signal indications, and curb ramps.

## **Mass Transportation Options**

There are bus stops on Newark Avenue and on Palisade Avenue for the 80, 82, 84, and 86-bus routes with service to Journal Square, Exchange Place, Newport Mall, Gates Avenue, and Bergenline Avenue. The Journal Square Transportation Center is a 8-minute/0.4-mile walk from the subject site. The route that pedestrians could take between the subject site and the Journal Square Transportation Center would be via Chestnut Avenue to Pavonia Avenue, crossing Summit Avenue at the traffic signal. With frequent mass transportation service during the peak commuting hours, as well as the variety of local commercial, retail, and entertainment options, this location is an attractive alternative to owning a car.

## Bicycle Master Plan 2019

Near the subject site, as of 9/30/2019, the <u>Let's Ride JC Bicycle Master Plan</u> shows protected two-way, bicycle lanes and shared bicycle lanes for Newark Avenue, Kennedy Boulevard, and Summit Avenue in the area of the subject property.

## Pedestrian Enhancement Plan 2018

Near the subject site, Newark Avenue, Kennedy Boulevard, and Summit Avenue were identified by the public as key streets that need improvement for walkability. There were crashes involving bicycles and pedestrians at the intersections of Newark Avenue with Summit Avenue/Newark Avenue, and Newark Avenue with Kennedy Boulevard.

## 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 Newark Avenue with Kennedy Boulevard and Newark Avenue with Summit Avenue.

## *Crashes (2012 to 2016)*

Between the years 2012 and 2016, the <u>School Travel Plan</u> identified crashes involving pedestrians and bicyclists at the intersections of Newark Avenue with Kennedy Boulevard and Newark Avenue with Summit Avenue.

## Vision Zero Action Plan

The <u>Vision Zero Action Plan</u>, February 2019 shows Newark Avenue, Kennedy Boulevard, and Summit Avenue near the subject site as being in the High Injury Network.

## **DEVELOPMENT PROPOSAL**

The proposed development consists of the construction of 40 units of multifamily housing (midrise) in four stories over 4,502 square feet of commercial space on the ground floor with no onsite parking. Consistent with the Journal Square 2060 Redevelopment Plan, there are no required parking spaces. Tenants of the proposed residential units would access the site via the doors on Newark Avenue.

## TRIP GENERATION

According to the <u>Trip Generation Manual, 11<sup>th</sup> Edition</u> published by the Institute of Transportation Engineers (ITE), "Multifamily Housing (Mid-Rise)" are located in rental buildings that have between three and ten levels (floors). Therefore, trip generation for the proposed 40-unit, mid-rise, residential building was calculated using the current ITE <u>Trip Generation Manual, 11<sup>th</sup> Edition</u> for the land use "Multifamily Housing (Mid-Rise)". A dense multi-use urban setting/location was used to account for the proximity of the Journal Square Transportation Center. Table 1, Trip Generation Summary, tabulates the trip generation for the proposed 40 mid-rise multifamily housing dwelling units and 4,502 square feet of commercial space and shows the proposed redevelopment would generate 33 person trips during the AM peak hour and 58 person trips during the PM peak hour. The potential new vehicular trips generated by rideshare vehicles could be 23 new vehicle trips during the AM peak hour and 12 new vehicle trips during the PM peak hour.

Based on the size of the retail space, the percentage of trips associated with the retail space would be primarily pass-by trips, which is reflected in the PM peak hour pass-by rate of 95.9 percent, which was calculated based on ITE standards and is also shown in Table 1. Pass-by trips are trips that are already on the roadway network and are not new trips to the area. The 4,502 square feet of commercial space would generate 11 vehicle trips (10 new vehicle trips) during the weekday AM peak hour and would generate 30 vehicle trips (2 new vehicle trips) during the PM peak hour. Since no on-site parking is being proposed and there is already high pedestrian activity in this area, the new trips to and from this project would be pedestrian trips.

The proposed redevelopment is expected to generate 58 or less additional pedestrian trips. 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 previous uses of the subject property were 8 dwelling units and 6,750 square feet of commercial space. Table 1 summarizes the trip generation of the previous uses of the subject property. The changes in uses of the subject property result in a small increase in vehicle trips and person trips during the weekday AM and weekday PM peak hours.

According to <u>Transportation Impact Analysis for Site Development</u>, 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 Journal Square 2060 Redevelopment Plan requires zero parking spaces per unit, whereas the site is proposed with zero parking spaces per unit. Since zero on-site parking spaces are required and proposed, if any of the potential residents of this proposed multifamily housing (mid-rise) building would own a vehicle, they would need to find a parking space in one of the nearby parking garages. There is access to robust mass transportation services, as well as local shopping, dining, and entertainment options; therefore, those residents would not need to own a vehicle.

The bicycle parking requirement is 0.5 bicycle spaces per unit or 20 bicycle parking spaces, where 28 bike parking spaces can be accommodated within the designated Bike Storage room.

## **CONCLUSIONS**

Based upon our trip generation evaluation, it is our professional opinion that the proposed 40-unit, Multifamily Housing (Mid-Rise) building and 4,502 square feet of commercial space with no on-site parking would generate 23 or less vehicle trips during either the weekday AM or PM peak hour and would not have a significant impact on traffic conditions during the weekday AM and PM peak commuter traffic hours.

The route that pedestrians could take between the subject site and the Journal Square Transportation Center would be via Newark Avenue to Kennedy Boulevard or via Summit Avenue. The proposed redevelopment is expected to generate 58 or less additional pedestrian trips during either the weekday AM or the PM peak hours. 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.

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

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# Google Maps

# Journal Square, 1 Path Plaza, Jersey City, NJ 07306 to 681 Newark Ave, Jersey City, NJ 07306

Walk 0.3 mile, 8 min

PROJECT LOCATION MAP



Map data ©2023 Google 200 ft L

Table 1 - Trip Generation Summary 681-685 Newark Avenue, Jersey City, Hudson County, NJ

CODE   LAND USE   L				WEEKDAY						
EXISTING   VEHICLE TRIPS   221   Multifamily Housing (Mid-Rise)(Average)(Dense Urban)   8 units   1   2   3   1   1   2   2   22   44   24   25   25   25				AM PEAK HOUR			PIV	PM PEAK HOUR		
VEHICLE TRIPS   21   Multifamily Housing (Mid-Rise)(Average)(Dense Urban)   8 units   1   2   3   1   1   2   2   3   2   2   2   2   2   2   2	CODE	LAND USE	AMOUNT	IN	OUT	TOTAL	IN	OUT	TOTAL	
221   Multifamily Housing (Mid-Rise) (Average) (Dense Urban)   8 units   1   2   3   1   1   2	EXISTING	ì								
Region   Plaza   C40KSF   - Vehicle Trips   6,750 SF   9   6   15   22   22   44     Pass By Percentage (PM)   85.2%   (19) (19) (38)     Total New Strip Retail Trips   9   6   15   3   3   7      TOTAL EXISTING SITE GENERATED VEHICLE TRIPS   10   8   18   5   4   9     PERSON TRIPS   221   Multifamily Housing (Mid-Rise)(Average)(Dense Urban)   8 units   1   3   4   4   2   6     822   Strip Retail Plaza (C40KSF)   6,750 SF   10   6   16   22   22   24     TOTAL EXISTING SITE GENERATED PERSON TRIPS   10   10   20   26   24   50    PROPOSED USE VEHICLE TRIPS   21   Multifamily Housing (Mid-Rise)(Average)(Dense Urban)   40 units   2   11   13   7   3   10     822   Strip Retail Plaza (C40KSF) - Vehicle Trips   4,502 SF   6   4   10   15   15   30     Pass By Percentage (PM)   95.9%   (14) (14) (14) (28)     Total New Strip Retail Trips   6   4   10   1   1   2      TOTAL NEW SITE GENERATED VEHICLE TRIPS   8   15   23   8   4   12     PERSON TRIPS   221   Multifamily Housing (Mid-Rise)(Average)(Dense Urban)   40 units   4   19   23   19   9   28     822   Strip Retail Plaza (C40KSF) - Vehicle Trips   4,502 SF   6   4   11   15   15   30      TOTAL NEW SITE GENERATED VEHICLE TRIPS   8   15   23   8   4   12     PERSON TRIPS   21   Multifamily Housing (Mid-Rise)(Average)(Dense Urban)   40 units   4   19   23   19   9   28     822   Strip Retail Plaza (C40KSF)   4,502 SF   6   4   11   15   15   30      TOTAL NEW SITE GENERATED PERSON TRIPS   10   23   33   34   24   58      TOTAL NEW SITE GENERATED PERSON TRIPS   10   23   33   34   24   58      TOTAL NEW SITE GENERATED PERSON TRIPS   10   23   33   34   24   58      TOTAL NEW SITE GENERATED PERSON TRIPS   10   23   33   34   24   58      TOTAL NEW SITE GENERATED PERSON TRIPS   10   23   33   34   24   58      TOTAL NEW SITE GENERATED PERSON TRIPS   10   23   33   34   24   58      TOTAL NEW SITE GENERATED PERSON TRIPS   10   23   33   34   24   58      TOTAL NEW SITE GENERATED PERSON TRIPS   10   23   33   34   24   58      TOTAL NEW SITE GENERATED PERSON TRIPS	<b>VEHICLE</b>	TRIPS								
Pass By Percentage (PM)	221	Multifamily Housing (Mid-Rise)(Average)(Dense Urban)	8 units	1	2	3	1	1	2	
Total New Strip Retail Trips	822	Strip Retail Plaza (<40KSF) - Vehicle Trips	6,750 SF	9	6	15	22	22	44	
TOTAL EXISTING SITE GENERATED VEHICLE TRIPS   10		Pass By Percentage (PM)	85.2%				(19)	(19)	(38)	
Person Trips   221   Multifamily Housing (Mid-Rise) (Average) (Dense Urban)   8 units   1   3   4   4   2   6   6   822   Strip Retail Plaza (<40KSF)   6,750 SF   10   6   16   22   22   44		Total New Strip Retail Trips		9	6	15	3	3	7	
Person Trips   221   Multifamily Housing (Mid-Rise) (Average) (Dense Urban)   8 units   1   3   4   4   2   6   6   822   Strip Retail Plaza (<40KSF)   6,750 SF   10   6   16   22   22   44										
221   Multifamily Housing (Mid-Rise)(Average)(Dense Urban)   8 units   1   3   4   4   2   6     822   Strip Retail Plaza (<40KSF)   6,750 SF   10   6   16   22   22   24		TOTAL EXISTING SITE GENERATED VEHICLE TRIPS		10	8	18	5	4	9	
Strip Retail Plaza (<40KSF)   6,750 SF   10   6   16   22   22   44	PERSON	TRIPS								
TOTAL EXISTING SITE GENERATED PERSON TRIPS   10   10   20   26   24   50	221	Multifamily Housing (Mid-Rise)(Average)(Dense Urban)	8 units	1	3	4	4	2	6	
PROPOSED USE VEHICLE TRIPS    221	822	Strip Retail Plaza (<40KSF)	6,750 SF	10	6	16	22	22	44	
PROPOSED USE VEHICLE TRIPS    221										
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VEHICLE TRIPS           221 Multifamily Housing (Mid-Rise)(Average)(Dense Urban)         40 units         2         11         13         7         3         10           822 Strip Retail Plaza (<40KSF) - Vehicle Trips										
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Strip Retail Plaza (<40KSF) - Vehicle Trips   4,502 SF   6   4   10   15   15   30	VEHICLE	TRIPS								
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Total New Strip Retail Trips	822	Strip Retail Plaza (<40KSF) - Vehicle Trips	4,502 SF	6	4	10	15	15	30	
TOTAL NEW SITE GENERATED VEHICLE TRIPS   8   15   23   8   4   12		Pass By Percentage (PM)	95.9%				(14)	(14)	(28)	
PERSON TRIPS           221 Multifamily Housing (Mid-Rise)(Average)(Dense Urban)         40 units         4         19         23         19         9         28           822 Strip Retail Plaza (<40KSF)		Total New Strip Retail Trips		6	4	10	1	1	2	
PERSON TRIPS           221 Multifamily Housing (Mid-Rise)(Average)(Dense Urban)         40 units         4         19         23         19         9         28           822 Strip Retail Plaza (<40KSF)										
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822   Strip Retail Plaza (<40KSF)   4,502 SF   6   4   11   15   15   30		-								
TOTAL NEW SITE GENERATED PERSON TRIPS         10         23         33         34         24         58           INCREASE IN VEHICLE TRIPS         (2)         7         5         3         (1)         3	221	Multifamily Housing (Mid-Rise)(Average)(Dense Urban)	40 units	4	19	23	19	9	28	
INCREASE IN VEHICLE TRIPS  (2) 7 5 3 (1) 3	822	Strip Retail Plaza (<40KSF)	4,502 SF	6	4	11	15	15	30	
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		TOTAL NEW SITE GENERATED PERSON TRIPS		10	23	33	34	24	58	
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INCREASE IN PEDESTRIAN TRIPS (0) 13 13 8 (0) 8					,			1	, ,	
		INCREASE IN PEDESTRIAN TRIPS		(0)	13	13	8	(0)	8	

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

NOTE: ## - Indicates an INCREASE in site generated trips; (##) - Indicates a DECREASE in site generated trips